



## 2015-2016 Product Catalog



Innovation for those that provide safety.

- Lightbars
- Beacons
- Directional Warning
- Perimeter Lighting
- Back-up Alarms
- Area Lighting
- Camera Systems

The driving force in technology |



**FEDERAL SIGNAL**

Federal Signal is **The Driving Force™** behind the technology that provides safe and reliable emergency warning for municipal, utility, tow and recovery, and DOT vehicles. It is our commitment to engineer the most reliable and high-performing products for your work trucks.

Exclusive to Federal Signal, these technologies are identified on the following product pages. *Ask your local FS Representative how you can experience the latest in Federal Signal products.*

TECHNOLOGY

### Federal Signal Exclusive Technologies



**SpectraLux®**

**SPECTRALUX®** multicolor LED technology provides the ability for a LED light head to change color while in operation. LEDs can change between Red, Blue, Amber or White through user-selected flash patterns.



**Solaris®**

**SOLARIS® LED** reflector technology is engineered to increase off-axis warning and maximize the LED light source to eliminate dark spots and distribute 360-degree of light coverage.



**SLR**

**SLR (SOLARIS® LED ROTATOR)** design maximizes the LED light source for full light coverage. The SLR rotates the Solaris LED reflector providing superior LED warning light output.



**Convergence Network**

**FS CONVERGENCE NETWORK** provides “plug-n-play” installation from Federal Signal’s SmartSiren® Platinum, amplifier and controller, to our family of serial communication lightbars and SpectraLux ILS Interior Lighting System.



**ROC**

**ROC (RELIABLE ONBOARD CIRCUITRY™)** technology eliminates approximately 85% of the connection failure points found in a typical lightbar. Wires, connections and assemblies are replaced by PCB assemblies — reducing labor repair time and increasing the road time for emergency vehicles.



**HotFoot®**

**HOTFOOT®** lighted mounting feet provide additional light through powerful Solaris LED reflectors that are built into the mounting system of the lightbar.

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## General Notes

1. All voltage is 12V (V denotes volts) unless marked otherwise. Contact the factory for pricing and availability of 24V models.
2. Standard rotators: 95 FPM. Medium rotators: 120 FPM. Fast rotators: 175 FPM (halogen models).
3. Prices for lightbars do not include controls (purchase separately) unless otherwise noted.
4. Product code: -95 and Z=Service Replacement Parts.
5. For detailed information on how to order, consult the product bulletins or contact the factory at 800-824-0254.

# Legend® LPX Discrete | Lightbar

## Features

- Traditional nine-conductor cable
- Solaris® LED reflector technology
- ROC (Reliable Onboard Circuitry™) technology
- All-LED lightbar — LED work lights and S/T/T (Stop/Tail/Turn) lights available
- LEDs offered in Amber, Blue, Green, Red, and White
- Top domes offered in Amber, Blue, Clear, and Red
- Independently controlled front and rear flashing
- Ten (10) selectable flash patterns; Two (2) flashing modes
- Available in 24", 32", 45", 53", 61" and 70" lengths
- Five-year LED warranty

## Approvals

- SAE J845, Class 1
- NFPA 1901 (on specific models)

## Applications

- Municipal
- Security
- Tow & Recovery



CLASS 1

Online Lightbar Configurator

ROC

SOLARIS

Model	Description
<b>53" Model — Traditional cable, flat mount</b>	
LPX53D-00042*	(18) LED Amber heads, (2) LED takedown, (2) LED alley lights, clear domes
<b>61" Models — Traditional cable, flat mount</b>	
LPX61DNC-00008*	(12) LED Amber heads, (2) LED work lights, (2) LED S/T/T lights, clear domes
LPX61D-00017*	(22) LED Amber heads, (2) LED work lights, (2) LED S/T/T lights, clear domes
LPX61DS-00005*	(22) LED Amber heads, (2) LED work lights, (2) LED S/T/T lights, clear domes, weather pack connector
<b>70" Model — Traditional cable, flat mount</b>	
LPX70D-00003	(22) LED Amber heads, (2) LED work lights, (2) LED S/T/T lights, clear domes
<b>Center Section-Upgrade Kits</b>	
LPXUPK-A-002	(8) Amber 5" LED reflectors, wire upgrade kit
LPXUPK-R-001	(8) Red 5" LED reflectors, wire upgrade kit, flasher
<b>Accessories and Kits</b>	
HKB-(Model)	Hook required with hook-on mount, specify vehicle — see page 17

### NOTES

\*Stock Model Lightbars: Order with "S" at the end of the part number for a stock lightbar.

- See page 16 for common replacement parts.
- See page 18 for 24" Legend LPX Discrete models.

### HOW TO ORDER

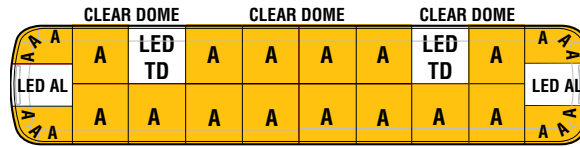
Choose one of the popular models above, customize your own lightbar with our online configurator or contact a local Federal Signal representative or distributor.



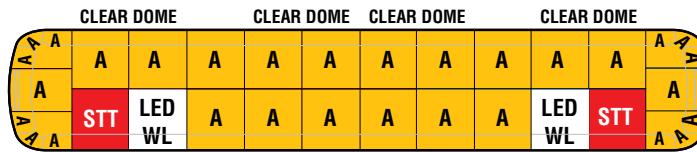
For additional lighting, center section upgrade kits with Solaris LED reflectors are available.



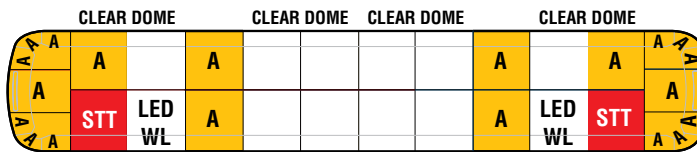
24" and 32" Model—Domes are available in Amber/Clear



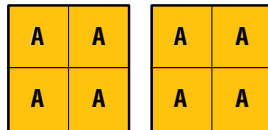
LPX53D-00042



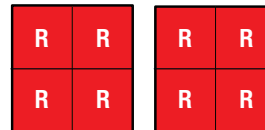
LPX61D-00017  
LPX61DS-00005



LPX61DNC-00008



LPXUPK-A-002



LPXUPK-R-001

	LPX24D	LPX32D	LPX45D	LPX53D	LPX61D	LPX70D
<b>Specifications</b>						
Operating Voltage	12.8 VDC for all models					
Operating Temp	-30°C to +65°C					
Current Draw	1 Amp per head, 0.5 Amp per alley light					
<b>Physical Specifications</b>						
Length	24.25 in (61.6 cm)	32.5 in (61.6 cm)	44.5 in (113.0 cm)	52.7 in (133.9 cm)	60.9 in (154.7 cm)	69.1 in (175.5 cm)
Width	11.2 in (28.4 cm)	11.2 in (28.4 cm)	11.2 in (28.4 cm)	11.2 in (28.4 cm)	11.2 in (28.4 cm)	11.2 in (28.4 cm)
Height	2.5 in (6.4 cm)	2.5 in (6.4 cm)	2.5 in (6.4 cm)	2.5 in (6.4 cm)	2.5 in (6.4 cm)	2.5 in (6.4 cm)
<b>Shipping Weight*</b>						
	16.6 lb (7.5 kg)	18.5 lb (8.4 kg)	20.4 lb (9.3 kg)	24.2 lb (11.0 kg)	28.0 lb (12.7 kg)	31.8 lb (14.4 kg)

\*Standard Foot Model



Federal Signal's ROC technology allows for field replacement of upgrade kits.

# Legend® LPX | Lightbar

## Features

- Solaris® LED reflector technology
- ROC (Reliable Onboard Circuitry™) technology
- FS Convergence Network, serial lightbar
- All-LED lightbar — LED takedowns, work lights and S/T/T (Stop/Tail/Turn) lights available
- LEDs offered in Amber, Blue, Green, Red and White
- Top domes offered in Amber, Blue, Clear and Red
- Built-in SignalMaster, front/rear cut-off, intersection warning and “dimming” functions
- Same flash patterns, controller options and mounting option as standard Legend lightbars
- Available in 24", 32", 45", 53", 61" and 70" lengths
- Five-year LED warranty

## Approval

- SAE J845, Class 1

## Applications

- Municipal
- Security
- Tow & Recovery



CLASS 1

Online Lightbar Configurator

ROC

SOLARIS

Model	Description
<b>45" Models — Hook mount and 6-button controller included</b>	
LPX45Z-00038	Clear/Clear, (4) Amber corner LED reflectors, (12) Amber 5" LED reflectors, (2) Amber 2" LED reflectors
LPX45Z-00080	Clear/Clear, (4) Amber corner LED reflectors, (8) Amber 5" LED reflectors, (2) Amber 2" LED reflectors, (2) LED takedowns, (2) LED alley lights
<b>53" Models — Hook mount and 6-button controller included</b>	
LPX53Z-00025	Clear/Clear/Clear, (4) Amber corner LED reflectors, (12) Amber 5" LED reflectors, (4) Amber 4" LED reflectors, (2) Amber 2" LED reflectors
LPX53Z-00204	Clear/Clear/Clear, (4) Amber corner LED reflectors, (8) Amber 5" LED reflectors, (4) Amber 4" LED reflectors, (2) Amber 2" LED reflectors, (2) LED work lights, (2) LED takedowns
<b>61" Models — Flat mount and 6-button controller included</b>	
LPX61Z-00007	Clear/Clear/Clear/Clear, (4) Amber corner LED reflectors, (12) Amber 5" LED reflectors, (8) Amber 4" LED reflectors, (2) Amber 2" LED reflectors
LPX61Z-00008	Clear/Clear/Clear/Clear, (4) Amber corner LED reflectors, (8) Amber 5" LED reflectors, (8) Amber 4" LED reflectors, (2) Amber 2" LED reflectors, (2) LED work lights, (2) LED S/T/T lights
<b>Accessories and Kits</b>	
660000	6-button programmable controller, light control only
660300SSG	3-button programmable controller, light control only
660100SSG	RS485 relay module
HKB-(Model)	Hook required with hook-on mount, specify vehicle — see page 17

### NOTE

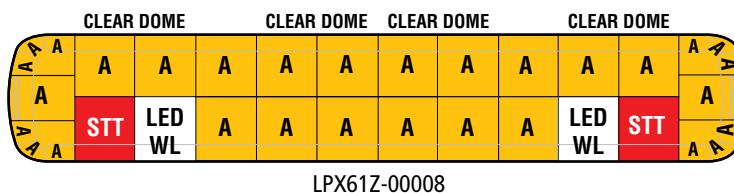
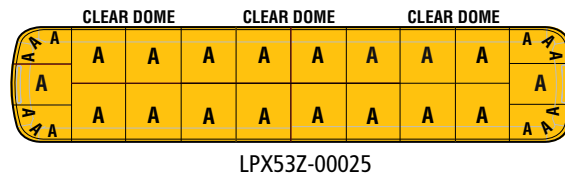
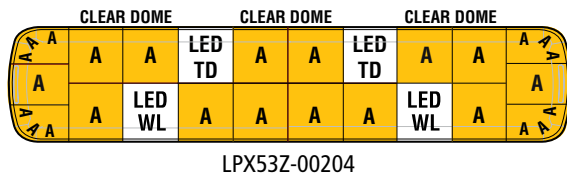
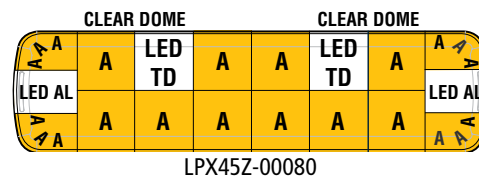
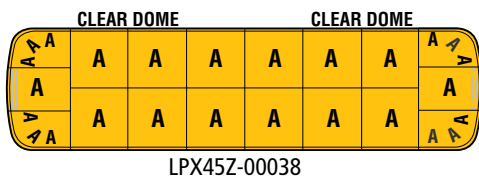
\*Stock Model Lightbars: Order with "S" at the end of the part number for a stock lightbar.

- See page 16 for common replacement parts.

### HOW TO ORDER

Choose one of the popular models above, customize your own lightbar with our online configurator or contact a local Federal Signal representative or distributor.

24" and 32" Model-Domes are available in Amber/Clear



	LPX24	LPX32	LPX45	LPX53	LPX61	LPX70
<b>Specifications</b>						
Voltage	12.8 VDC for all models					
Current Draw — Per Lighting Options (All three lengths)	1 Amp per head, 0.5 Amps per alley light					
LED Takedown Light / Work Light**	1.0 Amp					
Alley Light*	2.7 Amp					
Solaris LED - Main Lightbar**	1.0 Amp					
<b>Physical Specifications</b>						
Length	24.2 in (113.0 cm)	32.5 in (61.6 cm)	44.5 in (113.0 cm)	52.7 in (133.9 cm)	60.9 in (154.7 cm)	69.1 in (175.5 cm)
Width	11.2 in (28.4 cm)	11.2 in (28.4 cm)	11.2 in (28.4 cm)	11.2 in (28.4 cm)	11.2 in (28.4 cm)	11.2 in (28.4 cm)
Height	2.5 in (6.4 cm)	2.5 in (6.4 cm)	2.5 in (6.4 cm)	2.5 in (6.4 cm)	2.5 in (6.4 cm)	2.5 in (6.4 cm)
<b>Shipping Weight***</b>						
	16.6 lbs (7.5 kg)	20.4 lbs (9.2 kg)	20.4 lbs (9.2 kg)	24.2 lbs (10.9 kg)	28.0 lbs (12.6 kg)	31.8 lbs (14.4 kg)

\* Amperage per pair, with flashing takedown and alley lights.  
 \*\* Amperage in steady burn mode.  
 \*\*\* Standard foot model.

## Relay Module



- Works in conjunction with the 3- or 6-button controllers
- Customize complete warning packages with any serial communication lightbar platform and a variety of lightheads
- Built-in 2-channel flasher with alternating flash patterns
- (4) relay outputs - (2) 10-Amp and (2) 15-Amp (not to exceed 40-Amp)

## Six and Three Button Controller



- Model 660300 features (3) illuminated push-button switches with (9) pre-programmed keypad configurations
- Model 660000 features (6) illuminated push-button switches and a (4) position slide switch with (18) pre-programmed keypad configurations
- Quick and easy install with FS Convergence Network which provides "plug-n-play" installation and programming

# Legend® | Lightbar

## Features

- Low-profile, linear lightbar design offers front and rear cut-off and dimming features
- Solaris® LED reflector technology
- ROC (Reliable Onboard Circuitry™) technology
- Optional built-in SignalMaster™ directional warning
- Advanced microprocessor controller provides three modes of operation and a library of flash patterns
- LED S/T/T (stop/turn/tail), LED takedown, and alley lights available
- Three-button or six-button serial controller available for light control only
- Six-button wireless controller option available (lightbar control only)
- Available in 24", 32", 45", 53", 61" and 70" lengths
- Five-year LED warranty

## Approvals

- SAE J845, Class 1
- CAC Title 13

## Applications

- Municipal
- Security
- Tow & Recovery



Model	Description
<b>45" Models — Hook mount and 6-button controller included</b>	
LGD45Z-000169	Clear/Clear, (4) Amber corner LED reflectors, (12) Amber 5" LED reflectors, (2) Amber 2" LED reflectors
<b>53" Models — Hook mount and 6-button controller included</b>	
LGD53Z-00123	Clear/Clear/Clear, (4) Amber corner LED reflectors, (10) Amber 5" LED reflectors, (4) Amber 4" LED reflectors, (2) LED alley lights, (2) LED takedowns
<b>61" Models — Flat mount and 6-button controller included</b>	
LGD61Z-00004	Clear/Clear/Clear/Clear, (2) LED S/T/T lights, (2) LED work lights, (4) Amber corner LED reflectors, (8) Amber 5" LED reflectors, (8) Amber 4" LED reflectors, (2) Amber 2" LED reflectors
LGD61Z-00009	Clear/Clear/Clear/Clear, (2) LED S/T/T lights, (2) LED work lights, (4) Amber corner LED reflectors, (8) Amber 5" LED reflectors, (8) Amber 4" LED reflectors, (2) Amber 2" LED reflectors
<b>70" Models</b>	
LGD70Z-00004	Clear/Clear/Clear/Clear/Clear, (2) LED S/T/T lights, (2) LED work lights, (4) Amber corner LED reflectors, (8) Amber 5" LED reflectors, (12) Amber 4" LED reflectors, (2) Amber 2" LED reflectors, 6-button controller, flat mount
<b>Accessories and Kits</b>	
660000	6-button programmable controller, light control only
660300SSG	3-button programmable controller, light control only
660100SSG	RS485 relay module
HKB-(Model)	Hook required with hook-on mount, specify vehicle — see page 17

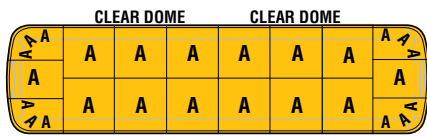
### NOTE

- See page 16 for common replacement parts.

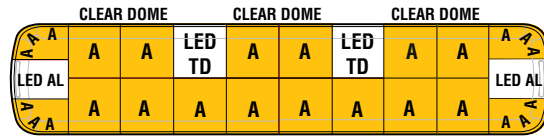
### HOW TO ORDER

Choose one of the popular models above, customize your own lightbar with our online configurator or contact a local Federal Signal representative or distributor.

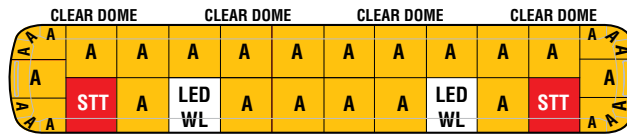
24" and 32" Model-Domes are available in Amber/Clear



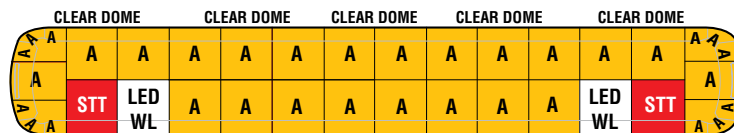
LGD45Z-00169



LGD53Z-00123



LGD61Z-00004



LGD70Z-00004

	LGD24	LGD32	LGD45	LGD53	LGD61	LGD70
<b>Specifications</b>						
Operating Voltage	12.8 VDC for all models					
Current Draw	1 Amp per head, 0.5 Amp per alley light					
<b>Physical Specifications</b>						
Length	24.2 in (61.6 cm)	32.5 in (82.8 cm)	44.5 in (113.0 cm)	52.7 in (133.9 cm)	60.9 in (154.7 cm)	69.1 in (175.5 cm)
Width	11.2 in (28.4 cm)	11.2 in (28.4 cm)	11.2 in (28.4 cm)	11.2 in (28.4 cm)	11.2 in (28.4 cm)	11.2 in (28.4 cm)
Height	2.5 in (6.4 cm)	2.5 in (6.4 cm)	2.5 in (6.4 cm)	2.5 in (6.4 cm)	2.5 in (6.4 cm)	2.5 in (6.4 cm)
<b>Shipping Weight*</b>						
	16.6 lbs. (7.5 kg)	118.5 lbs. (8.4 kg)	20.4 lbs (9.3 kg)	24.2 lbs (11.0 kg)	28.0 lbs (12.7 kg)	31.8 lbs (14.4 kg)

\*Standard foot included

## Relay Module



- Works in conjunction with the 3- or 6-button controllers
- Customize complete warning packages with any serial communication lightbar platform and a variety of lightheads
- Built-in 2-channel flasher with alternating flash patterns
- (4) relay outputs - (2) 10-Amp and (2) 15-Amp (not to exceed 40-Amp)

## Six and Three Button Controller



- Model 660300 features (3) illuminated push-button switches with (9) pre-programmed keypad configurations
- Model 660000 features (6) illuminated push-button switches and a (4) position slide switch with (18) pre-programmed keypad configurations
- Quick and easy install with FS Convergence Network which provides "plug-n-play" installation and programming



# Navigator™ | Lightbar

## Features

- High-profile, traditional cable LED lightbar
- Solaris LED technology incorporated QuadraFlare and SLR modules
- Federal Signal patented SLR rotator optimizes LEDs for a true 360-degrees of light output
- (30) built-in flash patterns
- Two-color capability with LED colors in Amber, Blue, Green, Red and White
- LED takedown, work lights and S/T/T features available
- Available in 18", 25", 60", 73" and 87" lengths
- Five-year LED warranty

8

## Approvals

- SAE Class 1
- CAC Title 13

## Applications

- Security
- Tow & Recovery
- Utility



CLASS 1

TITLE XIII

Online Lightbar  
Configurator

SOLARIS

SLR

Model	Description
<b>60" Models</b>	
NVG60-TOW1	(4) QL73 Amber, (4) QL64 Amber, (2) Work lights, (2) S/T/T, clear domes, clear bulkheads, flat mount
NVG60-TOW2	(4) QL73 Amber, (2) QL64 Amber, (2) SLR Amber with parabolic mirror, (2) Work lights, (2) S/T/T, clear domes, clear bulkheads, flat mount
<b>73" Models</b>	
NVG73-TOW1	(4) QL73 Amber, (4) QL64 Amber, (2) Work lights, (2) S/T/T, clear domes, clear bulkheads, flat mount
NVG73-TOW2	(4) QL73 Amber, (2) QL64 Amber, (2) SLR Amber with parabolic mirror, (2) Work lights, (2) S/T/T, clear domes, clear bulkheads, flat mount
NVG73-TOW2	(4) SLR Amber with parabolic mirror, (2) Work lights, (2) S/T/T, clear domes, clear bulkheads, flat mount
<b>Accessories or Kits</b>	
HKB- (Model)	Hook required with hook-on mount, specify vehicle – see page 17

### NOTE

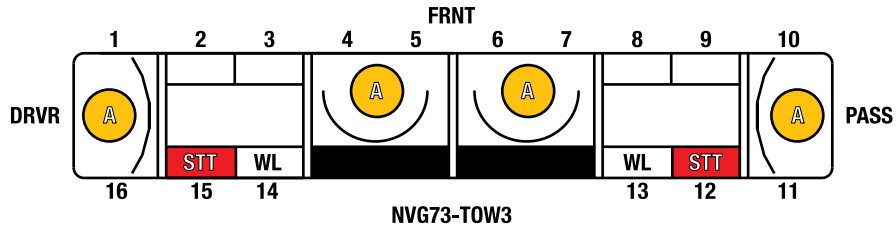
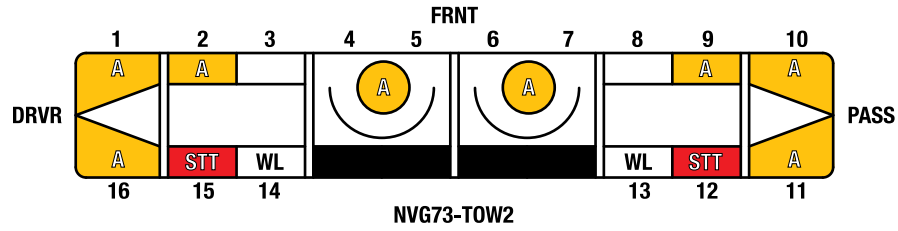
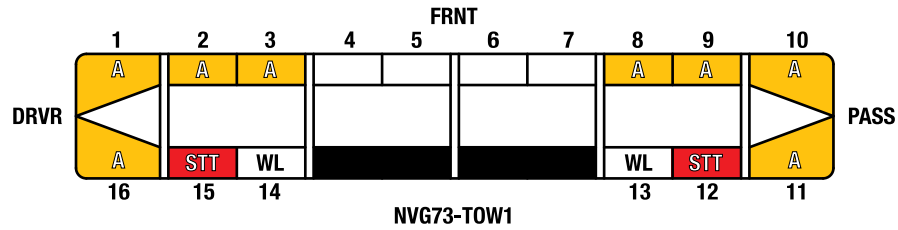
- See page 16 for common replacement parts

### HOW TO ORDER

Choose one of the popular models above, customize your own lightbar with our online configurator or contact a local Federal Signal representative or distributor.



*Stop/Tail/Turn and Work Light features available*



	18"	25"	60"	73"	87"
<b>Specifications</b>					
Operating Voltage	12.8 VDC for all models				
Current Draw	1.5 Amps per QuadraFlare head/2.5 Amps per SLR rotator				
<b>Physical Specifications</b>					
Length	18 in (45.72 cm)	25 in (63.50 cm)	60 in (152.4 cm)	73 in (185.42 cm)	87 in (220.98 cm)
Width	12.5 in (31.8 cm)	12.5 in (31.8 cm)	12.5 in (31.8 cm)	12.5 in (31.8 cm)	12.5 in (31.8 cm)
Height	4.5 in (11.43 cm)	4.5 in (11.43 cm)	4.5 in (11.43 cm)	4.5 in (11.43 cm)	4.5 in (11.43 cm)
<b>Shipping Weight</b>					
	Varies by size and configuration of lightbar				

# Integrity™ | Lightbar

## Features

- Low-profile, all-LED linear lightbar
- SpectraLux® multicolor LED technology
- Solaris® LED reflector technology
- ROC (Reliable Onboard Circuitry™) technology
- Optional built-in SignalMaster™ directional warning
- Front and rear LED Work Light features available
- Six-button controller for ease of installation and lightbar control
- Available in 44" and 51"

## Approvals

- SAE Class 1
- CAC Title 13

## Applications

- Security
- Tow & Recovery
- Utility



Model	Description
<b>44" Models — Hook mount and 6-button controller included</b>	
INTG44S-AMBR1	(22) Amber modules, SignalMaster
INTG44S-AMBR2	(12) Amber/White modules, (10) Amber modules, SignalMaster, front flood feature
INTG44S-AMBR3	(20) Amber/White modules, (2) Amber modules, SignalMaster, front and rear flood feature
<b>51" Models — Hook mount and 6-button controller included</b>	
INTG51S-AMBR1	(26) Amber modules, SignalMaster
INTG51S-AMBR2	(14) Amber/White modules, (12) Amber modules, SignalMaster, front flood feature
INTG51S-AMBR3	(22) Amber/White modules, (4) Amber modules, SignalMaster, front and rear flood feature
<b>Accessories or Kits</b>	
HKB-(Model)	Hook required with hook-on mount, specify vehicle — see page 17

### NOTE

- See page 16 for common replacement parts

### HOW TO ORDER

Choose one of the popular models above, customize your own lightbar with our online configurator or contact a local Federal Signal representative or distributor.

### SpectraLux® Multicolor LED Technology

Exclusive to Federal Signal, SpectraLux provides the ability for a LED light head to operate with an amber flash pattern or the same module can be utilized as a work light.



### Solaris® LED Reflector Design

Federal Signal's Solaris® LED reflector technology is engineered to significantly increase off-axis warning and maximize the LED light source to eliminate dark spots and distribute 360-degrees of light coverage.



### ROC (Reliable Onboard Circuitry) Technology

Federal Signal's patented ROC technology is manufactured to eliminate approximately 85% of the connection failure points found in a typical lightbar assembly. Wires, connections and assemblies have been replaced by PCB assemblies — reducing labor repair time and increasing the road time for your work trucks.



### SignalMaster™

The Integrity is built with an 8-head LED SignalMaster capability for directional warning.

### Simple Installation

For maximum performance, the FS Convergence Network provides literal "plug-n-play" installation. Utilizing standard RJ45 connections, the Integrity can be easily programmed using a six-button controller.



A serial interface module with your existing light controller can also be used to program and operate the features and functions of the Integrity

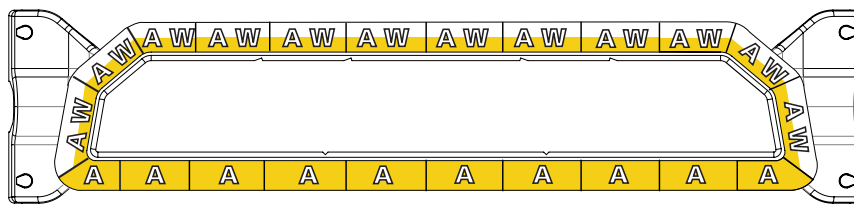


### Easy Service

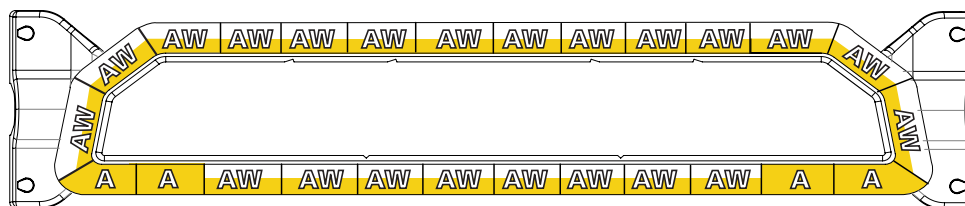
Integrity can be serviced while on the roof top. Remove the single dome and easily disconnect the ROC board.

### Low Power Feature

When activated, the low power feature significantly reduces the light output intensity.



INTG44S-AMBR2



INTG51S-AMBR3

# Valor® | Lightbar

## Features

- SpectraLux® multicolor LED technology
- Solaris® LED reflector technology
- ROC (Reliable Onboard Circuitry™) technology
- Six-button controller for ease of installation and lightbar control
- Available in 44" and 51"

## Approvals

- SAE J845 and J595 Class 1
- CAC Title 13 Class B

## Applications

- Security
- Tow & Recovery
- Utility



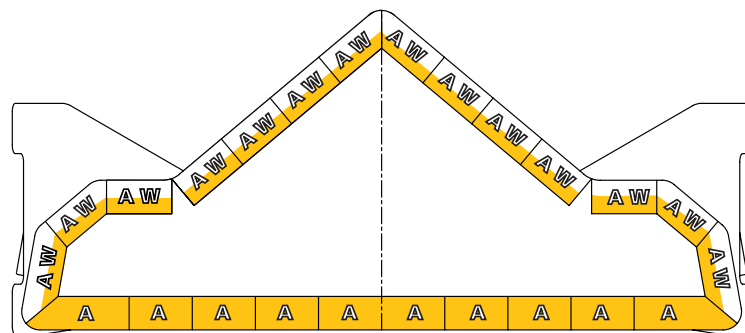
Model	Description
<b>44" Models — Hook mount and 6-button controller included</b>	
VALR44S-AMBR2	(14) Amber/White modules, (10) Amber modules, SignalMaster, front flood feature
VALR44S-AMBR3	(22) Amber/White modules, (2) Amber modules, SignalMaster, full flood feature
<b>51" Models — Hook mount and 6-button controller included</b>	
VALR51S-AMBR2	(12) Amber LED modules, (16) Amber/White LED modules, SignalMaster, front flood feature
VALR51S-AMBR3	(2) Amber LED modules, (26) Amber/White LED modules, SignalMaster, full flood feature
<b>Accessories or Kits</b>	
HKB-(Model)	Hook required with hook-on mount, specify vehicle — see page 17

### NOTE

- See page 16 for common replacement parts

### HOW TO ORDER

Choose one of the popular models above, customize your own lightbar with our online configurator or contact a local Federal Signal representative or distributor.



VALR44S-AMBR2



**SpectraLux® Multicolor LED Technology**

Exclusive to Federal Signal, SpectraLux provides the ability for a LED light head to operate with an amber flash pattern or the same module can be utilized as a work light.



**Solaris® LED Reflector Design**

Federal Signal's Solaris® LED reflector technology is engineered to significantly increase off-axis warning and maximize the LED light source to eliminate dark spots and distribute 360-degrees of light coverage.



**ROC (Reliable Onboard Circuitry) Technology**

Federal Signal's patented ROC technology is manufactured to eliminate approximately 85% of the connection failure points found in a typical lightbar assembly. Wires, connections and assemblies have been replaced by PCB assemblies — reducing labor repair time and increasing the road time for your work trucks.



**SignalMaster™**

The Valor is built with an 8-head LED SignalMaster capability for directional warning.

**Simple Installation**

For maximum performance, the FS Convergence Network provides literal "plug-n-play" installation. Utilizing standard RJ45 connections, the Valor can be easily programmed using a six-button controller.



A serial interface module with your existing light controller can also be used to program and operate the features and functions of the Valor.

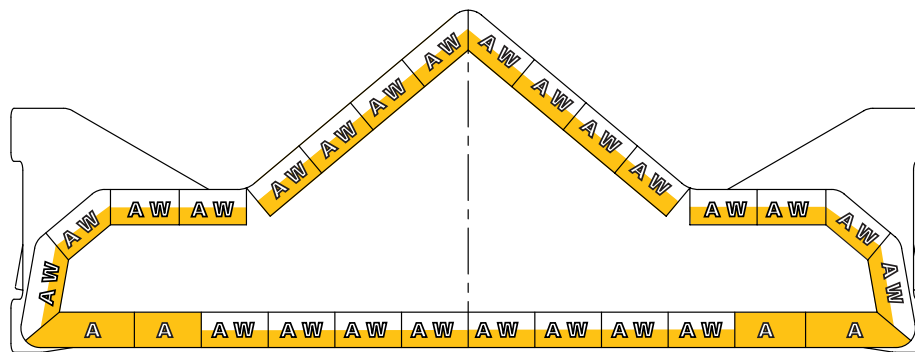


**Easy Service**

Valor can be serviced while on the roof top. Remove the single dome and easily disconnect the ROC board.

**Low Power Feature**

When activated, the low power feature significantly reduces the light output intensity.



VALR51S-AMBR3

# JetSolaris® LED | Lightbar

## Features

- Traditional nine-conductor cable
- Classic aerodynamic profile provides outstanding warning and limits drag
- Solaris® LED reflector technology
- ROC (Reliable Onboard Circuitry™) technology
- Integrated SignalMaster™ directional warning
- Twenty-six (26) user-selectable patterns
- LEDs offered in Amber, Blue, Red and White
- Available in 21", 48", 54", 60" and 72" lengths
- Five-year LED warranty

## Approvals

- SAE J845 and J595 Class 1

## Applications

- Municipal
- Tow & Recovery
- Utility



CLASS 1

Online Lightbar  
ConfiguratorROC  
RELIABLE ONBOARD CIRCUITRY™

SOLARIS

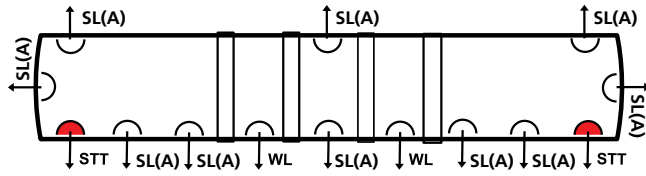
Model	Description
<b>48" Model — Mount kit included</b>	
JLX4816-HD	Amber/Clear/Amber, (14) Amber 6-LED reflectors, (6) Amber 3-LED reflectors
<b>60" Models — Mount kit included</b>	
JLX6003C-HD	Clear/Clear/Clear/Clear/Clear, (8) Amber 6-LED reflectors, (2) Amber 3-LED reflectors, work lights, LED S/T/T lights
JLX6004C-HD	Clear/Clear/Clear/Clear/Clear, (4) Amber 6-LED reflectors, (2) Amber 3-LED reflectors, work lights, LED S/T/T lights
<b>72" Model — Mount kit included</b>	
JLX72LLL-00003	Clear/Clear/Clear/Clear/Clear/Clear/Clear, (18) Amber 6-LED reflectors, (4) Amber 3-LED reflectors, LED S/T/T lights, work lights
<b>Accessories and Kits</b>	
HKB-(Model)	Hook required with hook-on mount, specify vehicle — see page 17
JNHK	Kit, hook mount brackets, Jet
UNPK	Kit, permanent mount, universal
501430	Kit, flat mount

### NOTES

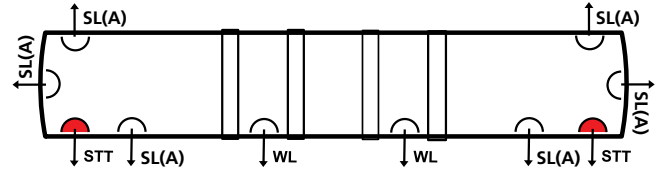
- See page 16 for common replacement parts
- See page 22 for 21" JetSolaris models

### HOW TO ORDER

Choose one of the popular models above, customize your own lightbar with our online configurator or contact a local Federal Signal representative or distributor.



JLX6003C-HD (Clear domes)



JLX6004C-HD (Clear domes)

	48"	54"	60"	72"
<b>Specifications</b>				
Voltage	12 VDC			
Current Draw	3-button Solaris LED reflector - 0.5 Amp 6-button Solaris LED reflector - 1 Amp Traffic Clearing Light - 4.3 Amp Work Light - 4.3 Amp Stop/Tail/Turn - 0.32 Amp			
<b>Physical Specifications</b>				
Height	4.7 in (11.9 cm)	4.7 in (11.9 cm)	4.7 in (11.9 cm)	4.7 in (11.9 cm)
Length	47.5 in (120.0 cm)	54.0 in (137.2 cm)	60.0 in (152.4 cm)	72.0 in (182.9 cm)
Width	11.2 in (28.4 cm)	11.2 in (28.4 cm)	11.2 in (28.4 cm)	11.2 in (28.4 cm)
<b>Ship Weight</b>				
	32.0 lbs (14.5 kg)	33.5 lbs (15.2 kg)	35.0 lbs (15.9 kg)	83.0 lbs (37.4 kg)

# Lightbar Common Replacement Parts

Model	Description
<b>Legend LPX Discrete, Legend LPX and Legend</b>	
Z1751357A-02	RS485, 25-ft Interface cable assembly
Z1751364B	Cable, Interface, 36"
Z8583020B-01	Gasket, dome, Clear, 6-ft required per base, sold by the foot
Z8583446E	Interface module with cable assembly
Z8583469E	Serial interface module
Z8653100A	Base, end, Clear
Z8653101C	Dome, end, Clear; -02(Amber); -03(Blue); -04(Red)
Z8653102A	Base, center, Clear
Z8653103C	Dome, center, Clear; -02(Amber); -03(Blue); -04(Red)
Z8653134B	Hook mount kit
Z8653134B-01	Permanent mount kit
Z8653178A	Flat mount kit
Z8653176C	24"/12" Dome, End, Clear
Z8653176A-02	24"/12" Dome, End, Amber
<b>Integrity</b>	
Z2005653A	Controller replacement board
Z864900652	44", Lens
Z864900653	51", Lens
Z8653134B	Hook mount kit
Z8653134B-01	Permanent mount kit
Z8653178A	Flat mount kit
<b>Valor</b>	
Z2005653A	Controller replacement board
Z8651101A	44", Lens
Z8651103A	51", Lens
Z8651116A	Gasket, Top Dome Valor
<b>JetSolaris LED</b>	
521500-02	End dome, Amber; -04(Red); -05(Clear)
521501-02	Center dome, Amber; -05(Clear)
Z8552348A	Bulkhead gasket assembly, Black; -02(Amber); -05(Clear)

## NOTE

- Common replacement parts can be found online at [www.fedsig.com](http://www.fedsig.com) under Service.

# Hook Kit Reference Guide

For the most up-to-date hook mount information, contact Customer Support at 800-824-0254.

CARS, VANS AND SUV'S			
MAKE/MODEL	YEAR	HOOK KIT MODEL #	ROOF WIDTH
<b>FORD</b>			
Crown Victoria	1992-11	HKB-CV92	46.0"
Edge	2013	HKB-CAR8	51.5"
	2012	HKB-FRD7	52.0"
Escape	2013	HKB-ESC13	52.5"
	2007-12	HKB-ESC7	49.5"
Expedition	2003-12	HKB-FTEX	52.0"
Explorer	2011-13	Permanent Mount	55.0"
	2008-10	HKB-XPL8	51.0"
Fiesta SE	2013	HKB-CHGR11	45.0"
Flex	2012	HKB-CHGR11	57.0"
Focus	2013	HKB-CHGR11	48.5"
	2011-12	HKB-CHGR	48.0"
Fusion	2011-12	HKB-CHGR	48.5"
Mustang	2012-13	Permanent Mount	46.0"
Police Interceptor Sedan	2013-15	HKB-TAR11	52.5"
Police Interceptor Utility	2013-15	HKB-FPIU13B	55.5"
Taurus	2011-13	HKB-TAR11	52.5"
Transit Connect	2012	Permanent Mount	48.0"
Van	1987-12	HKB-SAV	65.0"
<b>CHEVROLET/GM</b>			
Camaro	2011-14	Permanent Mount	50.0"
Caprice	2011-14	HKB-CAP11B	49.25"
Equinox LS (NO Roof Rails)	2012-13	HKB-IMP7	48.0"
Express Van	2003-14	HKB-SAV	61.0"
Impala (Civilian)	2014	HKB-CHGR11	49.5"
	2006-13	HKB-IMP7	46.5"
Impala Limited & Limited Police	2014	HKB-IMP7	46.5"
Malibu	2012-13	HKB-CHGR11	48.0"
	2008-11	HKB-MAL8	47.0"
Sonic (Sedan or Hatchback)	2012-13	Permanent Mount	43.0"
Spark	2013-14	HKB-MAG7	44.5"
Suburban (NO Roof Rails)	2007-14	HKB-TA10	55.0"
Tahoe	2007-14	HKB-TA10	55.0"
	2015	HKB-TAH15-44	44", 45", 46"
	2015	HKB-LPCHGR11	51", 53"
Traverse	2012-14	Permanent Mount	53.0"
Volt	2012-13	HKB-CHGR11	47.0"
<b>CHRYSLER/DODGE/JEEP</b>			
200	2012	HKB-FRD4	50.0"
Challenger	2012-13	Permanent Mount	54.5"
Charger	2011-14	HKB-LPCHGR11	50.25"
	2006-10	HKB-CHGR	47.0"
Durango	2008-09	HKB-DUR8	48.0"
Durango (Slick Top)	2011-13	HKB-MAL7	54.0"
Grand Caravan/Town & Country	2008-13	HKB-CAR8	60.0"
Grand Cherokee	2011	HKB-MAL7	54.0"
Liberty	2012	HKB-CAR8	55.0"
Wrangler	2012-13	Permanent Mount	N/A
<b>Subaru</b>			
WRX	2012	HKB-CHGR11	47.0"

TRUCKS				
MAKE/MODEL	CAB STYLE	YEAR	HOOK KIT MODEL #	ROOF WIDTH
<b>FORD</b>				
F150	Reg	2009-13	HKB-FRD9	57.0"
		2007-08	HKB-FRD7	57.0"
	Ext/SuperCab	2009-13	HKB-FRD9	57.0"
		2007-08	HKB-FRD7	57.0"
	Crew/SuperCrew	2009-13	HKB-FRD9	57.0"
		2007-08	HKB-FRD7	57.0"
F250/350/450	Reg	2007-13	HKB-FHD7	58.5"
	Ext/SuperCab	2007-13	HKB-FHD7	58.5"
	Crew	2007-13	HKB-FHD7	58.5"
<b>CHEVROLET/GMC</b>				
Avalanche (w/o Roof rack only)	Crew	2002-13	HKB-CK2	55.0"
Silverado/Sierra (1500)	Crew	2014	HKB-CHGR (IN Only)	55.75"
Silverado/Sierra (1500, 2500, 3500)	Reg	2014	2007-13	55.0"
	Ext	2007-13	HKB-TA10	55.0"
	Crew	2007-13	HKB-TA10	55.0"
Silverado/Sierra (2500 & 3500)	Reg	2014	HKB-TA10	55.0"
	Ext	2014	HKB-TA10	55.0"
<b>DODGE</b>				
Ram (1500, 2500, 3500)	Reg	2010-14	HKB-FRD9	57.5"
	Quad	2010-14	HKB-FRD9	57.5"
	Mega	2010-14	HKB-FRD9	57.5"

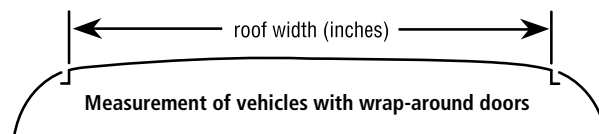
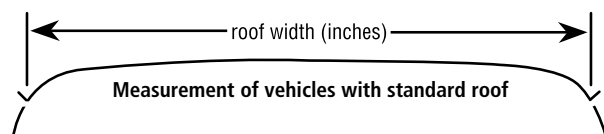
All Federal Signal lightbars may be permanent or hook-on mounted. When using a hook-on mount, a separate hook kit is required for the make, model and year of your vehicle. Use the hook kit reference guide to find your vehicle's appropriate hook kit. Measurements for the roof width are determined by the style of the vehicle. These measurements may help you in choosing the lightbar length best suited for your vehicle.

### Transfer of lightbars from one vehicle to another

From time to time, departments will remove a lightbar from an older vehicle and re-install it on a newer vehicle. Before performing this kind of transition, be sure to contact our Service Department to ensure that you not only have the proper Hook Kit, but that you also have the latest design Lightbar Mount Foot. Mounting Foot designs continuously improve over time, and it is recommended that you utilize the most current Mount Foot design when re-installing an older lightbar on a newer vehicle.

### Notes

The hook kit reference guide is updated on an ongoing basis as information becomes available. Please check the hook kit reference guide online at [www.fedsig.com](http://www.fedsig.com) for up-to-date vehicle and hook kit listings. For older vehicle make and model year hook kit offerings, please contact Customer Support at (800) 264-0254.





# 24" Legend® LPX Discrete | Mini-Lightbar

## Features

- Traditional cable
- Low-profile, linear lightbar design
- Solaris® LED reflector technology
- ROC (Reliable Onboard Circuitry™) technology
- Ten (10) selectable flash patterns; Two (2) flashing modes
- LEDs offered in Amber, Blue, Green Red and White
- Top dome colors are offered in Amber and Clear
- Five-year LED warranty

## Approval

- SAE J845, Class 1

## Applications

- Construction
- Landscape
- Pick-up Trucks
- Snow Plows
- Tow Trucks



CLASS 1

Online Lightbar Configurator

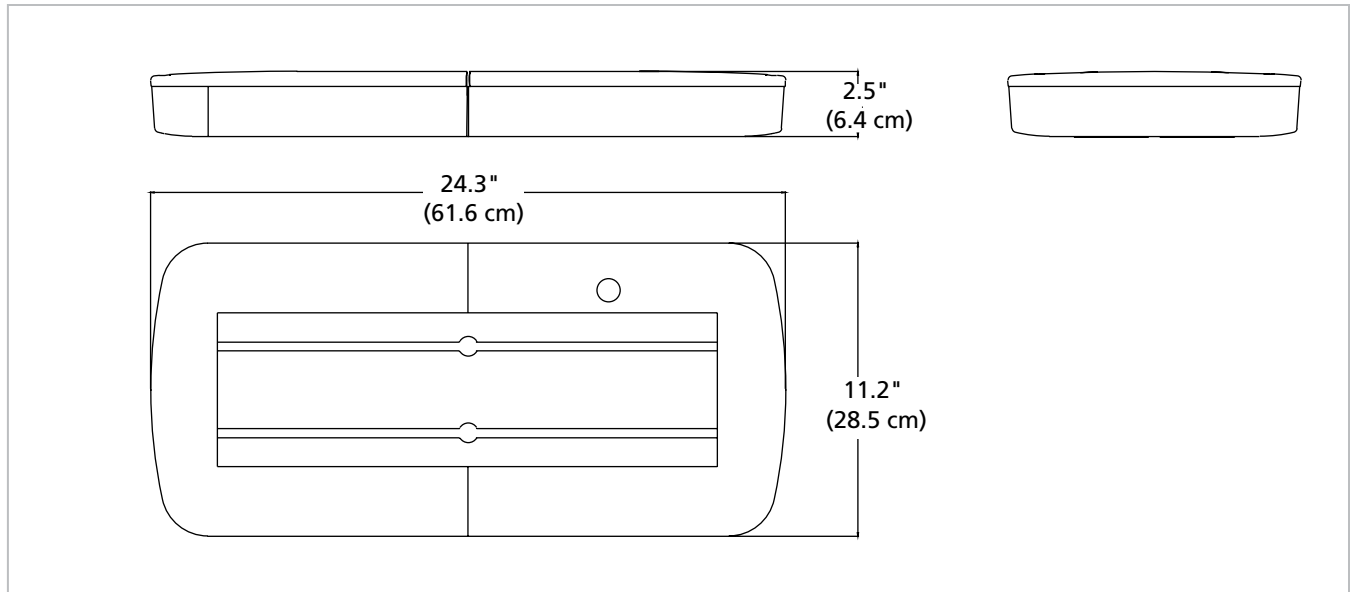
ROC  
RELIABLE ONBOARD CIRCUITRY™

SOLARIS

Model	Description
<b>24" Model</b>	
LPX24D-00003	Clear/Clear, (4) Amber corner LED reflectors, (4) Amber 5" LED reflectors, (2) Amber 2" LED reflectors, permanent mount
LPX24D-00015	Amber/Amber, (4) Amber corner LED reflectors, (4) Amber 5" LED reflectors, (2) Amber 2" LED reflectors, flat mount
<b>24" Model — Magnet mount</b>	
LPX24DS-00002	Clear/Clear, (4) Amber corner LED reflectors, (4) Amber 5" LED reflectors, (2) Amber 2" LED reflectors, cigarette plug included
<b>Accessories and Kits</b>	
660100SSG	RS485 relay module
HKB-(Model)	Hook required with hook-on mount, specify vehicle — see page 17
<b>NOTE</b>	
• See page 16 for common replacement parts.	

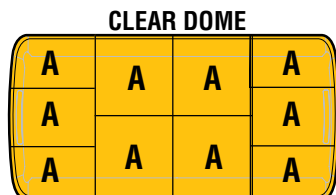
### HOW TO ORDER

Choose one of the popular models above, customize your own lightbar with our online configurator or contact a local Federal Signal representative or distributor.

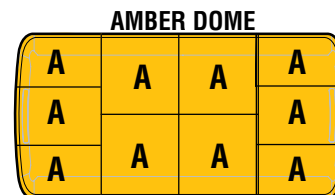


LPX24D	
<b>Specifications</b>	
Operating Voltage	12.8 VDC for all models
Operating Temp	-30°C to +65°C
Current Draw	1 Amp per head, 0.5 Amp per alley light
<b>Physical Specifications</b>	
Height	2.5 in (6.4 cm)
Length	24.3 in (61.6 cm)
Width	11.2 in (28.5 cm)
<b>Shipping Weight</b>	
	16.6 lb (7.5 kg)*

\*Standard Foot Model



LPX24D-00003  
 LPX24DS-00002



LPX24D-00015

# 12" Legend® Sets

## Mini-Lightbar

### Features

- Solaris® LED reflector technology
- ROC (Reliable Onboard Circuitry™) technology
- 20-ft traditional cable
- Built-in flasher models include ten (10) selectable flash patterns
- Five-year LED warranty

### Applications

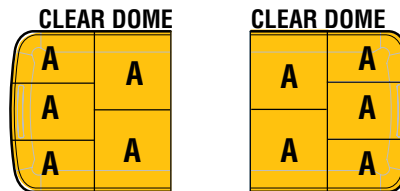
- Tow and Recovery Heavies
- Utility



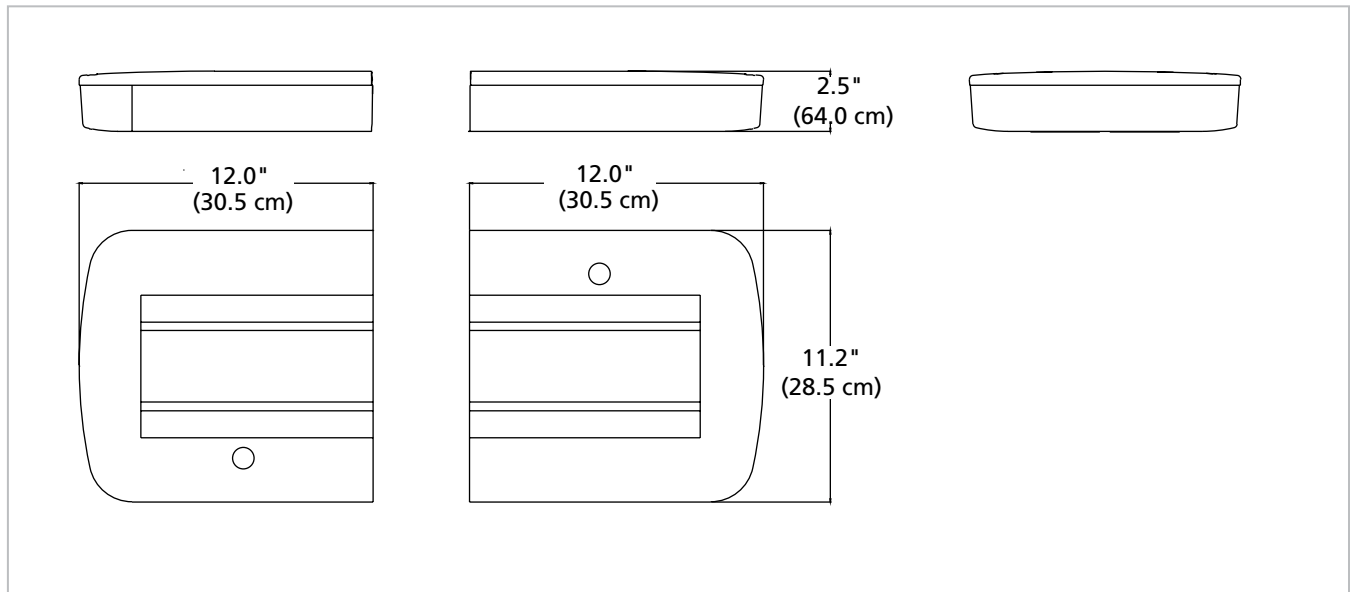
Model	Description
<b>Flat Mount Included</b>	
LGD12Z-00001	Clear, (2) Amber corner LED reflectors, (2) Amber 5" LED reflectors, (1) Amber 2" reflector, built-in flasher, set
LGD12Z-00002	Clear, (2) Amber corner LED reflectors, (2) Amber 5" LED reflectors, (1) Amber 2" reflector, set
<b>Accessories and Kits</b>	
660100SSG	RS485 relay module
650205	Flasher, (2) 10 A loads, (10) flash patterns, high-side switching

**NOTE**

- See page 16 for common replacement parts.



LGD12Z-00001  
LGD12Z-00002



Specifications	
Amp Draw	2.5 Amp @ 12.8 VDC
Flash Patterns	10
LED Color Options	Amber, Blue, Clear, Green and Red
Dome Color Options	Amber and Clear
Physical Specifications	
Height	2.5 in (64.0 cm)
Length	12.0 in (30.5 cm)
Width	11.2 in (28.5 cm)
Ship Weight	
	10.8 lbs (4.9 kg)*

\*Standard foot included

## Relay Module

- Works in conjunction with the 3- or 6-button controllers
- Customize complete warning packages with any serial communication lightbar platform and a variety of light heads
- Built-in 2-channel flasher with alternating flash patterns
- (4) relay outputs - (2) 10-Amp and (2) 15-Amp (not to exceed 40-Amp)



# 21" Mini-JetSolaris® | Mini-Lightbar

## Features

- Solaris® LED reflector technology
- ROC (Reliable Onboard Circuitry™) technology
- Twenty-six (26) user-selectable patterns with primary/secondary modes
- LEDs offered in Amber, Blue, Red and White
- Cigarette plug power option available
- Five-year LED warranty

22

## Approval

- SAE Class 1

## Applications

- Construction
- Pick-up trucks
- Snow plows
- Utility



JLX2106C-HD

CLASS 1

Online Lightbar  
ConfiguratorROC  
RELIABLE ONBOARD CIRCUITRY™

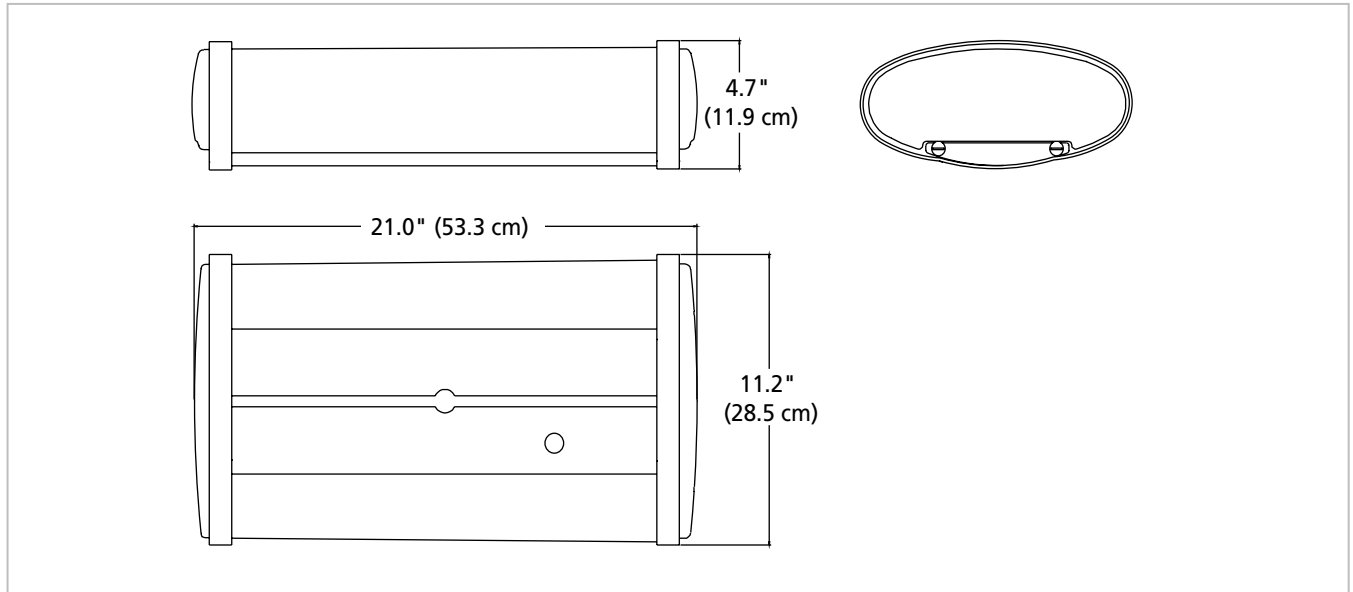
SOLARIS

Model	Description
<b>21" Mini-JetSolaris — Mount kit included</b>	
JLX2101-HD	Amber, (2) Amber 6-LED reflectors, (6) Amber 3-LED reflectors
JLX2101C-HD	Clear, (2) Amber 6-LED reflectors, (6) Amber 3-LED reflectors
JLX2106-HD	Amber, (6) Amber 6-LED reflectors, (6) Amber 3-LED reflectors
JLX2106C-HD	Clear, (6) Amber 6-LED reflectors, (6) Amber 3-LED reflectors
JLX2192-HD	Clear, (6) Amber 6-LED reflectors, (6) Amber 3-LED reflectors, cigarette plug included
<b>Accessories or Kits</b>	
JMPK	Kit, permanent mount, 21" Mini-Jet models
JMMK	Kit, magnetic mount

### HOW TO ORDER

Choose one of the popular models above, customize your own lightbar with our online configurator or contact a local Federal Signal representative or distributor.





Specifications	
Voltage	12 VDC for all models
Current Draw	3-button Solaris LED reflector (any color) - 0.5 Amp
	6-button Solaris LED reflector (any color) - 1 Amp
	Traffic Clearing Light - 4.3 Amp
	Work Light - 4.3 Amp
	Stop/Tail/Turn - 0.32 Amp
Physical Specifications	
Height	4.7 in (11.9 cm)
Length	21.0 in (53.3 cm)
Width	11.2 in (28.5 cm)
Ship Weight	
	16.0 lbs (7.2 kg)



JMK



JMMK

# HighLighter™ LED | Mini-Lightbar

## Features

- Solaris® LED reflector technology
- ROC (Reliable Onboard Circuitry™) technology
- Highly effective 360-degree of light output
- Low profile; only 2.6" tall; 15" long
- Offered in Amber LEDs only
- Dome available in Amber and Clear
- Five-year LED warranty

## Approval

- SAE J845, Class 1

## Applications

- Construction
- Landscape vehicles
- Pick-up trucks
- Snow plows



454101HL-02

CLASS 1

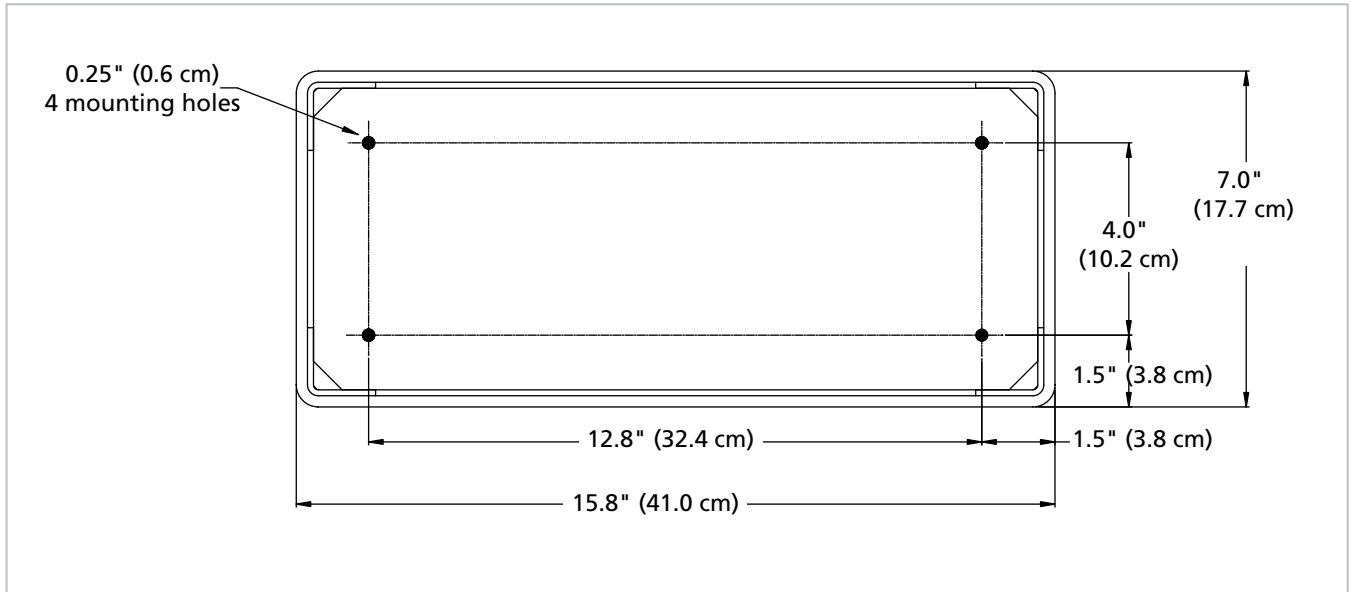
ROC  
RELIABLE ONBOARD CIRCUITRY™

SOLARIS

Model	Description
<b>Suction-cup magnet mount, cigarette plug with on/off switch</b>	
454100HL-02	Amber LEDs with Amber dome
454101HL-25	Amber LEDs with Clear dome
<b>Permanent mount models</b>	
454101HL-02	Amber LEDs with Amber dome
454101HL-25	Amber LEDs with Clear dome
<b>Magnetic mount models, cigarette plug with on/off switch</b>	
454102HL-02	Amber LEDs with Amber dome
454102HL-25	Amber LEDs with Clear dome

### NOTE

- See page 34 for mounting kits
- Visit [www.fedsig.com](http://www.fedsig.com) to view HighLighter LED flash patterns



Specifications			
Amp Draw	Max 4 Amps; Total Amp draw depends on flash pattern used		
Flash Rate	Various		
Flash Patterns	23		
LED Count	26		
LED Color Options	Amber		
Lens Color Options	Amber and Clear		
Physical Specifications			
	Permanent mount	Magnetic mount	Suction-cup mount
Height	2.7 in (6.6 cm)	3.0 in (7.6 cm)	3.0 in (7.6 cm)
Length	15.3 in. (38.8 cm)		
Width	8.4 in (21.3 cm)		
Ship Weight			
	3.4 lbs (1.5 kg)	4.5 lbs (2.0 kg)	6.0 lbs (2.7 kg)



*Shatterproof dome and base with wiper blade gasket protects against moisture*



*On/Off control switch on cigarette plug magnet mount models*

# HighLighter™ LED Plus | Mini-Lightbar

## Features

- Low profile; only 2.6" tall
- Uniform 360-degree light distribution; no dark spots or shadows
- Solaris® LED reflector technology
- ROC (Reliable Onboard Circuitry™) technology
- Pattern selection using MagnetSelect™, key chain included
- Low power, dim option
- See [www.fedsig.com](http://www.fedsig.com) for "How-to" videos on the HighLighter LED
- Five-year LED warranty

## Approvals

- SAE J845, Class 1
- CAC Title 13 approved

## Applications

- Construction
- Landscape
- Pick-up trucks
- Snow plows



454201HL-02

CLASS 1

CAC Title 13

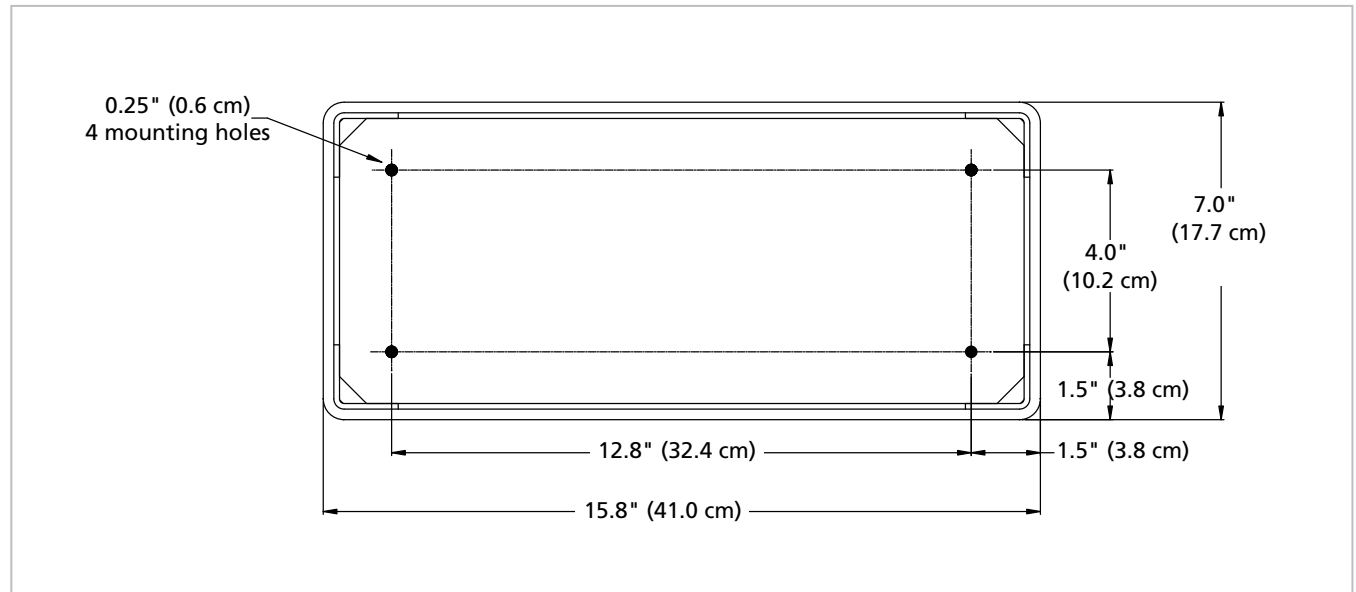
ROC  
RELIABLE ONBOARD CIRCUITRY™

SOLARIS

Model	Description
<b>Solid-color models</b>	
<b>Suction-cup magnet mount, cigarette plug with on/off switch</b>	
454200HL-02	Amber LEDs with Amber dome; -03(Blue); -04(Red)
454200HL-25	Amber LEDs with Clear dome; -35(Blue); -45(Red)
<b>Permanent mount models</b>	
454201HL-02	Amber LEDs with Amber dome; -03(Blue); -04(Red)
454201HL-25	Amber LEDs with Clear dome; -35(Blue); -45(Red)
<b>Magnetic mount, cigarette plug with on/off switch</b>	
454202HL-02	Amber LEDs with Amber dome; -03(Blue); -04(Red)
454202HL-25	Amber LEDs with Clear dome; -35(Blue); -45(Red)
<b>Accessories and Kits</b>	
SW2	Switch control
Z8560109A	MagnetSelect key chain
<b>Common Replacement Parts</b>	
Z8560095B-02	Dome, LED HighLighter, Amber; -03(Blue); -04(Red); -05(Clear)
Z124161A	Kit, base, LED HighLighter

### NOTES

- See page 34 for mounting kits
- See price sheet for additional HighLighter LED models
- Visit [www.fedsig.com](http://www.fedsig.com) to view HighLighter LED Plus flash patterns



Specifications			
Amp Draw	Max 4.8 Amps; Total Amp draw depends on flash pattern used		
Flash Rate	Various		
Flash Patterns	23		
LED Count	36		
LED Colors Options	Amber, Blue, Clear, Green and Red		
Lens Color Options	Amber, Blue, Clear, Green and Red		
Physical Specifications			
	Permanent mount	Magnetic mount	Suction-cup mount
Height	2.7 in (6.6 cm)	3.0 in (7.6 cm)	3.0 in (7.6 cm)
Length	15.8 in. (41.0 cm)		
Width	7.0 in (17.7 cm)		
Ship Weight			
	3.4 lbs (1.5 kg)	4.5 lbs (2.0 kg)	6.0 lbs (2.7 kg)



MagnetSelect enables selection from 23 flash patterns using a simple magnet.



Highly-effective 360-degree of light output.



A wiper gasket blade improves the seal of the dome.



On the bottom of the base, are two knock-outs with a strain-relief for power and ground or for additional wiring.

# HighLighter™ LED Pro | Mini-Lightbar

## Features

- Low profile; only 2.6" tall
- 360-degree light distribution; no dark spots or shadows
- Solaris® LED reflector technology
- ROC (Reliable Onboard Circuitry™) technology
- Pattern selection using MagnetSelect™, key chain included
- Sync capability, option
- Two channel high-side flasher synchronizes other light heads (up to 7.5 Amp per channel), option
- Low power, dim option
- Models can be configured with Amber, Blue, Green, Red or White LEDs
- Five-year LED warranty

## Approvals

- SAE Class 1
- CAC Title 13

## Applications

- Construction
- Landscape
- Pick-up trucks
- Snow plows



454301HL-AWA

CLASS 1

CAC Title 13

ROC  
RELIABLE ONBOARD CIRCUITRY™

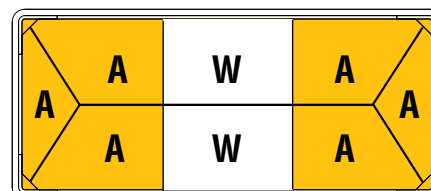
SOLARIS

Model	Description
<b>Suction-cup magnet mount, cigarette plug with on/off switch</b>	
454300HL-AWA	AWAAAWAA, Clear dome
<b>Permanent mount models</b>	
454301HL-AWA	AWAAAWAA, Clear dome
<b>Magnetic mount, cigarette plug with on/off switch</b>	
454302HL-AWA	AWAAAWAA, Clear dome
<b>Accessories and Kits</b>	
SW2	Switch control
Z8560109A	Magnet Select keychain
<b>Common Replacement Parts</b>	
Z8560095B-02	Dome, LED HighLighter, Amber; -03(Blue); -04(Red); -05(Clear)
Z124161A	Kit, base, LED HighLighter

### NOTES

- See page 34 for mounting kits
- See price sheet for additional HighLighter LED models
- Visit [www.fedsig.com](http://www.fedsig.com) to view HighLighter LED Pro flash patterns

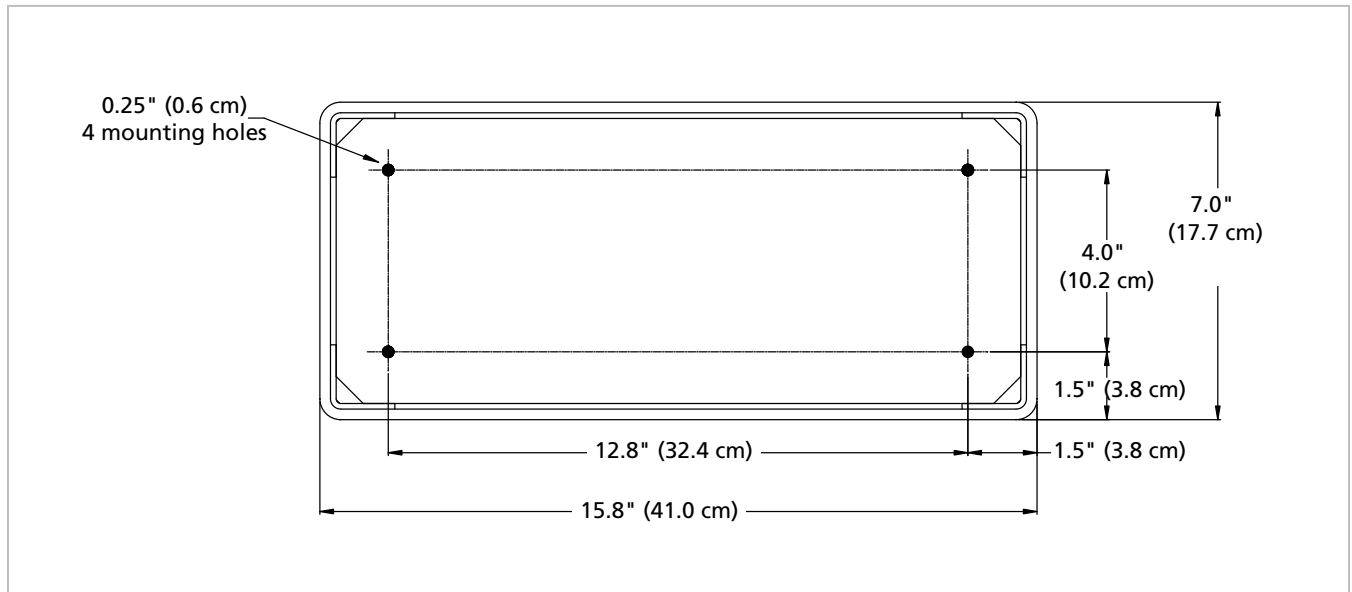
### CLEAR DOME



454300HL-AWA

454301HL-AWA

454302HL-AWA



Specifications			
Amp Draw	Max 5.7 Amps; Total Amp draw depends on flash pattern used		
Flash Rate	Various		
Flash Patterns	23		
LED Count	42		
LED Colors Options	Amber, Blue, Clear, Green and Red		
Lens Color Options	Clear		
Physical Specifications			
	Permanent mount	Magnetic mount	Suction-cup mount
Height	2.7 in (6.6 cm)	3.0 in (7.6 cm)	3.0 in (7.6 cm)
Length	15.8 in. (41.0 cm)		
Width	7.0 in (17.7 cm)		
Ship Weight			
	3.4 lbs (1.5 kg)	4.5 lbs (2.0 kg)	6.0 lbs (2.7 kg)



MagnetSelect enables selection from 23 flash patterns using a simple magnet.



Highly-effective 360-degree of light output.



A wiper gasket blade improves the seal of the dome.



On the bottom of the base, are two knock-outs with a strain-relief for power and ground or for additional wiring.



# HighLighter™ | Mini-Lightbar

## Features

- Two 55-watt halogen reflectors produce an effective 80,000 candelas each
- Compact size - 15" long
- Special thick filament bulb
- Permanent or magnetic mount options for ease of installation
- Domes available in Amber, Blue and Clear
- Five-year product warranty

## Approvals

- SAE J845, Class 1
- CAC Title 13 approved

## Applications

- Construction
- Landscape
- Pick-up trucks
- Snow plows

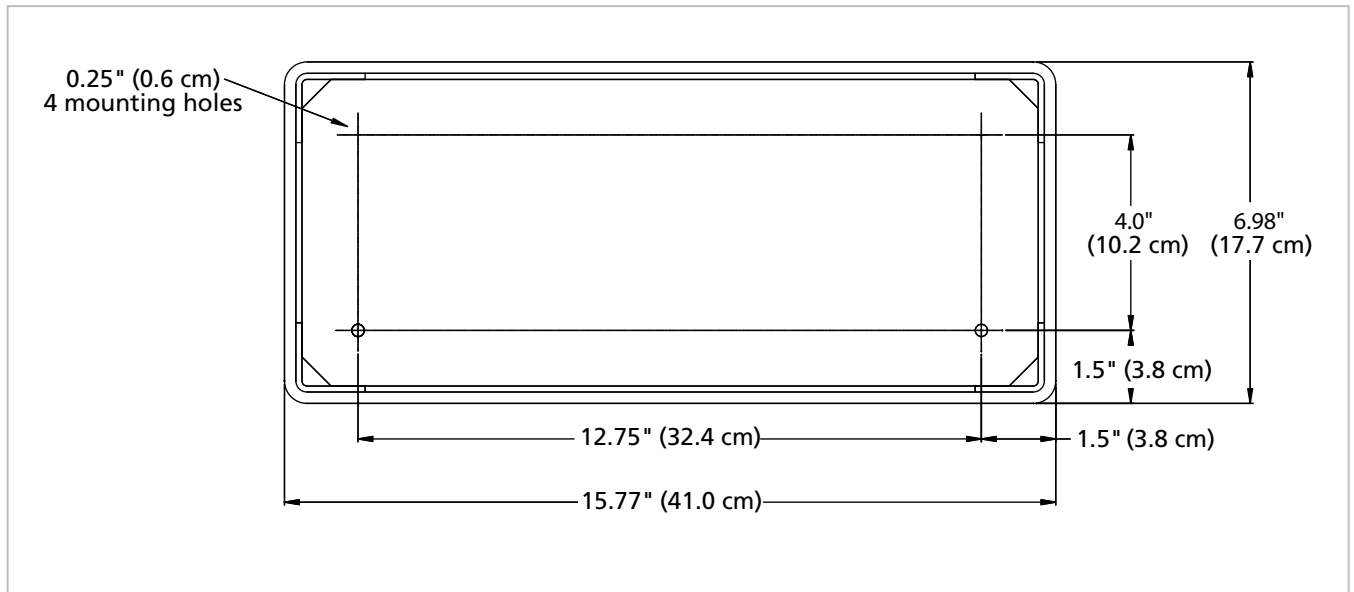


(permanent mount shown)

CLASS 1

CAC Title 13

Model	Description
<b>Permanent mount</b>	
450112-02	(2) 95 FPM rotators, diagonal mirror; Amber
450114-02	(2) 95 FPM rotators, diagonal mirror, 24 VDC; Amber
450152-02	(2) 120 FPM rotators, diagonal mirror; Amber
451112-02	(2) 175 FPM rotators, diagonal mirror; Amber; -05(Clear)
<b>Magnetic mount, includes cigarette plug</b>	
452142-02	(2) 95 FPM rotators, diagonal mirror; Amber; -03(Blue); -05(Clear)
452412-02	(2) 175 FPM rotators, diagonal mirror; Amber
<b>Suction-cup magnetic mount, includes cigarette plug</b>	
450142-02	(2) 95 FPM rotators, diagonal mirror; Amber
450162-02	(2) 120 FPM rotators, diagonal mirror; Amber
451412-02	(2) 175 FPM rotators, diagonal mirror; Amber
<b>Kits</b>	
DCK	Kit, dome cover, specify color, -A(Amber)
SPL2	Kit, rotator lens, specify color, -A(Amber); -B(Blue)
452341	Magnet mount kit with cigarette plug included
<b>Common Replacement Parts</b>	
Z8440A265A-02	Bulb, 55 W, halogen, long life
439231-95	Bulb, 24 VDC
447532SSG	Motor, 95 FPM, 12 VDC
447542	Motor, 120 FPM, 12 VDC
447539	Motor, 175 FPM, 12 VDC
447534	Motor, 95 FPM, 24 VDC
448572SSG	Rotator, 95 FPM, 12 VDC
448522	Rotator, 175 FPM, 12 VDC
448514	Rotator, 95 FPM, 24 VDC
448524	Rotator, 175 FPM, 24 VDC
452510-02	Dome, HighLighter; Amber; -03(Blue); -05(Clear)



	450112	452142	451112	452412
<b>Factory Set Specifications</b>				
Input Voltage	12.8 VDC	12.8 VDC	12.8 VDC	12.8 VDC
Current Draw	8.6 Amp	8.6 Amp	8.6 Amp	8.6 Amp
Candelas	80,000	80,000	80,000	80,000
Flash Rate	285/min.	285/min.	525/min.	525/min.
Dome colors	Amber, Blue and Clear			
<b>Physical Specifications</b>				
Height	5.3 in (13.5 cm)	5.3 in (13.5 cm)	5.3 in (13.5 cm)	5.3 in (13.5 cm)
Length	15.8 in (40 cm)	15.8 in (40 cm)	15.8 in (40 cm)	15.8 in (40 cm)
Width	7.0 in (17.8 cm)	7.0 in (17.8 cm)	7.0 in (17.8 cm)	7.0 in (17.8 cm)
<b>Ship Weight</b>				
	5.0 lbs (2.3 kg)	7.3 lbs (3.3 kg)	5.0 lbs (2.3 kg)	7.3 lbs (3.3 kg)

**NOTE**

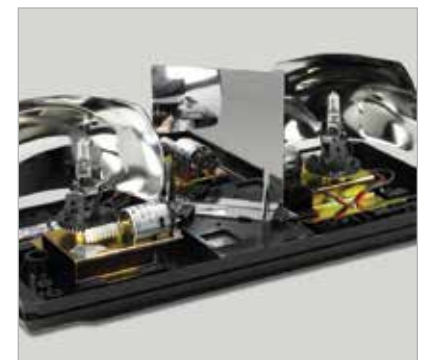
- See page 36 for mounting kits



**452341**  
Magnetic mount kit with cigarette plug included



For ease of service while on the vehicle, the dome can be removed from the base by simply removing (4) screws



Two 55-watt reflectors produce 80,000 candelas each (diagonal mirror shown)

# TurboBeam® | Mini-Lightbar

## Features

- Powerful 80,000-candela halogen rotators
- Optional diamond mirrors double flash rate
- Available in 15" and 22" lengths with flush or raised bases
- Five-year product warranty

## Approval

- SAE J845, Class 1

## Applications

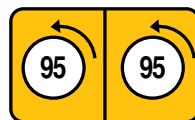
- Landscape Vehicles
- Pick-up Trucks
- Snow Plows
- Utility



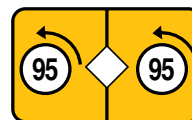
415010-02SC

CLASS 1

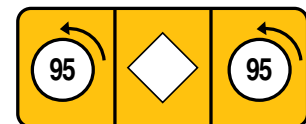
Model	Description
<b>15" Models — 12 VDC, (2) rotators, flush base</b>	
211906-02SC	Diamond mirror, magnetic mount, Amber
415010-02SC	Permanent mount, Amber
415011-02SC	Diamond mirror, permanent mount, Amber
<b>22" Models — 12 VDC, (2) rotators, diamond mirror, flush base</b>	
211914-02SC	Magnetic mount, Amber
415111-02SC	Permanent mount, Amber; -04(Red); -242(Amber/Red/Amber); -454(Red/Clear/Red)
<b>Accessories and Kits</b>	
SPL2	Filter, rotator, specify color, -A(Amber); -B(Blue); -R(Red); (only compatible with all raised base and 22" flush base models)



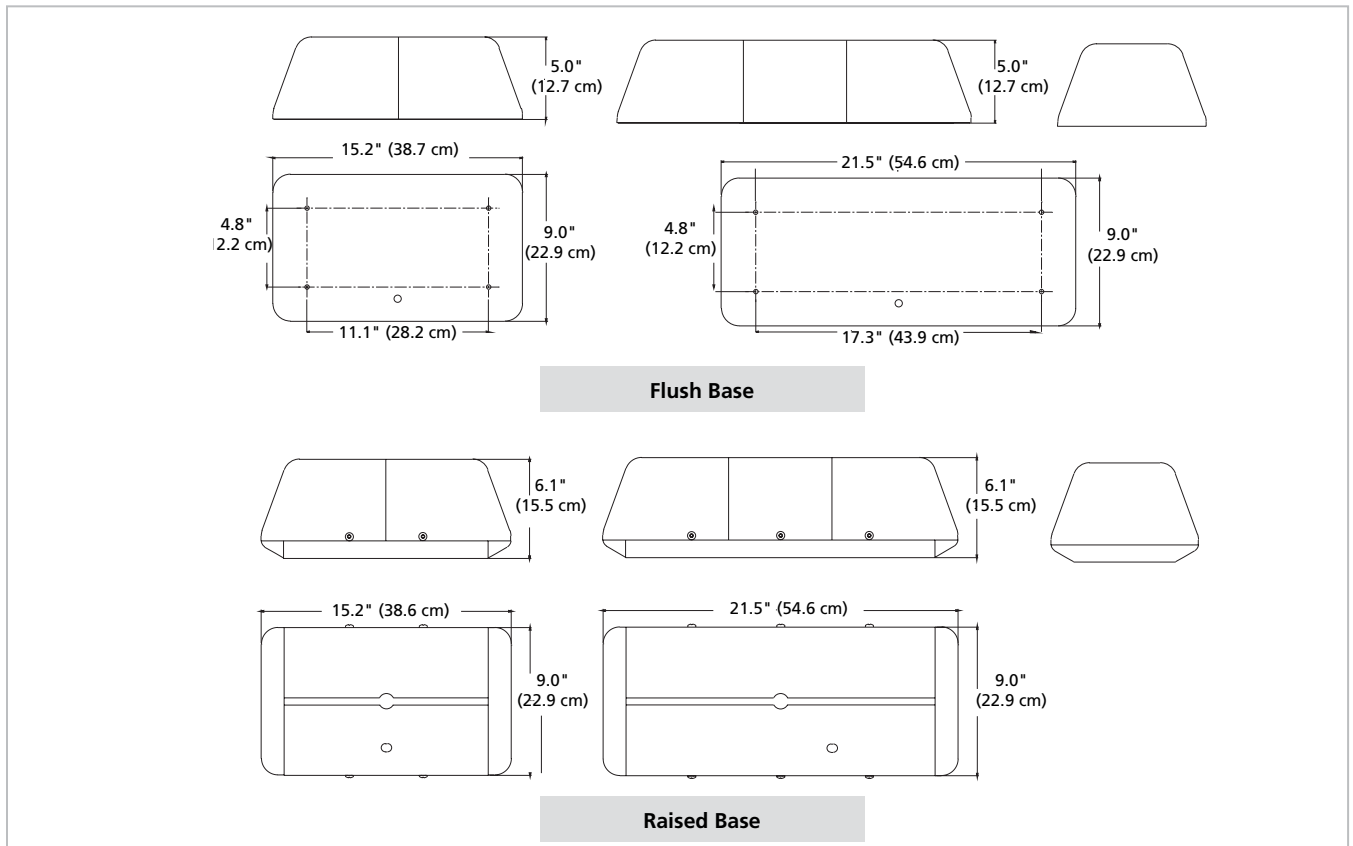
415010-02SC



211906-02SC  
415011-02SC



211914-02SC  
415111-02SC



	15"	22"
<b>Specifications</b>		
Flash Rate	190 per minute (380 with mirror)	
Voltage	12/24 VDC	
Candelas	80,000	
<b>Physical Specifications</b>		
Height	5.0 in (12.7 cm)	5.0 in (12.7 cm)
Length	15.0 in (38.1 cm)	22.0 in (55.8 cm)
Width	9.0 in (22.9 cm)	9.0 in (22.9 cm)
<b>Ship Weight</b>		
	5.0 lbs (2.2 kg)	6.0 lbs (2.7 kg) (add 2.0 lbs [0.9 kg] for magnetic mount)



SPL2-A

# Mini-Lightbar Specifications / HighLighter Mounting Kits

## LED Mini-Lightbars

Model	Operating Voltage	Amp Draw	FPM	Flash Patterns	Approvals	Base Material	LED Colors	Dome Colors	Dimensions (L x W x H)	Ship Weight (lbs)	Warranty (years)
24" Legend LPX Discrete	12	4.0 A @ 12.8 V	Various	Various	Class 1	Aluminum	Amber, Blue, Green, Red and White	Amber and Clear	24.3" x 11.2" x 2.5"	10.8*	5
12" Legend	12	2.5 A @ 12.8 V	Various	10	Class 1	Aluminum	Amber, Blue, Green, Red and White	Amber and Clear	12.0" x 11.2" x 2.5"	10.8*	5
Mini-JetSolaris	12	2.0 A @ 12 V	Various	26	Class 1	Aluminum	Amber, Blue, Green, Red and White	Amber, Blue, Clear and Red	21.0" x 11.2" x 4.7"	16.0*	5
HighLighter LED	12	Total Amp draw depends on flash pattern used.	Various	23	Class 1	Polycarbonate	Amber	Amber and Clear	15.3" x 8.4" x 3.0"	6.0*	5
HighLighter LED Plus	12	Total Amp draw depends on flash pattern used.	Various	23	Class 1 and Title 13	Polycarbonate	Amber, Blue, Clear, Green and Red	Amber, Blue, Clear, Green and Red	15.3" x 8.4" x 3.0"	6.0*	5
HighLighter LED Pro	12	Total Amp draw depends on flash pattern used.	Various	23	Class 1 and Title 13	Polycarbonate	Amber, Blue, Clear, Green and Red	Amber, Blue, Clear, Green and Red	15.3" x 8.4" x 3.0"	6.0*	5

\*Permanent mount models

## Rotating Mini-Lightbars

Model	Operating Voltage	Amp Draw	Lamp	Candelas	FPM	Approvals	Base Material	Dome Colors	Dimensions (L x W x H)	Ship Weight (lbs)	Warranty (years)
HighLighter	12/24	8.6 @ 12 V; 5.8 @ 24 V	55/70	80,000	285-525	Class 1 Title 13	Polycarbonate	Amber, Blue, Clear and Green	15.8" x 7.0" x 5.3"	5.0	5
TurboBeam Mini-Lightbar	12/24	8.6 @ 12 V; 5.6 @ 24 V	55/70	80,000	190/380	Class 1	Aluminum	Amber, Blue, Red, Clear and Green	(15") 15.0" x 9.0" x 5.0" (22") 22.0" x 9.0" x 5.0"	5 (15") 6 (22")	5

## Mounting Kits - For use with HighLighter LED Series and HighLighter models.



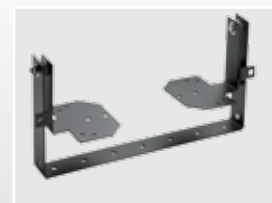
452341



454218



454217



210883SSG

Model	Description
452340	Kit, magnetic mount, cigarette plug included
452341	Kit, suction cup magnetic mount, cigarette plug included
452342	Kit magnetic mount, cigarette plug not included
454217	Kit, riser mount
454218	Kit, flat mount
210883SSG	Self-leveling bracket

# Beacon Specifications

## LED Beacons

Model	Operating Voltage	Amp Draw	RPM	Flash Patterns	Approvals	Base Material	Dimensions (D x H)	Ship Weight (lbs)	Warranty (years)
SLR Beacon	12/24	1.8A @ 12.8 V	75/90/120	--	Class 1 & 2	Aluminum/ Polycarbonate	7.09" x 5.75"	2.75	5
UltraStar LED	12/24	1.2A @ 12.8 V	--	14	Class 1	Aluminum	6.5" x 5.25"	2.75 (perm.) 3.5 (mag.)	5
Pulsator LED	12/24	0.74 A/0.325 A average @ 12.8 V Class 1; 0.65 A max @ 0.28 A average Class 2	--	14	Class 1 & 2	Polycarbonate	6.5" x 6.0"	1.9	5
Pulsator 451 LED	12/24	0.65A max / 0.28 average @12.8VDC	--	14	Class 2	Polycarbonate	6.5" x 4.0"	1.3	5
651 LED	12/24	1A @ 12.8 V	--	4	Class 2	Aluminum	6.51" x 5.4" 6.51" x 6.05" (Wire Branch Guard)	2	5
AL2	12/24	1A @ 12.8 V	--	4	Class 3	Aluminium or Chrome-Plated Aluminium	8.3" x 9.7"	3.8	5
Firebolt LED	12/24	1A @ 12.8 V	--	14	Class 2	Polycarbonate	5.1" x 3.6"	1.3	5
Firebolt LED	12/24	1A @ 12.8 V	--	8	Class 3	Polycarbonate	5.1" x 3.8"	1.2	3

## Strobe Beacons

Model	Operating Voltage	Amp Draw	Joules	Watts	FPM	Approvals	Base Material	Dimensions (D x H)	Ship Weight (lbs)	Warranty (years)
UltraStar US 5	12/24	1.8A @ 12V to 0.9A @ 24V	13/14	18.4/19	85/80	Class 1 & 2	Aluminum	6.5" x 6.74" (Tall) 6.5" x 5.25" (Short)	4.0	5
UltraStar US 6	12/24	2.0A @ 12.8V to 1.2A @ 25.6V (high) 1.6A @ 12.8V to 0.8A @ 25.6V (low)	17/12	17/12	75	Class 1	Aluminum	6.5" x 6.7" (Perm.) 6.5" x 6.9" (Mag.)	4.25 (Perm.) 4.95 (Mag.)	5
UltraStar US 7	12/24	2.5A @12V to 1.2A to 24V	21/13 Hi-Lo	21.3/15	75	Class 1	Aluminum	6.5" x 6.74" (Tall)	4.0	5
Model 901	12/48	2.1A @ 12V to 0.55A @ 48V	18/9	21.3	75	Class 1	Aluminum	6.51" x 5.69"	2.3	5
Model 951	12/48	2.1A @ 12V to 0.55A @ 48V	18/9	21.3	75	Class 1, Title 13	Aluminum	6.51" x 5.88"	2.7	5
Model 851	12/48	1.65A @ 12V	12	16	80	Class 2	Aluminum	6.6" x 7.5"	2.2	5
Model 651	12/48, 72	1.65A @ 12V to 0.41 @ 48V	12/10	12/10	80	Class 2	Aluminum	6.51" x 5.65"	2.0	5
Pulsator 551 Plus	12/48	1.2A @ 12V to 0.3A @ 48V (10J)	10/8	13.3/12.5	80/75	Class 2	Polycarbonate	6.5" x 6.0"	1.5 1.9 (Heavy Duty)	3
Pulsator 451 Plus	12/48	0.9A @ 12V to 0.25 @48V	8	10.7/10	80/75	Class 2	Polycarbonate	6.5" x 4.0"	1.3 1.6 (Heavy Duty)	3
Model 401	12/48	0.65A @ 12V to 0.17A @ 48V	5	5.4	65	Class 2	Rubber	5.72" x 5.0"	1.3 1.9 (Heavy Duty)	3
Firebolt Plus	12/72 @ 2J 12/48 @ 5J	0.24A @ 12V to 0.04A @24V	2	16	60/65	Class 3	Polycarbonate	5.1" x 3.61"	0.7	3
Renegade	12/48	0.3A @ 12V	2.2	2.6	75	Class 3	Polycarbonate	2.86" x 4.27" Pipe Mount 4.0" x 4.27" Permanent Mount	0.9	3

## Halogen Beacons

Model	Operating Voltage	Amp Draw	Lamp	Candelas	FPM	Approvals	Base Material	Dimensions (D x H)	Ship Weight (lbs)	Warranty (years)
Sentry	12/24	4.3 @ 12V; 2.1 @ 24V	55/70	80,000	95/175	Class 1, Title 13	Polycarbonate	6.33" x 6.48"	2.0	5
Model 100	12/24	4.3 @ 12V; 2.1 @ 24V	55/70	80,000	95/120/195	Class 1, Title 13	Polycarbonate	8.42" x 7.31"	4.0	5

# Firebolt® LED | LED Beacon

## Features

- Magnet mount models with cigarette-plug available
- Polycarbonate dome and base
- Multi-voltage, 12-24 VDC

## Class 2 Models

- Built-in permanent/ 1/2" pipe mount base
- Five-year warranty

## Class 3 Models

- Built-in permanent mount base
- Three-year warranty

## Approvals

- SAE J845, Class 2 (220250-02)
- SAE J845, Class 3 (220350-02)

## Applications

- Forklifts
- Landscape
- Pick-up Trucks



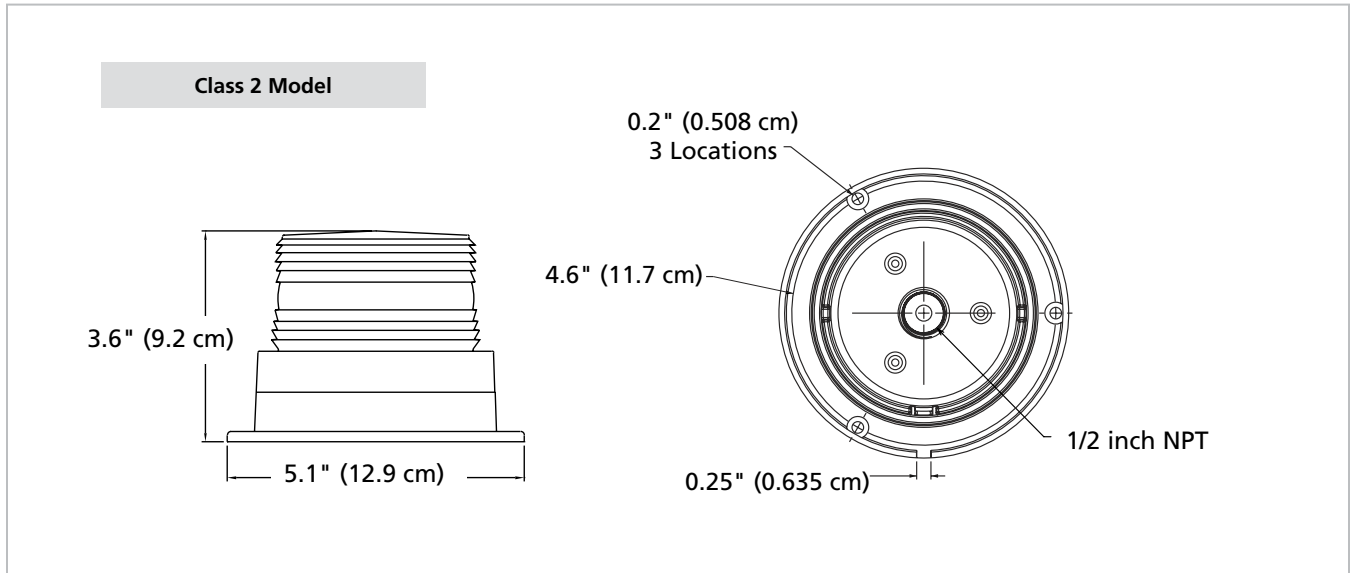
CLASS 2 CLASS 3

Model	Description
<b>Firebolt LED, Class 2</b>	
<b>Permanent/1/2" pipe mount base</b>	
220250-02	Amber dome, Amber LEDs; -03(Blue); -04(Red); -05(Clear); -06 (Green)
<b>Magnet mount, cigarette plug</b>	
220260-02	Amber dome, Amber LEDs; -03(Blue); -04(Red); -05(Clear); -06 (Green)
<b>Firebolt LED, Class 3</b>	
<b>Permanent Mount</b>	
220350-02	Amber dome
<b>Magnet Mount</b>	
220360-02	Amber dome
<b>Accessories and Kits for Class 2 models</b>	
210539	"L" mounting bracket
210728	Kit, magnetic mount with cigarette-plug
210850SSG	Adapter, pipe mount, 3/4"
210862	Kit, mounting self-adhesive
211676	Dome guard assembly, chrome

### NOTES

- Visit [www.fedsig.com](http://www.fedsig.com) to view Firebolt LED flash patterns





Model	Operating Voltage	Amp Draw	Flash Patterns	Approvals	Base Material	Dimensions (D x H)	Ship Weight (lbs)	Warranty (years)
Firebolt LED	12/24	1 A @ 12.8 V	14	Class 2	Polycarbonate	5.1" x 3.6"	1.3	5
Firebolt LED	12/24	1 A @ 12.8 V	8	Class 3	Polycarbonate	5.1" x 3.8"	1.2	3



Magnetic mount cigarette plug option available, Class 2 model



Built-in permanent 1/2" pipe mount base, Class 2 model

# Pulsator® LED | LED Beacon

## Features

- LED technology for zero maintenance lighting; no bulbs or strobe tubes to replace
- Fourteen (14) selectable “strobing” flash patterns
- Multi-voltage, 12-24 VDC
- Built-in permanent/ 1-inch pipe-mount polycarbonate base
- Five-year LED warranty

## Approvals

- SAE J845, Class 1 (212660-02SB)
- SAE J845, Class 2 (212650-02SB, 212670-02SB)

## Applications

- Landscape
- Pick-up Trucks
- Snow Plows
- Utility

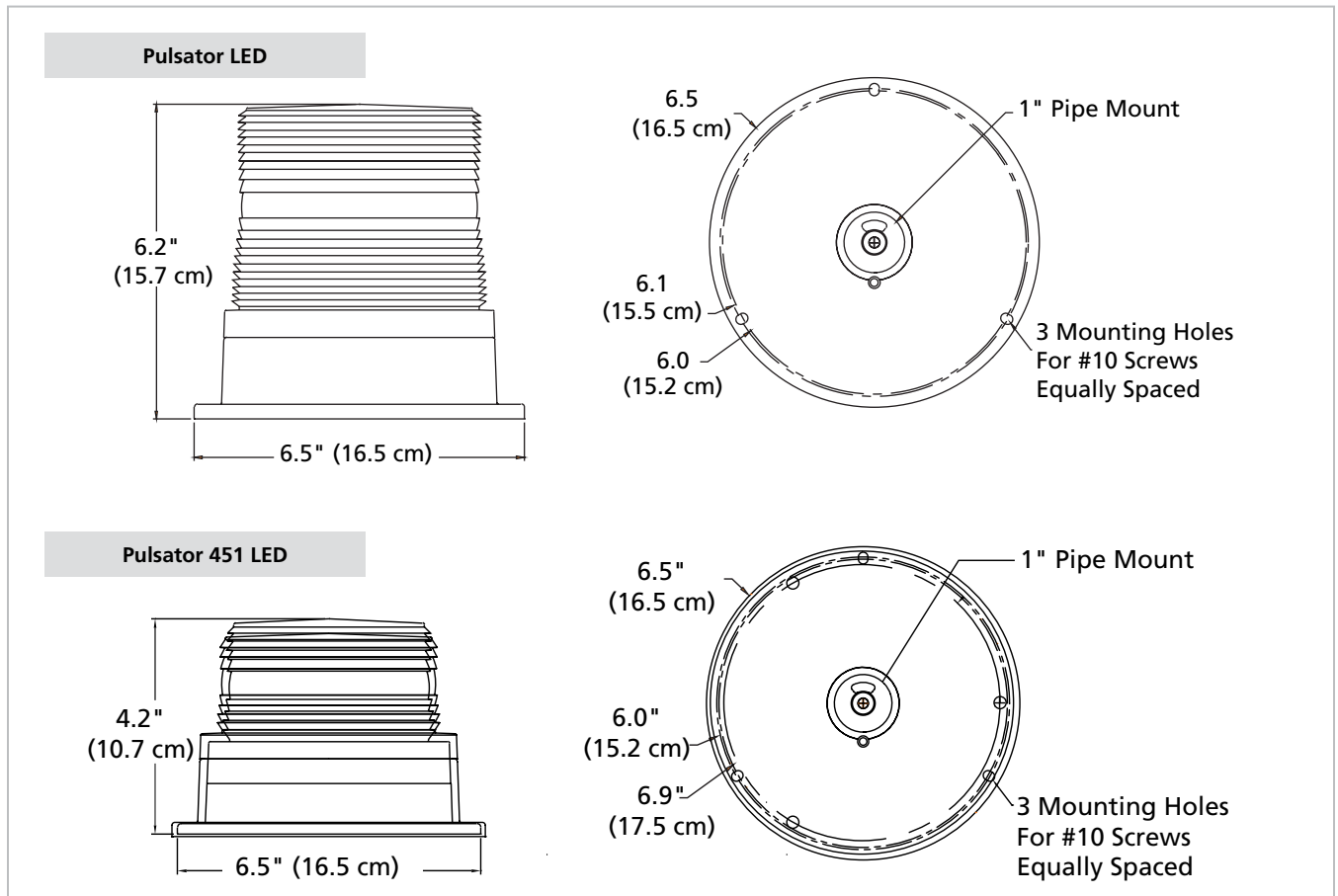


CLASS 1 CLASS 2

Model	Description
<b>Pulsator LED</b>	
<b>Permanent mount, tall dome</b>	
212660-02SB	Amber dome, Class 1; -04(Red)
212650-02SB	Amber dome, Class 2; -04(Red)
<b>Magnet mount, cigarette plug, tall dome</b>	
212662-02SB	Amber dome, Class 1; -04(Red)
212652-02SB	Amber dome, Class 2; -04(Red)
<b>Suction-cup magnet mount, cigarette plug, tall dome</b>	
212664-02SB	Amber dome, Class 1; -04(Red)
212654-02SB	Amber dome, Class 2; -04(Red)
<b>Pulsator 451 LED</b>	
<b>Permanent mount, short dome</b>	
212670-02SB	Amber dome, Class 2; -04(Red)
<b>Magnet mount, cigarette plug, short dome</b>	
212672-02SB	Amber dome, Class 2; -04(Red)
<b>Suction-cup mount, cigarette plug, short dome</b>	
212674-02SB	Amber dome, Class 2; -04(Red)
<b>Accessories and Kits</b>	
SW2	Switch control
210890	Kit, magnetic mount
210891	Kit, self-adhesive mounting
210893	1/2" pipe mount
210894	3/4" pipe mount
650201	(2) 6A loads, (8) flash patterns, ground side switching
<b>Common Replacement Parts</b>	
208666-95	Dome, tall, Blue
208667-95	Dome, tall, Amber
208668-95	Dome, tall, Red
208669-95	Dome, tall, Clear

## NOTES

- Visit [www.fedsig.com](http://www.fedsig.com) to view Pulsator LED flash patterns



Model	Operating Voltage	Amp Draw	Flash Patterns	Approvals	Base Material	Dimensions (D x H)	Ship Weight (lbs)	Warranty (years)
<b>Pulsator LED</b>	12/24	0.74 A/0.325 A average @ 12.8 V Class 1; 0.65 A max @ 0.28 A average Class 2	14	Class 1 & 2	Polycarbonate	6.5" x 6.0"	1.9	5
<b>Pulsator 451 LED</b>	12/24	0.65A max / 0.28 average @12.8V	14	Class 2	Polycarbonate	6.5" x 4.0"	1.3	5



*Built-in permanent/1-inch pipe mount polycarbonate base*



*Magnetic mount bottom with cigarette lighter plug*

# UltraStar® LED | LED Beacon

## Features

- Federal Signal patent-pending LED emitter design
- Industry standard mounting for quick and easy retrofits
- Fourteen (14) selectable “strobing” flash patterns
- Built-in permanent /1-inch pipe mount aluminum die-cast base
- Longer dwell time to enhance visibility at a distance
- Five-year LED warranty

40

## Approval

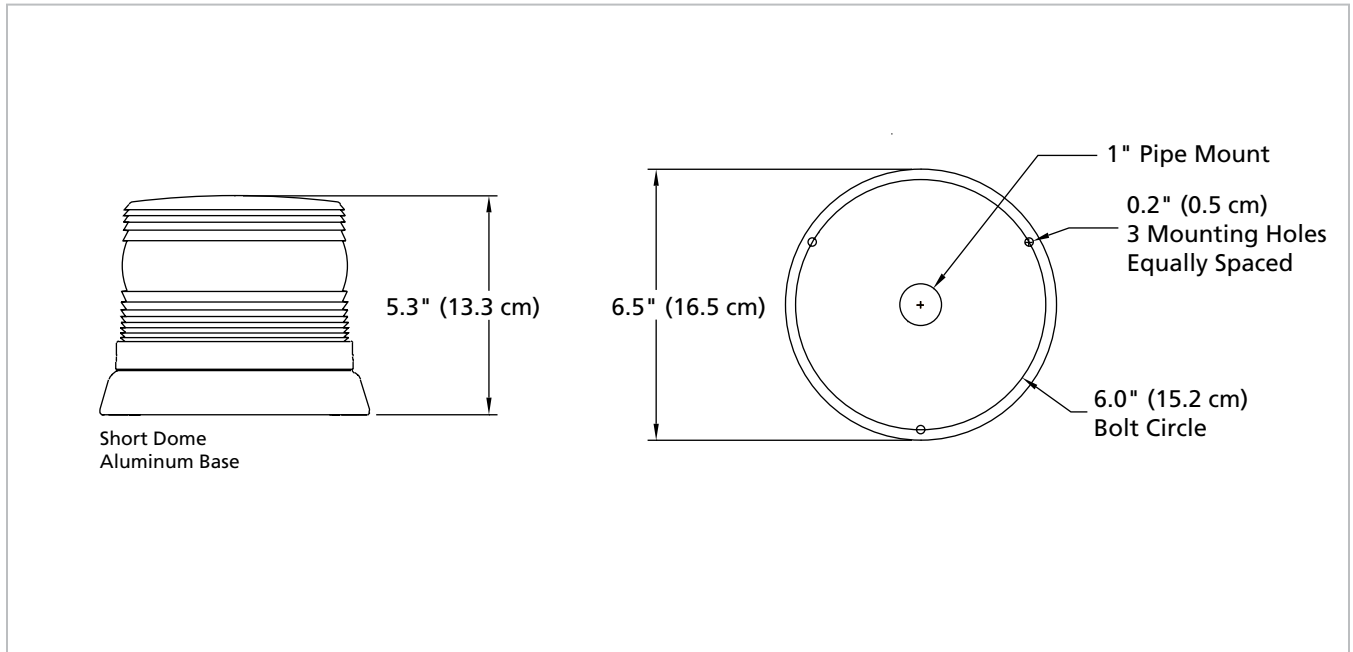
- SAE J1318 and J845, Class 1

## Applications

- Construction
- Landscape
- Snow plows
- Utility



Model	Description
<b>Permanent/1-inch pipe mount</b>	
252650-02SC	Amber dome
252654-04SC	Red dome
252657-02SC	Amber dome and dust cover
<b>Magnet mount with cigarette plug</b>	
252651-02SC	Amber dome
252655-04SC	Red dome
<b>Accessories</b>	
SW2	Switch control
448330	MZDGK branch guard
<b>Common Replacement Parts</b>	
Z8444374A	Dome, short, -01(Clear); -02(Red); -03(Amber); -04(Blue)
Z8444375A-01	Dust cover, short, Clear
Z8444313C	Light shield
Z8444397A	J-bolt mounting kit



Model	Operating Voltage	Amp Draw	RPM	Flash Patterns	Approvals	Base Material	Dimensions (D x H)	Ship Weight (lbs)	Warranty (years)
UltraStar LED	12/24	1.2 A @ 12.8 V	Various	14	Class 1	Aluminum	6.5" x 5.3"	2.75 (perm.) 3.5 (mag.)	5

**Solid-state light source and fully encapsulated circuitry to absorb extreme vibration**



448330  
Branch Guard option



Permanent / 1" pipe mount bottom



Magnetic mount bottom with cigarette lighter plug

# SLR Beacon | LED Beacon

## Features

- Rotating LED beacon with (12) high-powered LEDs
- Federal Signal's patented SLR (Solaris® LED Rotator) technology
- 75/90/120 RPM
- 12/24 VDC
- Five-year LED warranty

## Approvals

- SAE J845 Class 1 approved, 262650 models
- SAE J845 Class 2 approved, 272650 models

## Applications

- Construction
- Municipal
- Utility



CLASS 1 CLASS 2 SLR

Model	Description
262650-02	Amber LEDs, Amber dome, permanent/pipe mount, Class 1; -04(Red)
272650-02	Amber LEDs, Amber dome, permanent/pipe mount, Class 2

### NOTES

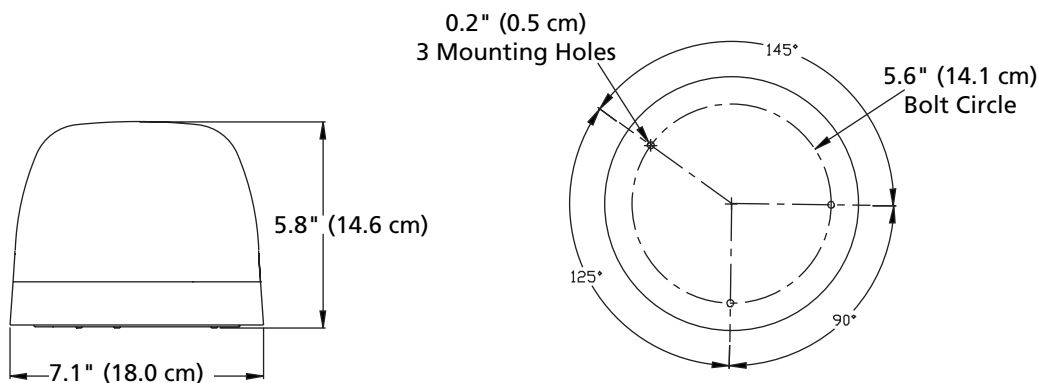
- Visit [www.fedsig.com](http://www.fedsig.com) to view SLR Beacon flash patterns



Patented Solaris LED reflector design with (12) high powered LEDs



Built-in permanent / 1" pipe mount



Model	Operating Voltage	Amp Draw	RPM	Approvals	Base Material	Dimensions (D x H)	Ship Weight (lbs)	Warranty (years)
SLR Beacon	12/24	1.8 A @ 12.8 V	75/90/120	Class 1 & 2	Polycarbonate/aluminum	5.8" x 7.1"	2.75 (perm.)	5

# AL2 | LED Beacon

## Features

- Electronics are encapsulated in a durable steel enclosure using high-temperature range silicone potting compound for dependable operation
- Operates at 12 or 24 VDC
- High-profile design, with a sturdy polycarbonate dust cover, provide for a robust warning solution
- Clear-anodized aluminum base or chrome-plated aluminum base models available
- Five-year LED warranty

## Approval

- SAE J845, Class 2

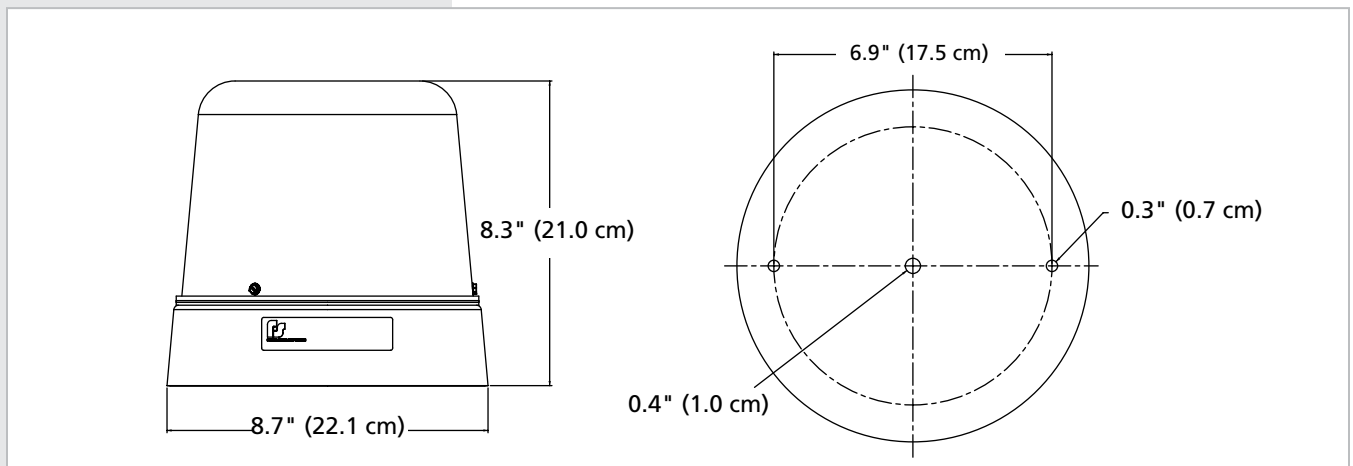
## Applications

- Municipal
- Snow Plows
- Utility



CLASS 2

Model	Description
211779-02	Amber dome with dust cover, anodized base



Model	Operating Voltage	Amp Draw	Flash Patterns	Approvals	Base Material	Dimensions (D x H)	Ship Weight (lbs)	Warranty (years)
AL2	12/24	1 A @ 12.8 V	1	Class 2	Aluminum or Chrome-plated Aluminum	8.3" x 8.7"	3.8	5



# Model 651 LED

## LED Beacon

### Features

- Open-style aluminum base
- Low-profile beacon
- Polycarbonate Fresnel dome
- Low-amp draw
- Five-year LED warranty

### Approval

- SAE J845, Class 2

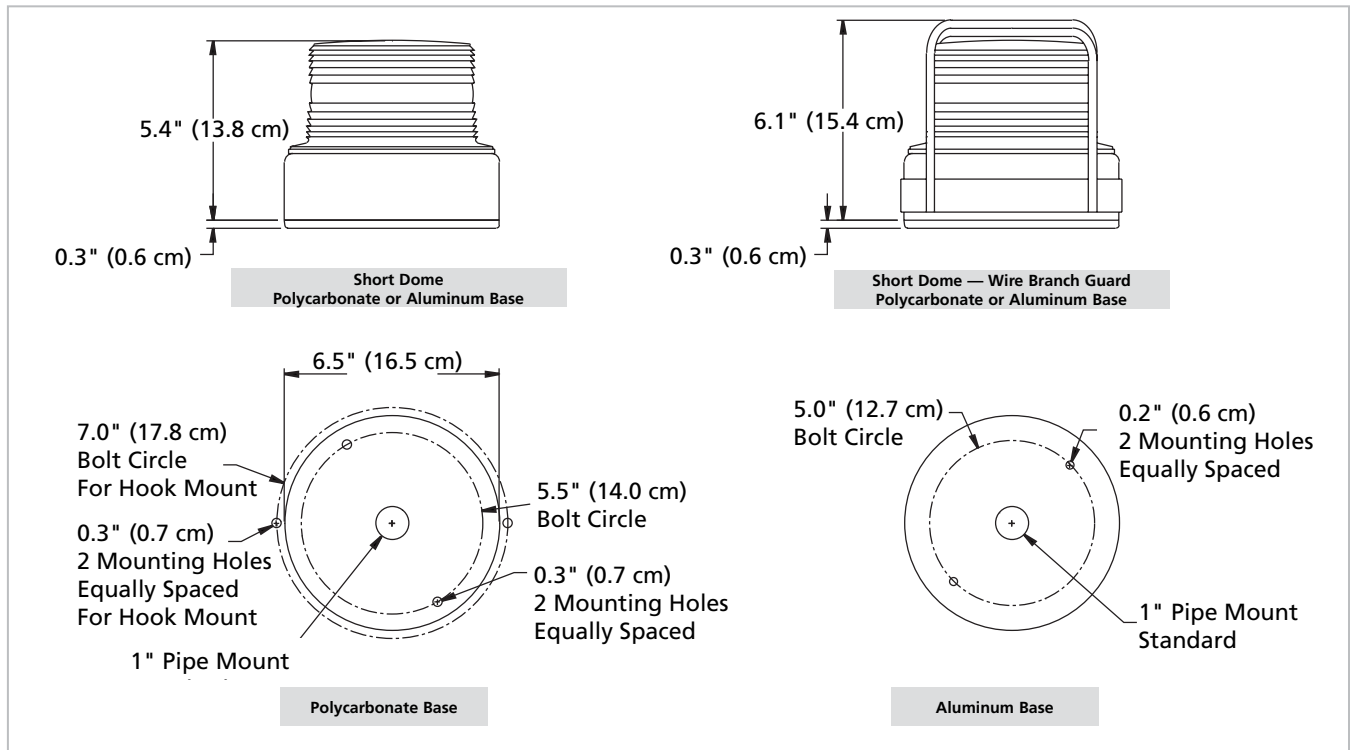
### Applications

- Construction
- Municipal
- Utility



Model	Description
420222-02	UTILITY LIGHT, blackout lens, clear dust cover, branch guard, Amber LED, Amber dome
420223-02	Open style bottom, Amber LED, Amber dome
<b>Accessories and Kits</b>	
210781SSG	Wire branch guard (used on 651 Plus and 651 AUL models)
210939SSG	"L" mounting bracket
210830SSG	Polycarbonate 1" pipe/flush mount bottom
210982	Aluminum 1" pipe/flush mount bottom
210831SSG	Kit, polycarbonate flush magnetic mount
210050SSG	Kit, aluminum flush magnetic mount
210846	Aluminum flush enclosed bottom
210923SSG	Aluminum raised enclosed bottom
210928SSG	Magnetic mount kit for aluminum/polycarbonate mount bottoms
210877SSG	Dust cover with black top
200765-95	Polycarbonate dust cover without black cover
<b>Common Replacement Parts</b>	
205003-95	Gasket, base
205004-95	Gasket, dome
208551-95	Base
438694-95	Kit, mounting
200767-95	Dome, Amber

# Model 651 LED | LED Beacon



45

Model	Operating Voltage	Amp Draw	Flash Patterns	Approvals	Base Material	Dimensions (D x H)	Ship Weight (lbs)	Warranty (years)
<b>651 LED</b>	12/24	1 A @ 12.8 V	1	Class 2	Aluminum	6.5" x 5.4" 6.5" x 6.1" (Wire Branch Guard)	2	5



210877SSG



200765-95



210781SSG

# Pulsator® 551 Plus / Pulsator® 451 Plus | Strobe Beacon

## Features

- High-profile, polycarbonate base strobe beacon
- Easily replaceable helical strobe tube
- Automatic adjustment to function at any voltage from 12-48 VDC
- Three-year warranty

## Approvals

- 8 and 10-Joule: SAE J845  
Class 2 (SAE J1319 Class 2, 2009)

## Applications

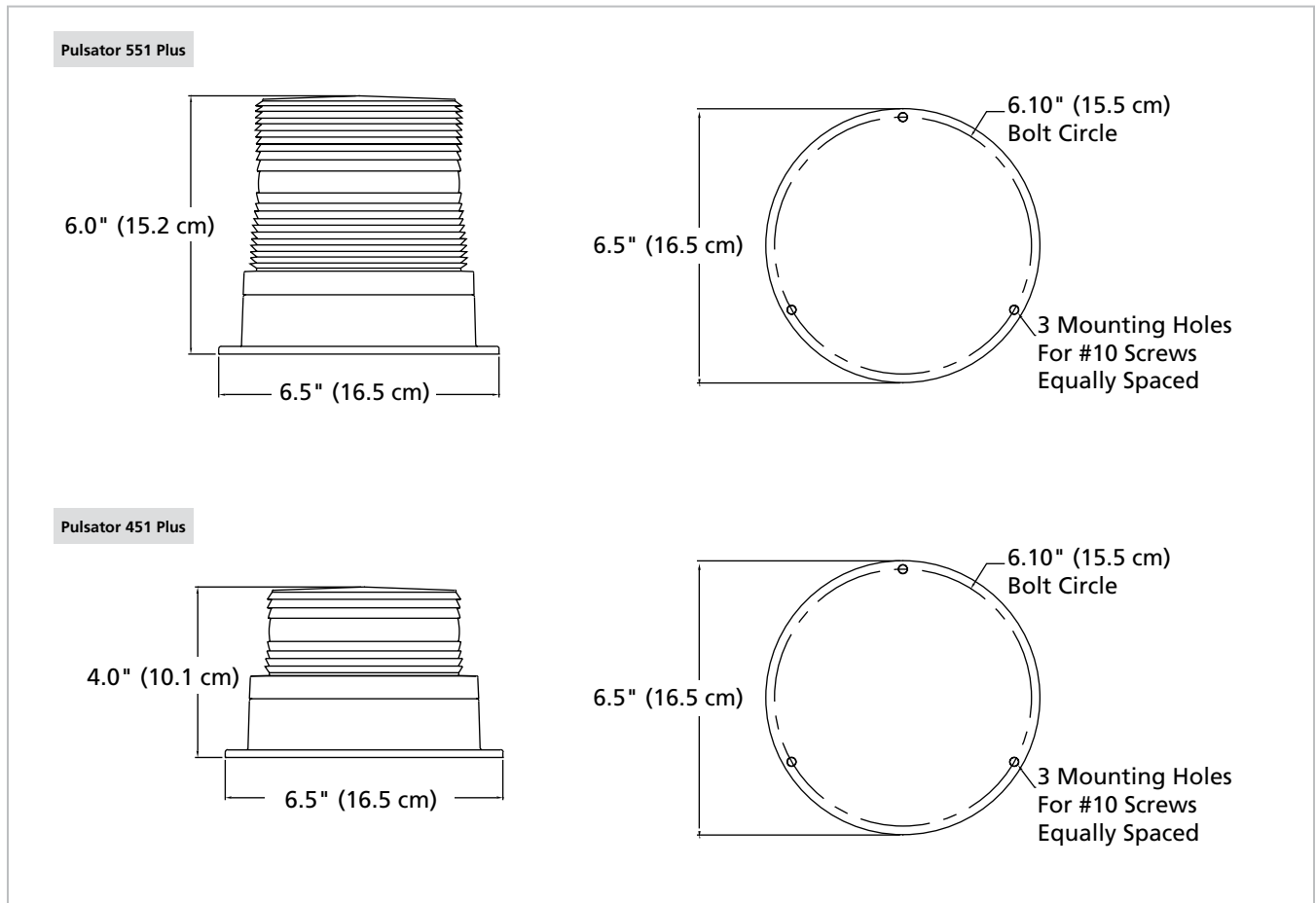
- Forklifts
- Construction
- Industrial



Model	Description
<b>Pulsator 551</b>	
<b>8J, 16 W, 12-24 VDC, 120 FPM, single flash</b>	
211694-02	Permanent mount, Amber; -03(Blue); -04(Red); -05(Clear)
211695-02	Magnetic mount, Amber
<b>10J, 13.3 W, 12-48 VDC, double flash</b>	
211681-02	Permanent mount, Amber; -03(Blue); -04(Red); -05(Clear)
211684-02	Magnetic mount, Amber; -05(Clear)
211685-02	Magnetic mount no cigarette plug, Amber
211820-02	HEAVY DUTY, permanent mount, Amber; -03(Blue); -04(Red); -05(Clear)
<b>10J, 12.5 W, 12-48 VDC, quad-flash</b>	
211683-02	Permanent mount, Amber; -04(Red); -05(Clear)
<b>5J, 5.8 W, 115 VAC</b>	
211925-02	Permanent mount, double flash, Amber; -03(Blue); -04(Red); -05(Clear)
<b>Pulsator 451</b>	
<b>8J, 10.7 W, 12-48 VDC, double flash</b>	
211680-02	Permanent mount, Amber; -03(Blue); -04(Red); -05(Clear)
211682-02	Magnetic mount, Amber; -05(Clear)
211823-02	HEAVY DUTY, permanent mount, Amber; -03(Blue); -04(Red); -05(Clear)
<b>Accessories and Kits</b>	
200069-95	Bottom plate
210890	Kit, magnetic mount
210891	Kit, self-adhesive mounting
210893	1/2" pipe mount
210894	3/4" pipe mount
210895SSG	1" pipe mount

Continued on next page

# Pulsator® 551 Plus / Pulsator® 451 Plus | Strobe Beacon



47

Model	Operating Voltage	Amp Draw	Joules	Watts	FPM	Approvals	Base Material	Dimensions (D x H)	Ship Weight (lbs)	Warranty (years)
<b>Pulsator 551 Plus</b>	12/48	1.2 A @ 12V to 0.3 A @ 48V (10J)	10/8	13.3/12.5	80/75	Class 2	Polycarbonate	6.5" x 6.0"	1.5 1.9 (Heavy Duty)	3
<b>Pulsator 451 Plus</b>	12/48	0.9 A @ 12 V to 0.25 A @48 V	8	10.7/10	80/75	Class 2	Polycarbonate	6.5" x 4.0"	1.3 1.6 (Heavy Duty)	3

Common Replacement Parts	
208666-95	Pulsator 551, Dome, Blue
208667-95	Pulsator 551, Dome, Amber
208668-95	Pulsator 551, Dome, Red
208669-95	Pulsator 551, Dome, Clear
208566-95	Pulsator 451, Dome, Blue
208567-95	Pulsator 451, Dome, Amber
208568-95	Pulsator 451, Dome, Red
208569-95	Pulsator 451, Dome, Clear
205005-95	Gasket, dome
205520-95	Replacement base
211083-95	Mounting kit
439290-95	Pulsator 551, flash tube
439411-95	Flash tube



210890



210891



210893



210894



210895SSG

# UltraStar® US 5, US 6, US 7 | Strobe Beacon

## Features

- Powder coated aluminum die-cast base
- Shock-mounted strobe tube
- Industry standard mounting: permanent/1" pipe, magnetic and J-bolt
- Five-year product warranty

### US 5

- 13 Joules, double flash and 14 Joules, quad flash

### US 6

- 17/12 Joules, double flash
- Built-in photocell provides automatic adjustment to ambient light for day or night operation (may be converted to a manual [switchable] adjustment)
- Potted, fully-encapsulated power supply

### US 7

- Power supply produces 21 Joules
- Built-in photocell provides automatic adjustment to ambient light for day or night operation (may be converted to a manual [switchable] adjustment)
- Potted, fully-encapsulated power supply

## Approvals

- SAE J1318 Class 1 (tall dome models)
- SAE J1318 Class 2 (short dome models)

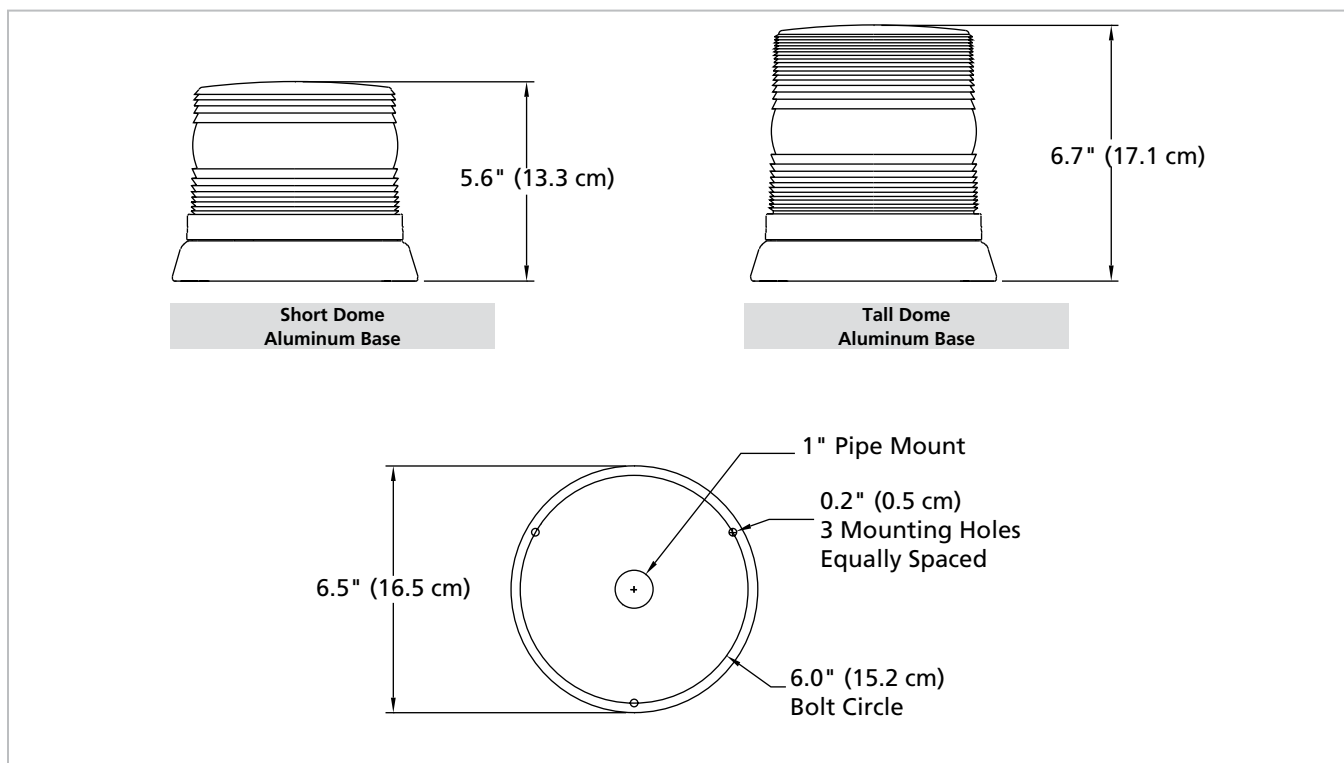
## Applications

- Construction
- Municipal
- Utility



CLASS 1 CLASS 2

Model	Description
<b>US5, 13J, 12-24 VDC, 18.4 W, double flash, tall dome</b>	
250121-02	Permanent/pipe mount, Amber; -03(Blue); -04(Red); -05(Clear), Class 1
250141-02	Magnetic mount, Amber; -03(Blue); -04(Red); -05(Clear), Class 1
<b>US5, 13J, 12-24 VDC, 18.4 W, double flash, short dome</b>	
251121-02	Permanent/pipe mount, Amber; -04(Red); -05(Clear), Class 2
251141-02	Magnetic mount, Amber; -04(Red), Class 2
<b>US6, 17/12J, 12-24 VDC, 21.3/15 W, double flash</b>	
252600-02	Permanent/1" pipe mount, Amber, Class 1
252601-02	Magnetic mount, Amber, Class 1
<b>US7, 21/13J, 12-24 VDC, 26.3/16.3 W, quad flash, tall dome</b>	
250721-02	Permanent/pipe mount, Amber; -05(Clear), Class 1
250741-02	Magnetic mount, Amber; -05(Clear), Class 1
<b>Accessories and Kits</b>	
SW2	Switch control
448310	Kit, vibration mount
448320	MZDGP pipe mount adapter for 448330 branch guard
448330	MZDGM branch guard
Z8444373A-01	Dust cover, tall dome, Clear
Z8444375A-01	Dust cover, short dome, Clear
<b>Common Replacement Parts</b>	
251500	Flash tube, US5
251501	Flash tube, US7
250520	Double flash power supply, US5
250530	Quad flash power supply, US7
Z8444372A	Dome, tall; -01(Clear); -02(Red); -03(Amber); -04(Blue); -05(Green)
Z8444374A	Dome, short; -01(Clear); -02(Red); -03(Amber); -04(Blue); -05(Green)
Z8575272A	Flash tube assembly, US6



Model	Operating Voltage	Amp Draw	Joules	Watts	FPM	Approvals	Base Material	Dimensions (D x H)	Ship Weight (lbs)	Warranty (years)
UltraStar US 5	12/24	1.8 A @ 12 V to 0.9 A @ 24 V	13/14	18.4/19	85/80	Class 1 & 2	Aluminum	6.5" x 6.74" (Tall) 6.5" x 5.25" (Short)	4.0	5
UltraStar US 6	12/24	2.0 A @ 12.8 V to 1.2 A @ 25.6 V (high); 1.6 A @ 12.8 V to 0.8 A @ 25.6 V (low)	17/12	17/12	75	Class 1	Aluminum	6.5" x 6.7" (Perm.) 6.5" x 6.9" (Mag.)	4.25 (Perm.) 4.95 (Mag.)	5
UltraStar US 7	12/24	2.5 A @ 12 V to 1.2 A to 24 V	21/13 Hi-Lo	21.3/15	75	Class 1	Aluminum	6.5" x 6.7" (Tall)	4.0	5



448330



448320

# Model 901/951

## Strobe Beacon

### Features

- Automatic adjustment to function at any voltage from 12-48 VDC
- Open-style aluminum base
- Attached dust cover
- High- (Model 951) and low- (Model 901) profile strobe beacon
- Built-in high/low flash option

### Approvals

- SAE J845, Class 1  
(SAE J1318, Class 1, 2009)
- CAC Title 13, Article 22 (Model 951)

### Applications

- Construction
- Municipal
- Utility



211742-02

211740-02

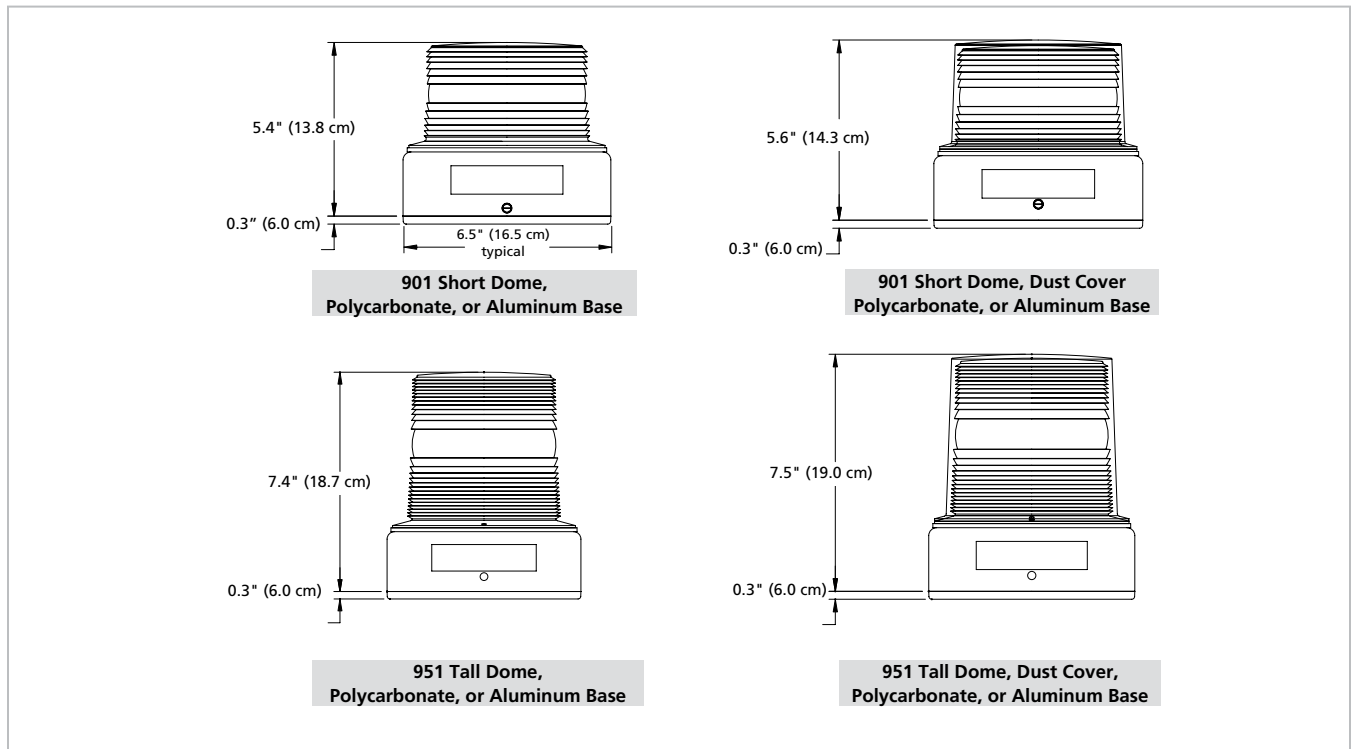
CLASS 1

CAC Title 13

Model	Description
<b>Model 901, 18J, 21.3 W, 12-48 VDC, double flash, hi/low</b>	
211740-02	Open-style bottom, Amber
<b>Model 951, 18J, 21.3 W, 12-48 VDC, double flash, hi/low</b>	
211742-02	Open-style bottom, Amber; -03(Blue); -04(Red); -05(Clear)
211749-02	Aluminum 1" pipe/flush mount bottom, Amber; -03(Blue)
211754-02	UTILITY LIGHT, blackout lens, clear dust cover, branch guard, and aluminum 1" pipe/flush mounting base, Amber
<b>Accessories — Model 901 only</b>	
200765-95	Polycarbonate dust cover without black cover
210781SSG	Wire branch guard
210877SSG	Dust cover with black top
<b>Accessories — Model 951 only</b>	
200776-95	Polycarbonate dust cover without black cover
210782	Wire branch guard
210878	Dust cover with black top
<b>Accessories and Kits — Model 901 and 951</b>	
210050SSG	Kit, aluminum flush magnetic mount
210830SSG	Polycarbonate 1" pipe/flush mount bottom
210831SSG	Kit, polycarbonate flush magnetic mount
210846	Aluminum flush enclosed bottom
210923SSG	Aluminum raised enclosed bottom
210928SSG	Magnetic mount kit for aluminum/polycarbonate mount bottoms
210982	Aluminum 1" pipe/flush mount bottom



# Model 901/951 | Strobe Beacon



Model	Operating Voltage	Amp Draw	Joules	Watts	FPM	Approvals	Base Material	Dimensions (D x H)	Ship Weight (lbs)	Warranty (years)
<b>Model 901</b>	12/48	2.1 A @ 12 V to 0.55 A @ 48 V	18/9	21.3	75	Class 1	Aluminum	6.5" x 5.6"	2.3	5
<b>Model 951</b>	12/48	2.1 A @ 12 V to 0.55 A @ 48 V	18/9	21.3	75	Class 1, Title 13	Aluminum	6.5" x 7.5"	2.7	5



210781



210782



200776-95



210830SSG



210831SSG

# Model 851 / Model 651 | Strobe Beacon

## Features

- Open-style aluminum base strobe beacon
- Automatic adjustment to function at any voltage from 12-48 VDC
- High-profile and low-profile models available
- Five-year warranty

## Approvals

- SAE J845, Class 2  
(SAE J1318, Class 2, 2009)

## Applications

- Construction
- Municipal
- Utility



420400-02



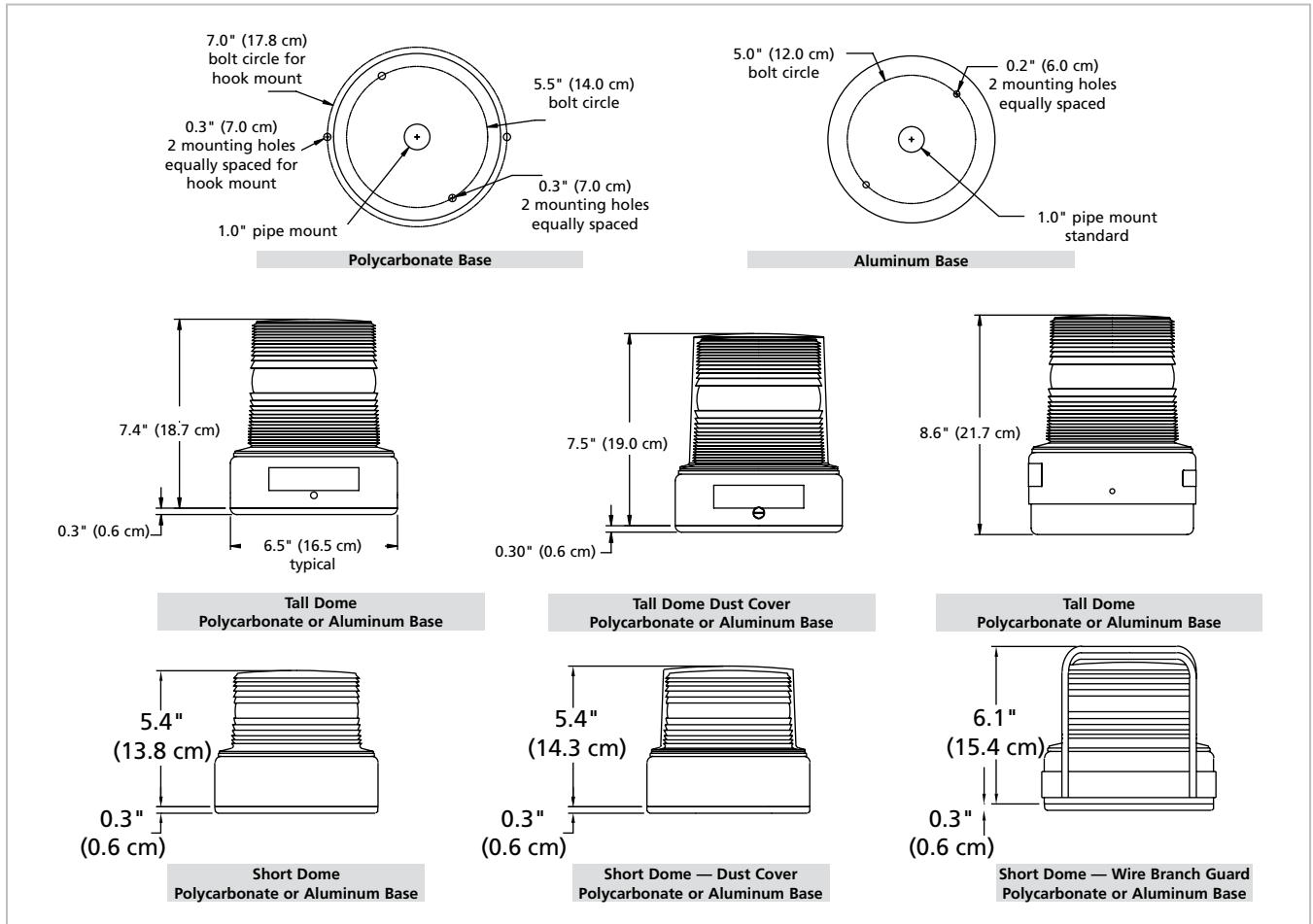
420200-02

CLASS 2

Model	Description
<b>Model 851 Plus, 12J, 16 W, 12-48 VDC, double flash</b>	
420400-02	Open style bottom, Amber; -03(Blue)
420406-02	UTILITY LIGHT, blackout lens, clear dust cover, branch guard, and polycarbonate mounting base
420412-02	Aluminum 1" pipe/flush mount bottom, Amber
<b>10J, 13.3 W, 115 VAC, single flash</b>	
412048-02	Enclosed bottom, pipe flange, Amber
<b>Model 851-RR, 10J, 13.3 W, 72 VDC, single flash</b>	
412046-02	Enclosed bottom, spike filter, Amber
<b>Model 651 Plus, 12J, 16 W, 12-48 VDC, double flash</b>	
420200-02	Open-style bottom, Amber; -05 (Clear)
420205-02	Black top dome, open-style bottom, Amber
420208-02	UTILITY LIGHT, blackout lens, Clear dust cover, and polycarbonate mounting base, Amber
420212-02	Aluminum 1" pipe/flush mount bottom, Amber
420213-02	UTILITY LIGHT, blackout lens, Clear dust cover, branch guard, and aluminum 1" pipe/flush mount bottom, Amber
<b>10J, 13.3 W, 115 VAC, single flash</b>	
412027-02	Enclosed bottom/AC line cord, Amber; -04(Red)
<b>Accessories and Kits</b>	
210782	Model 851, Wire branch guard
210781SSG	Wire branch guard (used on 651 Plus and 651 AUL models)
210939SSG	"L" mounting bracket
210830SSG	Polycarbonate 1" pipe/flush mount bottom
210982	Aluminum 1" pipe/flush mount bottom
210831SSG	Kit, polycarbonate flush magnetic mount
210050SSG	Kit, aluminum flush magnetic mount
210846	Aluminum flush enclosed bottom
210928SSG	Magnetic mount kit for aluminum/polycarbonate mount bottoms
210878	Model 851, Dust cover with black top
200776-95	Model 851, Polycarbonate dust cover without black cover
210877SSG	Model 651, Dust cover with black top
200765-95	Model 651, Polycarbonate dust cover without black cover

Continued on next page

# Model 851 / Model 651 | Strobe Beacon



Model	Operating Voltage	Amp Draw	Joules	Watts	FPM	Approvals	Base Material	Dimensions (D x H)	Ship Weight (lbs)	Warranty (years)
Model 851	12/48	1.65 A @ 12 V	12	16	80	Class 2	Aluminum	6.6" x 7.5"	2.2	5
Model 651	12/48, 72	1.65 A @ 12 V to 0.41 A @ 48 V	12/10	12/10	80	Class 2	Aluminum	6.5" x 5.7"	2.0	5

Common Replacement Parts	
211400-95	Model 851, flash tube
211200-95	Model 651, flash tube
205003-95	Gasket, base
205004-95	Gasket, dome
438694-95	Kit, mounting
200772-95	Model 851, Dome, Clear
200775-95	Model 851, Dome, Amber
200766-95	Model 651, Dome, Blue
200767-95	Model 651, Dome, Amber
200768-95	Model 651, Dome, Clear
200769-95	Model 651, Dome, Red

Z2005265B	Power supply, double flash
211024-95	Power supply, 72 VDC
211007-95	Power supply, 115 VAC
200030-95	Model 651 Plus, Bulb, cruise light

# Model 401 | Strobe Beacon

## Features

- Rubber base resists corrosion and absorbs harsh shock
- Low-profile strobe beacon
- Automatic adjustment to function at any voltage from 12-48 VDC
- Three-year warranty

## Approvals

- 8-Joule: SAE J845, Class 2 (SAE J1318, Class 2, 2009)

## Applications

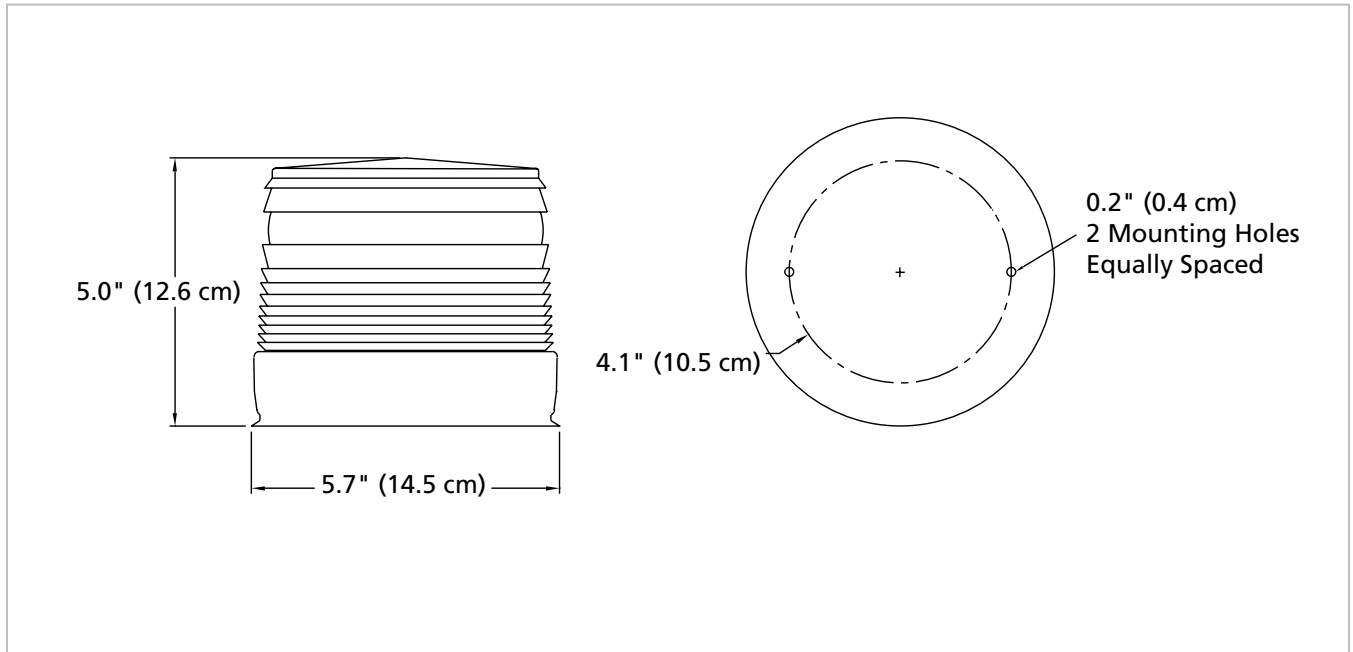
- Construction
- Forklifts
- Industrial



CLASS 2

Model	Description
<b>Double Flash, Permanent Mount</b>	
220300-02	5J, 5.4 W, 12-48 VDC, 65 FPM, Amber; -03(Blue); -04(Red)
<b>Single Flash, Permanent Mount</b>	
220301-02	5J, 5.4 W, 12-48 VDC, 65 FPM, Amber
<b>Double Flash, Magnetic Mount</b>	
220308-02	5J, 5.4 W, 12-48 VDC, 65 FPM, Amber; -03(Blue); -04(Red)
<b>Single Flash, Magnetic Mount</b>	
220309-02	5J, 5.4 W, 12-48 VDC, 65 FPM, Amber; -03(Blue)
<b>Common Replacement Parts</b>	
8107230A-95	Flash Tube, Double Flash
Z8263073A	Dome, Amber; -01(Blue); -02(Red); -03(Clear); -04(Green)

# Model 401 | Strobe Beacon



Model	Operating Voltage	Amp Draw	Joules	Watts	FPM	Approvals	Base Material	Dimensions (D x H)	Ship Weight (lbs)	Warranty (years)
<b>Model 401</b>	12/48	0.65 A @ 12 V to 0.17 A @ 48 V	5	5.4	65	Class 2	Rubber	5.7" x 5.0"	1.3 1.9 (Heavy Duty)	3

# Firebolt® Plus | Strobe Beacon

## Features

- Automatic adjustment to function at multi-voltages
- Polycarbonate base available in permanent and magnetic models
- Replaceable strobe tubes
- Three-year product warranty

## Approvals

- 2-Joule: SAE J845, Class 3 (SAE J1318, Class 3, 2009)

## Applications

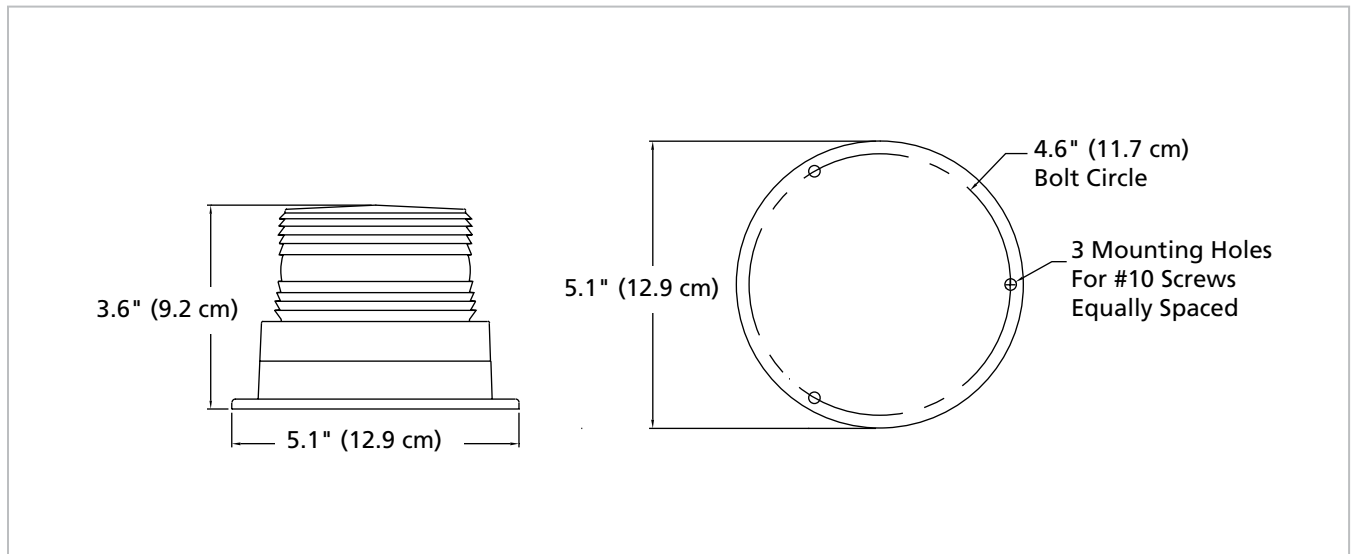
- Forklifts
- Landscaping
- Snow plows
- Utility



CLASS 3

Model	Description
	<b>Firebolt Plus, 2J, 2 W, 12-72 VDC, single flash, replaceable strobe tube</b>
220200-02	Permanent mount, Amber; -03(Blue); -04(Red); -05(Clear)
220208-02	Magnetic mount, Amber: -03(Blue); -05(Clear)
	<b>Accessories and Kits</b>
210539	"L" mounting bracket
210728	Kit, magnetic mount with cigarette plug
210850SSG	Adapter, pipe mount, 3/4"
210881	Adapter, pipe mount, 1/2"
211676	Dome guard assembly, Chrome
	<b>Common Replacement Parts</b>
211300-95	Flash tube, Firebolt Plus
211356-95	Power supply and flash tube, 115 VAC, Firebolt
211360-95	Power supply and flash tube, 2-Joules, Firebolt
211550-95	Power supply, Firebolt Plus
205580-95	Dome, Amber
205581-95	Dome, Red
205582-95	Dome, Clear
205584-95	Dome, Blue
200522-95	Gasket, base
200523-95	Gasket, dome
208505-95	Base

# Firebolt® Plus | Strobe Beacon



Model	Operating Voltage	Amp Draw	Joules	Watts	FPM	Approvals	Base Material	Dimensions (D x H)	Ship Weight (lbs)	Warranty (years)
Firebolt Plus	12/72 @ 2J 12/48 @ 5J	0.24 A @ 12 V to 0.04 A @ 24 V	2	16	60/65	Class 3	Polycarbonate	5.1" x 3.6"	0.7	3



*Screw-on dome, easy access for strobe tube changes*



*Shatterproof dome and base with o-ring protection against moisture*



*Magnet mount cigarette plug option available*



210850SSG



210881



210539



211676

# Sentry® | Halogen Beacon

## Features

- Rugged, polycarbonate housing features twist-off dome for easy maintenance
- Compact size allows for a variety of mounting options
- Large parabolic reflector and 55-watt halogen bulb produce an attention-getting 80,000 candelas per flash
- Permanent and magnetic mount versions available
- Five-year warranty

## Approvals

- SAE J845, Class 1 (SAE J1318, Class 1, 2009)
- CAC Title 13

## Applications

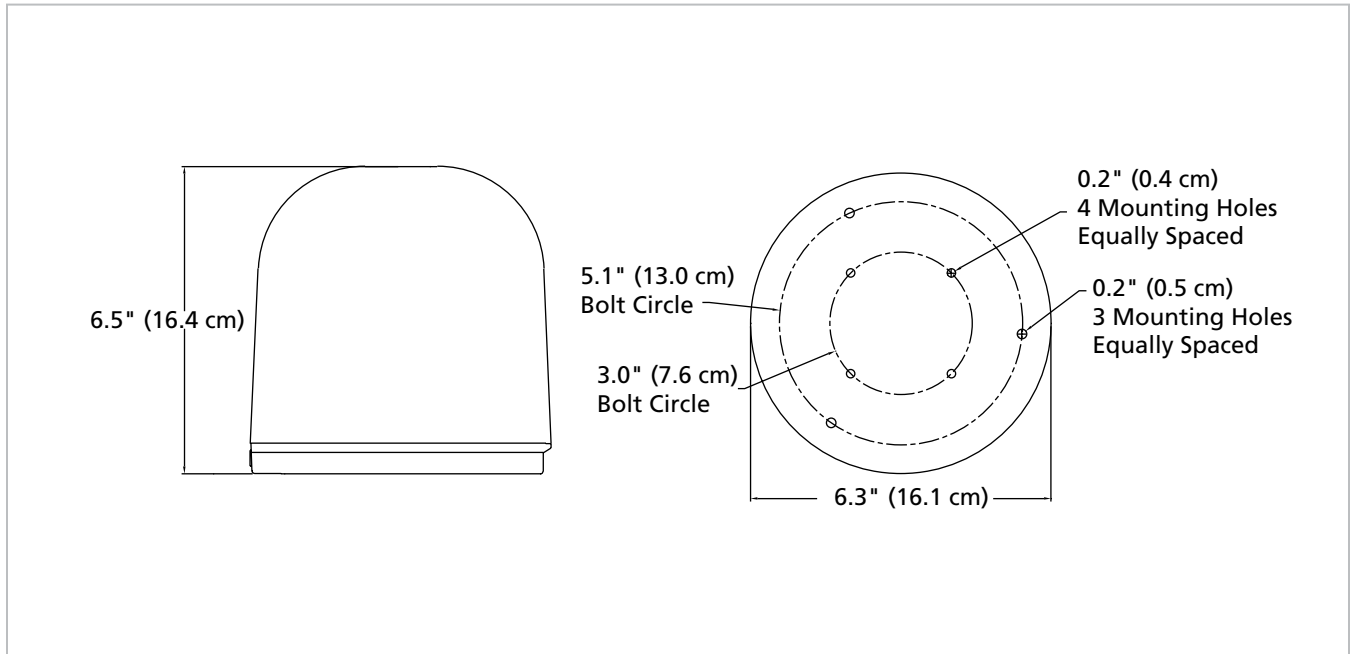
- Construction
- Landscaping
- Municipal
- Snow plows



CLASS 1 CAC Title 13

Model	Description
<b>12 VDC, 95 FPM</b>	
448112-02	Permanent mount, Amber; -03(Blue); -04(Red); -06(Green)
448142-02	Magnetic mount, Amber; -03(Blue); -05(Clear)
<b>24 VDC, 95 FPM</b>	
448114-02	Permanent mount, Amber; -04(Red)
<b>12 VDC, 175 FPM</b>	
449112-02	Permanent mount, Amber; -03(Blue); -04(Red)
449122-02	Pipe mount, Amber
449142-02	Magnetic mount, Amber; -03(Blue)
<b>Accessories and Kits</b>	
448320	Branch guard pipe mount adapter
448330	Branch guard
448410	Kit, magnetic mount
448310	Kit, vibration mount
<b>Common Replacement Parts</b>	
Z8440A265A-02	Bulb, 12 VDC, 55 W, halogen, long life
439231-95	Bulb, 24 VDC, 70 W
447532SSG	Motor, 12 VDC, 95 FPM
447539	Motor, 12 VDC, 175 FPM
447534	Motor, 24 VDC, 95 FPM
448572SSG	Rotator, 12 VDC, 95 FPM
448522	Rotator, 12 VDC, 175 FPM
448514	Rotator, 24 VDC, 95 FPM
448524	Rotator, 24 VDC, 175 FPM
448500-02	Dome, Amber; -03(Blue); -04(Red); -05(Clear)





Model	Operating Voltage	Amp Draw	Lamp	Candelas	FPM	Approvals	Base Material	Dimensions (D x H)	Ship Weight (lbs)	Warranty (years)
Sentry	12/24	4.3 A @ 12 V; 2.1 A @ 24 V	55/70	80,000	95/175	Class 1, Title 13	Polycarbonate	6.3" x 6.5"	2.0	5



*On/off control with switch on cigarette plug*



*Quick Maintenance — replace bulb without tools*



448320



448330



448410



448310

# Model 100 | Halogen Beacon

## Features

- Powerful 80,000 candela rotator provides effective warning
- All exposed materials are non-corrosive
- Modular design for easy maintenance
- Rotator assembly “floats” on neoprene sleeves that absorb vibration to extend service life
- Five-year warranty

## Approvals

- Meets NFPA requirements when used as part of a complete system
- SAE Class 1
- CAC Title 13

## Applications

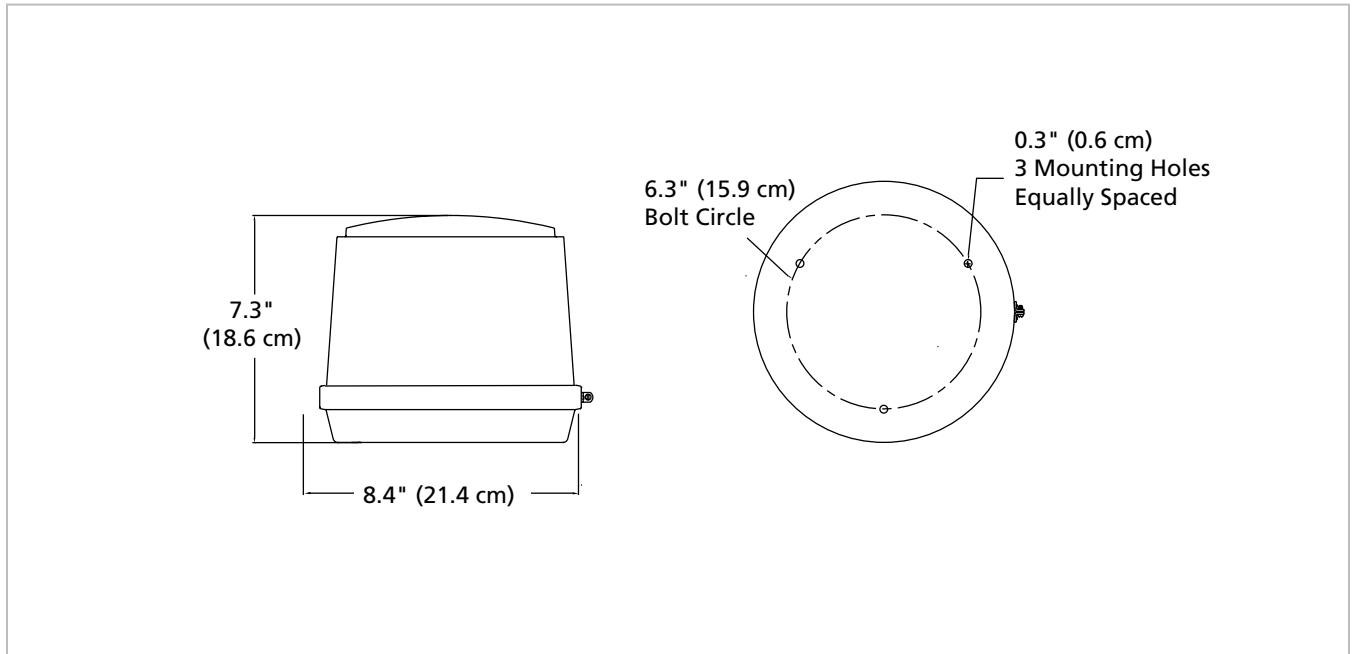
- Construction
- DOT/Municipal
- Fire/Rescue
- Tow and Recovery
- Utility



CLASS 1 CAC Title 13

Model	Description
<b>Model 100, 12 VDC, 175 FPM</b>	
442112-02	Permanent mount, Amber; -04(Red)
<b>Model 100, 24 VDC, 175 FPM</b>	
442114-02	Permanent mount, Amber
<b>Model 100, 12 VDC, 95 FPM</b>	
443112-02	Permanent mount, Amber; -03(Blue); -04(Red)
443212-02	Magnetic mount, Amber
443312-02	Magnetic mount, replacement bulb, Amber
<b>Model 100, 24 VDC, 95 FPM</b>	
443114-02	Permanent mount, Amber; -04(Red)
443314-02	Permanent mount, replacement bulb, Amber
<b>Accessories and Kits</b>	
447302	Kit, vibration mount
447303	Branch guard
<b>Common Replacement Parts</b>	
Z8440A265A-02	Bulb, 12 VDC, 55 W, halogen, long life
439231-95	Bulb, 24 VDC, 70W
447532SSG	Motor, 12 VDC, 95 FPM
447542	Motor, 12 VDC, 120 FPM
447539	Motor, 12 VDC, 175 FPM
447534	Motor, 24 VDC, 95 FPM
442512	Rotator, 12 VDC, 95 FPM
442522	Rotator, 12 VDC, 175 FPM
Z8422C002-01	Dome, Red; -04(Amber); -05(Clear); -09(Blue)

# Model 100 | Halogen Beacon



Model	Operating Voltage	Amp Draw	Lamp	Candelas	FPM	Approvals	Base Material	Dimensions (D x H)	Ship Weight (lbs)	Warranty (years)
<b>Model 100</b>	12/24	4.3 A @ 12 V; 2.1 A @ 24 V	55/70	80,000	95/120/195	Class 1, Title 13	Polycarbonate	8.4" x 7.3"	4.0	5



447303  
Branch guard



447302  
Vibration mount kit

# VPX SignalMaster™ | Directional Lighting

## Features

- Viper® EXT LED modules provide superior light intensity
- Eight (8) high-powered LEDs in each Viper EXT module
- Low Amp draw
- Fully-encapsulated, water resistant modules ideal for external mounting
- Extrusion designed to block sunlight, increasing the warning effectiveness
- The full-featured controllers (sold separately) include low-power mode to reduce Amp draw for nighttime operation and fast mode that increases the “build” speed of the warning pattern
- Five-year warranty on Viper EXT LED modules

## Approvals

- SAE J845, Class 1
- CAC Title 13 approved (on select models)

## Applications

- Construction
- Street Sweepers
- Tow & Recovery
- Utility
- Waste Hauling



CLASS 1

CAC Title 13

SOLARIS

Model	Description
320842	20", (4) LED modules, 30-ft cable, Amber LEDs with Amber lens
320862	31", (6) LED modules, 30-ft cable, Amber LEDs with Amber lens
320866	31", (6) LED modules, 60-ft cable, Amber LEDs with Amber lens
320872	42", (8) LED modules, 15-ft cable, Amber LEDs with Amber lens
320882	42", (8) LED modules, 30-ft cable, Amber LEDs with Amber lens
320886	42", (8) LED modules, 60-ft cable, Amber LEDs with Amber lens
320892	51", (8) LED modules, 30-ft cable, Amber LEDs with Amber lens
320893	51", (8) LED modules, 50-ft cable, Amber LEDs with Amber lens
<b>CAC Title 13 Model</b>	
320935	51", (8) LED modules, 30-ft cable, Amber LEDs with Amber lens
<b>Accessories and Kits</b>	
320310	Kit, bracket, flush mount system
320330	Kit, bracket, system mount
320350	Kit, bracket, foot adapter
320320	Kit, bracket, double "L" mount
320340	Kit, bracket, universal vehicle mount
<b>Common Replacement Parts</b>	
Z8613194A-01	Viper EXT, Amber LEDs with Amber lens
Z8613194A-04	Viper EXT, Amber LEDs with Clear lens

### NOTE

- See page 68 for SignalMaster controllers, sold separately.

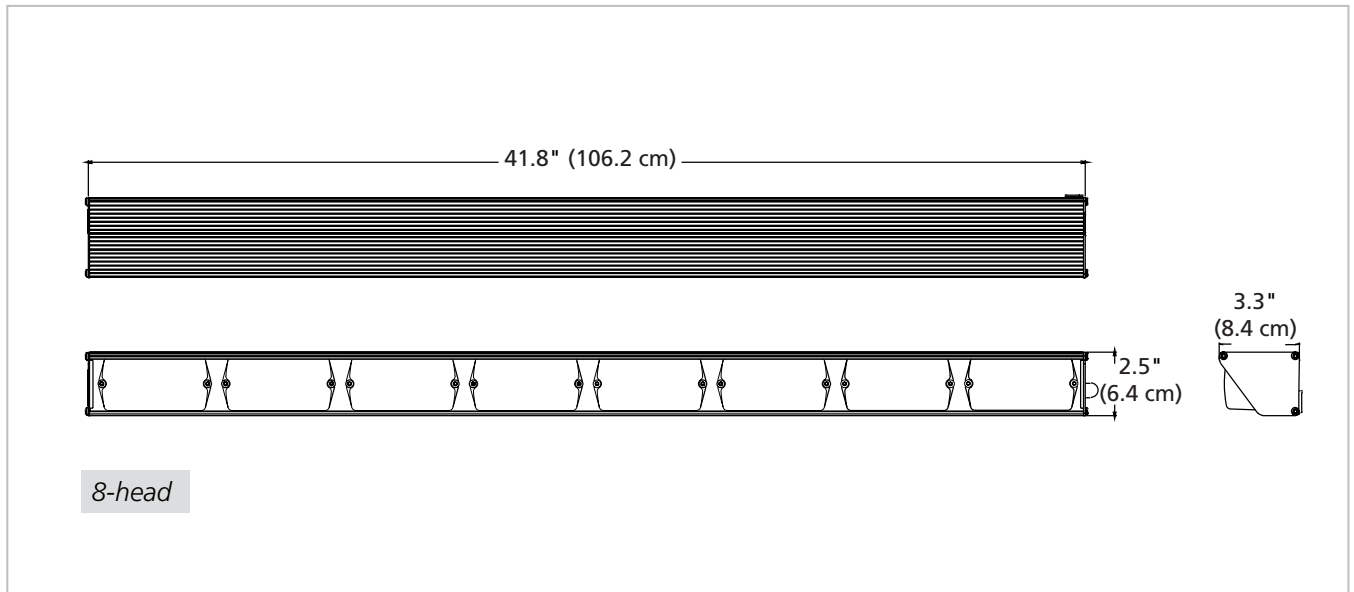


330104-SB



331105-SB

SignalMaster Controls



Specifications				
Voltage	12 VDC			
Amp Draw	2.1 Amp per head			
Physical Specifications				
	Length	Width	Height	Ship Weight
4 Lamp	20 in (50.8 cm)	3.3 in (8.4 cm)	2.5 in (6.4 cm)	3.5 lbs (1.6 kg)
6 Lamp	31.0 in (78.7 cm)	3.3 in (8.4 cm)	2.5 in (6.4 cm)	6.0 lbs (2.7 kg)
42" 8 Lamp	41.8 in (106.2 cm)	3.3 in (8.4 cm)	2.5 in (6.4 cm)	6.5 lbs (2.9 kg)
51" 8 Lamp	50.9 in (129.3 cm)	3.3 in (8.4 cm)	2.5 in (6.4 mm)	9.7 lbs (4.4 kg)
Controller	5.1 in (129.5 cm)	6.1 in (15.5 cm)	1.4 in (3.6 cm)	1.0 lbs (0.5 kg)



320310



320330



320320



320340



320350

# Latitude™ SignalMaster™ | Directional Lighting

## Features

- Solaris® LED reflector technology
- ROC (Reliable Onboard Circuitry™) technology
- Available in 6-head and 8-head models
- Three LEDs per position
- Both interior and exterior mounting brackets are available; compatible with Federal Signal's SignalMaster brackets
- Innovative co-extrusion, polycarbonate housing provides moisture resistance
- Each model includes left, right and center-out warning signals
- Five-year LED warranty

64

## Approval

- SAE J595 Class 1, CAC Title 13 Class B

## Applications

- Construction
- Street Sweepers
- Tow & Recovery
- Utility
- Waste Hauling



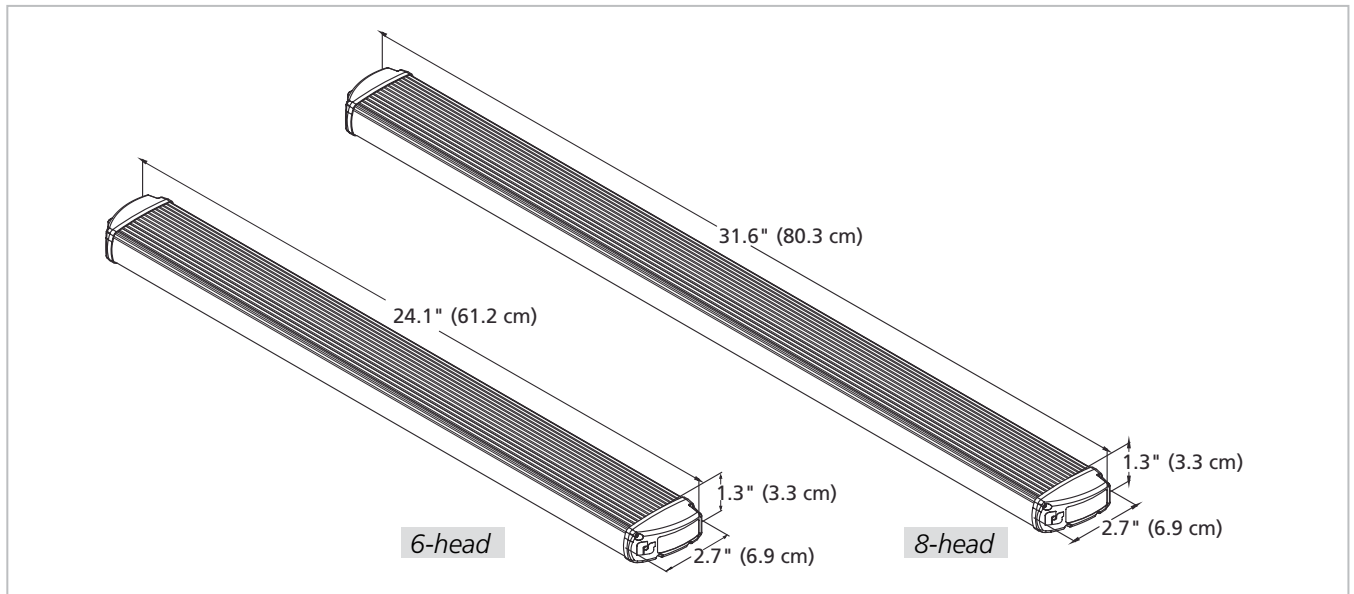
CAC Title 13

CLASS 1

ROC  
RELIABLE ONBOARD CIRCUITRY™

SOLARIS

Model	Description
<b>6-head, 24.2" model</b>	
SL6S-A	(6) Amber LED reflectors, A-A-A-A-A, SignalMaster Economy Controller
<b>8-head, 31.6" model</b>	
SL8S-A	(8) Amber LED reflectors, A-A-A-A-A-A-A, SignalMaster Economy Controller
<b>8-head, 48" model</b>	
SL8S-A48	(8) Amber LED reflectors, A-A-A-A-A-A-A-A, SignalMaster Economy Controller
<b>Accessories and Kits</b>	
320310	Kit, bracket, flush mount system
320330	Kit, bracket, system mount
320350	Kit, bracket, foot adapter
320320	Kit, bracket, double "L" mount
320340	Kit, bracket, universal vehicle mount



	6-Head	8-Head (31.6")	8-Head (48")
<b>Specifications</b>			
Voltage	12.8 VDC		
Amp Draw	3 Amp	4 Amp	4 Amp
Operating Temp	-22°F to +149°F (-30°C to +65°C)		
<b>Physical Specifications</b>			
Height	1.3 in (3.3 cm)	1.3 in (3.3 cm)	1.3 in (3.3 cm)
Length	24.1 in (61.2 cm)	31.6 in (80.3 cm)	48.0 in (121.9 cm)
Width	2.7 in (6.9 cm)	2.7 in (6.9 cm)	2.7 in (6.9 cm)
Ship Weight	3.8 lbs (1.7 kg)	4.0 lbs (1.8 kg)	5.0 lbs (1.8 kg)



320310



320320



320330



320340



320350

# CN SignalMaster™ | Directional Lighting

## Features

- Solaris® LED reflector technology
- FS Convergence Network controller
- A serial interface module is available for use with your existing light controller
- Available in 4-head and 8-head models
- Built-in SignalMaster functions and twenty-seven (27) flash patterns
- Suitable for internal or external use
- Five-year warranty

66

## Approvals

- SAE Class 1
- CAC Title 13

## Applications

- Construction
- Street Sweepers
- Tow & Recovery
- Utility
- Waste Hauling

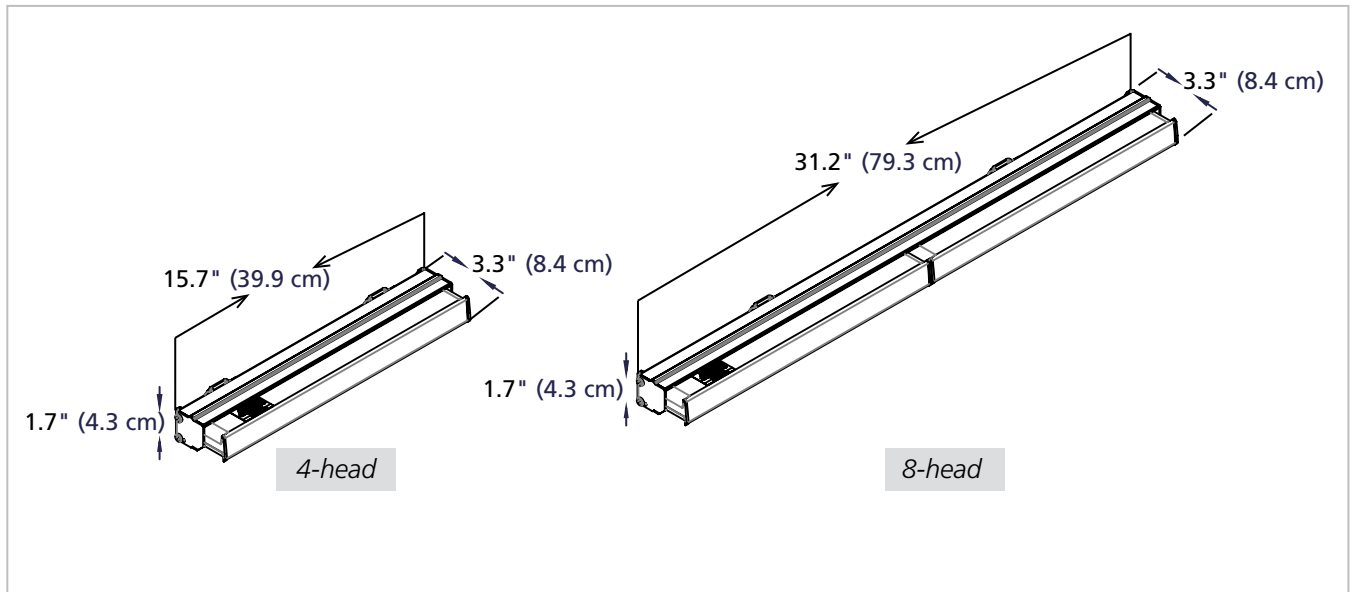


Model	Description
<b>4-Head Model</b>	
CNSM4R-00013	(4) Amber LED reflectors, no interface module
<b>8-Head Models</b>	
CNSM8R-00002	(8) Amber LED reflectors, no interface module
CNSM8R-00037	(8) Amber LED reflectors, 6-button controller
CNSM8RS-AMBR4	(8) Amber/White LED reflectors, no interface module
CNSM8RS-AMBR5	(8) Amber/White LED reflectors, interface module
<b>Accessories and Kits</b>	
CNSM-UM	Universal mount kit for internal and external use
Z8583446D	Serial interface module
Z8623133-VAL	6-button programmable controller

### How to Order

Choose one of the popular models above, customize your own directional lightbar with our online configurator or contact a local Federal Signal representative or distributor.





	4-Head	8-Head
<b>Specifications</b>		
Voltage	12 VDC	
Amp Draw	4 Amp	8 Amp
Operating Temp	-30°C to 65°C	
<b>Physical Specifications</b>		
Height	1.7 in (4.3 cm)	1.7 in (4.3 cm)
Length	15.7 in (39.9 cm)	31.2 in (79.3 cm)
Width	3.3 in (8.4 cm)	3.3 in (8.4 cm)
Ship Weight	2.0 lbs (0.9 kg)*	4.0 lbs (1.8 kg)*

\* Controller not included



CNSM-UM

# SignalMaster™ Controls | Directional Lighting

## Features

- Combined 12 and 24 VDC operation from one controller
- Operates two halogen or multiple LED SignalMaster™ directional lights (SMC5)
- One controller operates (2) 4-, 6-, or 8-lamp directional lights
- Fourteen (SMC5) / seven (SMC1) SignalMaster warning patterns
- AUX IN and AUX OUT functions with eight warning patterns and steady-on mode allows customization of complete warning packages (SMC5)
- Turn signal override feature (SMC5)
- Tactile membrane switch panel
- Reliable surface mount circuitry

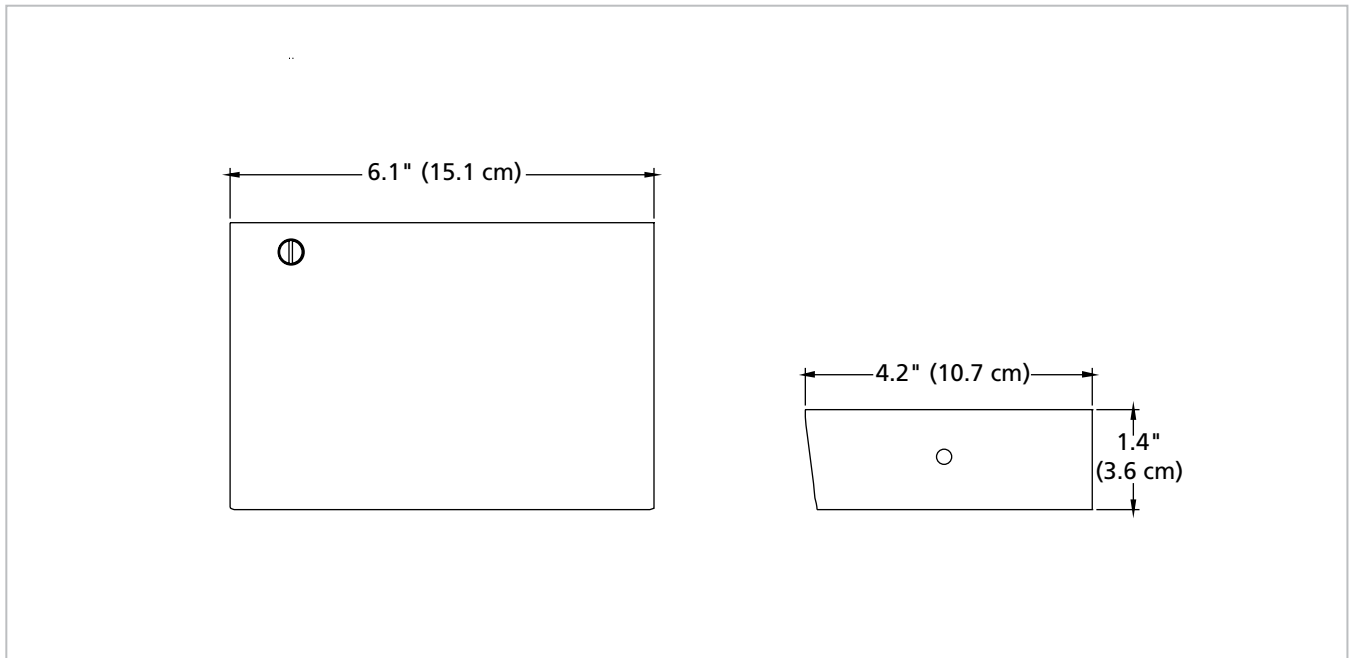


330104-SB



331105-SB

Model	Description
330104-SB	SMC1, Six or eight-lamp, 12 or 24 VDC (multiple installer-selectable flash patterns, fuse protected)
331105-SB	SMC5, Heavy Duty six or eight-lamp, 12 or 24 VDC (slide switch, multiple installer-selectable flash patterns, heavy duty ground, fuse protected, controls two halogen or LED SignalMasters simultaneously), turn signal override feature
<b>Common Replacement Part</b>	
Z140325A-13	SMC5, 15-position female connector for full featured controller



<b>SMC5 Specifications — Model 331105-SB</b>	
Input Voltage	11 VDC to 28 VDC
Polarity	Negative ground only
Operating Temp. Range	-30°C to +65°C
Standby Current	7mA (0.007A)
+BAT Fuse	25A (installer supplied)
+Ignition Fuse	2 Amp
Relay Fuse	1A (installer supplied)
Output Drive Capability (Total)	
Directional	(16) 27 W lamps on eight channels (2 lightbars in parallel)
Auxiliary	(4) 27 W lamps (2 per output) (2) 55 W lamps (1 per output)
Normal Directional Flash Rate	Approx. 30 patterns per minute
Fast Directional Flash Rate	Approx. 45 patterns per minute
<b>Physical Dimensions</b>	
Height	1.4 in (3.6 cm)
Width	6.1 in (15.1 cm)
Depth	4.2 in (10.7 cm)
<b>Ship Weight</b>	
	2.5 lbs (1.1 kg)

<b>SMC1 Specifications — Model 330104-SB</b>	
Input Voltage	11 VDC to 28 VDC
Polarity	Negative ground only
Operating Temp. Range	-30°C to +65°C
Standby Current	7mA (0.007A)
Lightbar Fuse	25A (installer supplied)
+IGNITION Fuse	2 Amp
Output Drive Capability (Total)	
Directional	(8) 27 W lamps on eight channels
Normal Directional Flash Rate	Approx. 30 patterns per minute
<b>Physical Dimensions</b>	
Height	1.4 in (3.6 cm)
Width	6.1 in (15.6 cm)
Depth	4.2 in (10.7 cm)
<b>Ship Weight</b>	
	2.5 lbs (1.1 kg)

# IMPAXX®6 / IMPAXX®3

## Exterior Mount / Perimeter Lights

### Features

- SpectraLux™ multicolor LED technology
- Solaris® LED reflector technology
- Fully-encapsulated waterproof housing
- Available in 6-LED, 12-LED or 18-LED models
- (25) flash patterns
- LEDs offered in Amber, Blue, Green, Red and White
- IMPAXX 3 is available in wide angle lens for better off-axis warning and center focus lens
- IMPAXX 6 Dimensions:  
5.5" (L) x 2.0" (H) x 1.5" (D) (with bezel)  
4.1" (L) x 1.4" (H) x 1.4" (D) (without bezel)
- IMPAXX 3 Dimensions:  
3.7" (L) x 1.7" (H) x 1.3" (D) (with bezel)  
2.9" (L) x 1.3" (H) x 1.2" (D) (without bezel)
- Five-year LED warranty

### Approvals

- IMPAXX6, SAE J595 Class 1
- IMPAXX6, CAC Title 13, Class B
- IMPAXX3, SAE J595 Class 2
- EMI and RFI approved

### Applications

- Construction
- Municipal
- Tow & Recovery
- Utility



IPX600B-A



IPX300-2

CLASS 1

CLASS 2 (IPX3)

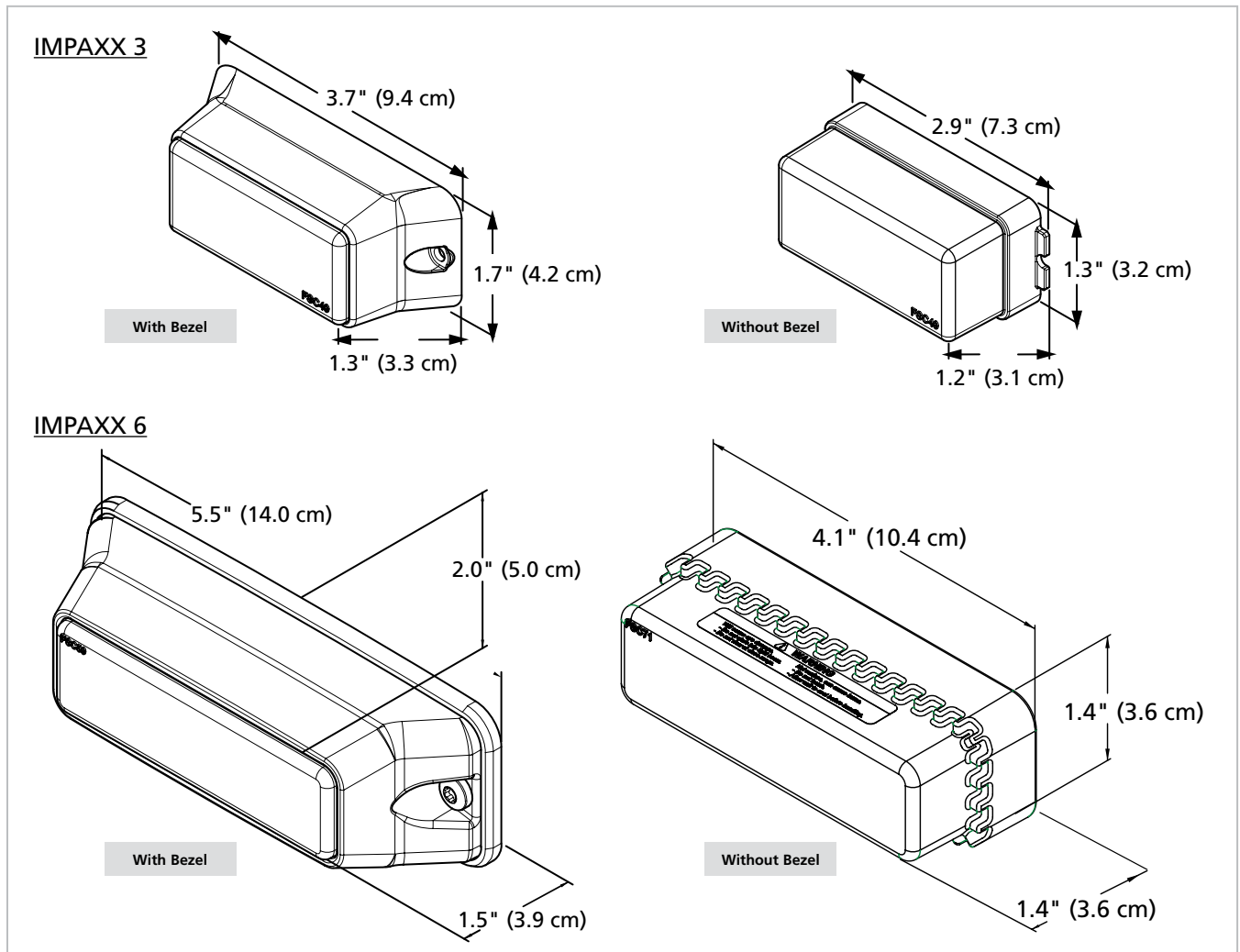
CAC Title 13 (IPX6)

SOLARIS

Model	Description
<b>IMPAXX 6</b>	
<b>Single color, Clear off-axis lens, horizontal mount</b>	
IPX600B-A	(6) LEDs Amber; -B(Blue); -G(Green); -R(Red); -W(White)
<b>Single color, Colored off-axis lens, horizontal mount</b>	
IPX602B-A	(6) LEDs Amber; -B(Blue); -R(Red)
<b>Single color, Clear off-axis, vertical mount</b>	
IPX603B-A	(6) LEDs Amber; -B(Blue); -G(Green); -R(Red); -W(White)
<b>Single color, Colored off-axis lens, vertical mount</b>	
IPX604B-A	(6) LEDs Amber; -B(Blue); -R(Red)
<b>Dual color, Clear off-axis lens, horizontal mount</b>	
IPX620B-BA	(12) LEDs Blue/Amber
IPX620B-BW	(12) LEDs Blue/White
IPX620B-RA	(12) LEDs Red/Amber
IPX620B-WA	(12) LEDs White/Amber
<b>IMPAXX 3</b>	
<b>Clear lens, advanced off-axis lens</b>	
IPX300-2	(3) LEDs Amber; -3(Blue); -4(Red); -5(White); -6(Green)
<b>Clear lens, center focused lens</b>	
IPX310-2	(3) LEDs Amber; -3(Blue); -4(Red); -5(White); -6(Green)
<b>Colored lens, advanced off-axis lens</b>	
IPX302-2	(3) LEDs Amber; -3(Blue); -4(Red); -6(Green)
<b>Accessories or Kits</b>	
IPX6M-1	Chrome bezel, for all IMPAXX 6 models
IPXM-1	Chrome bezel, all IMPAXX 3 models

#### NOTE

- See page 74-75 for mounting options



	IPX3	IPX6
<b>Specifications</b>		
Voltage	12.8 VDC	12.8 VDC
Current Draw	0.7 Amp	1.0 Amp
Operating Temp.	-30° C to +65° C	-30° C to +80° C
<b>Physical Specifications (with Bezel)</b>		
Height	1.7 in (4.2 cm)	2.0 in (4.8 cm)
Length	3.7 in (9.4 cm)	5.5 in (14.0 cm)
Width	1.3 in (3.3 cm)	1.5 in (3.8 cm)
<b>Physical Specifications (without Bezel)</b>		
Height	1.3 in (3.2 cm)	1.4 in (3.6 cm)
Length	2.9 in (7.3 cm)	4.1 in (10.4 cm)
Width	1.2 in (3.1 cm)	1.4 in (3.6 cm)
<b>Ship Weight</b>		
	1.0 lb (0.45 kg)	1.0 lb (0.45 kg)

# Viper® EXT | Exterior Mount / Perimeter Lights

## Features

- Solaris® LED reflector technology
- Fully-encapsulated waterproof housing
- Wide angle lens for better off-axis warning
- (25) selectable flash patterns
- Models come standard with Black bezel
- LEDs offered in Amber, Blue, Red and White
- Dimensions:  
5.7" (L) x 2.4" (H) x 1.5" (D) (with bezel)  
4.5" (L) x 1.9" (H) x 1.5" (D) (without bezel)
- Five-year LED warranty

## Approvals

- SAE J595, Class 1
- CAC Title 13 (on select models)

## Applications

- Construction
- Municipal
- Tow & Recovery
- Utility



VPX800-2

CLASS 1

CAC Title 13



Model	Description
-------	-------------

Clear off-axis lens	
VPX800-2	Amber, (8) high-powered LEDs
VPX800-3	Blue, (8) high-powered LEDs
VPX800-4	Red, (8) high-powered LEDs
VPX800-5	White, (8) high-powered LEDs
350172-25	Amber, (8) high-powered LEDs, 6" oval grommet mounting plate*
Colored off-axis lens	
VPX802-2	Amber, (8) high-powered LEDs
VPX802-3	Blue, (8) high-powered LEDs
VPX802-4	Red, (8) high-powered LEDs

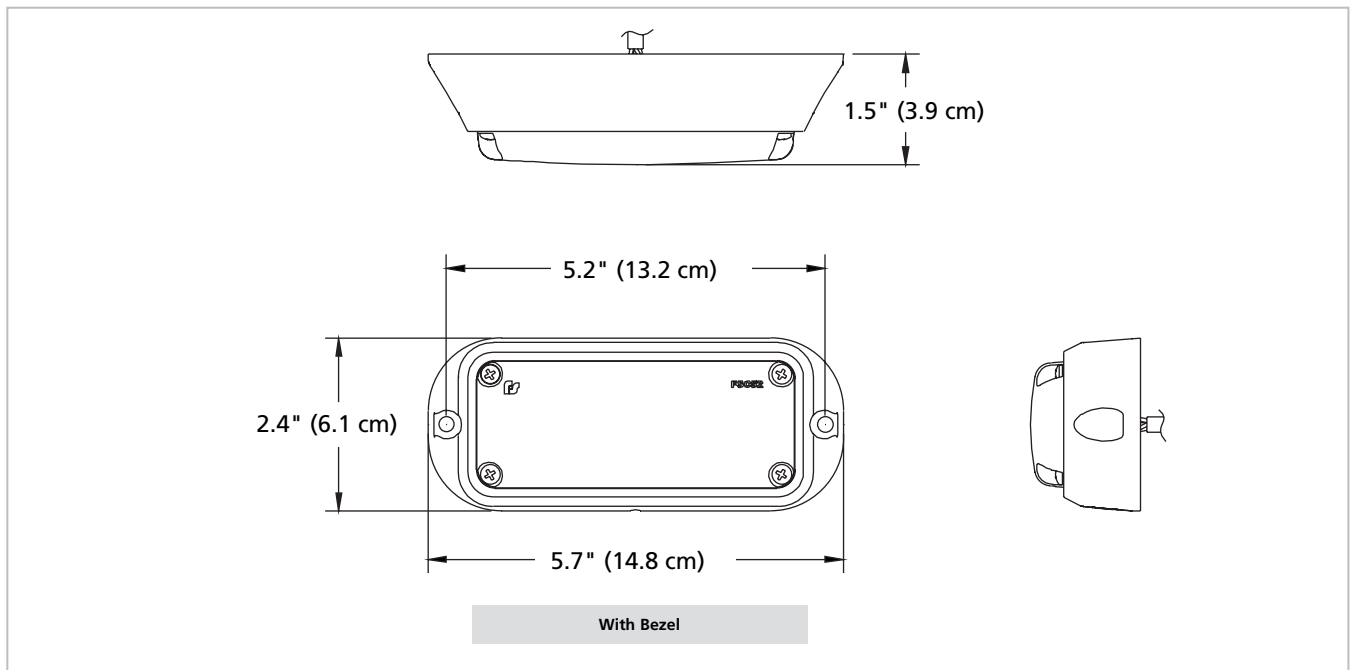
\* For mounting in standard 6" oval cutouts

CAC Title 13 Approved Models, (7) built-in approved flashed patterns	
Clear off-axis lens	
VPX813-2	Amber, (8) high-powered LEDs
Accessories and Kits	
330507	Kit, 6" oval grommet mounting plate (sold individually, lighthouse sold separately)
VPXM-1	Chrome bezel, all models

### NOTE

- See page 74-75 for mounting options

# Viper® EXT | Exterior Mount / Perimeter Lights



Specifications	
Voltage	12.8 VDC
Current Draw	1.5 Amp
Operating Temp	-30°C to +65°C
Ship Weight	
	1.0 lb (0.45 kg)
Physical Specifications (L x H x W)	
Without Bezel	4.5 in x 1.9 in x 1.5 in (11.4 cm x 4.8 cm x 3.9 cm)
With Bezel	5.7 in x 2.4 in x 1.5 in (14.8 cm x 6.1 cm x 3.9 cm)

Flash Pattern	Description	Flash Pattern	Description
1	Null (off)	14	75 FPM Double
2	79 FPM Power Quad*	15	150 FPM Triple
3	150 FPM Single	16	75 FPM Triple
4	151 FPM Single	17	5 Single @ 680 FPM 4 Single @ 216 FPM
5	74 FPM Single*	18	4 Single @ 570 FPM 3 Single @ 246 FPM
6	75 FPM Single*	19	3 Single @ 460 FPM 2 Quad @ 75 FPM
7	240 FPM Single	20	Progressive (flashes start slow and increase in speed)
8	241 FPM Single	21	4 Single @ 154 FPM 2 Quad @ 75 FPM
9	240 FPM Single	22	Random
10	241 FPM Single	23	3 Quick flashes, then stays in Steady Burn
11	150 FPM Single	24	FedPulse 75
12	151 FPM Single	25	Steady Burn
13	74 FPM Single		

\* Conforms to CCR Title 13

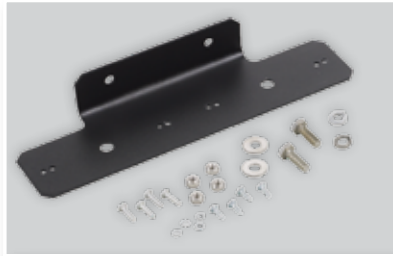
Note: Single, Double and Quad refer to the number of flashing intervals

# IMPAXX® and Viper® EXT Brackets



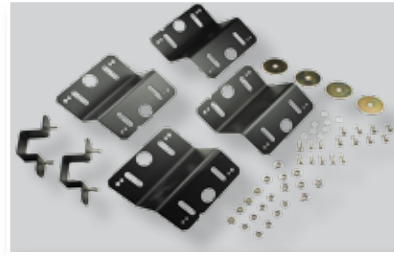
IPX-GRL1

Grille Bracket, IPX3/IPX6/VPX8, (1) grille brackets with hardware, vertical mount orientation



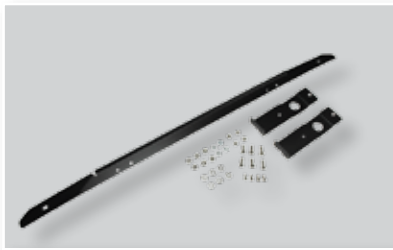
IPX-GRL2

Grille Bracket, IPX3/IPX6/VPX8, (1) grille brackets with hardware, horizontal mount orientation



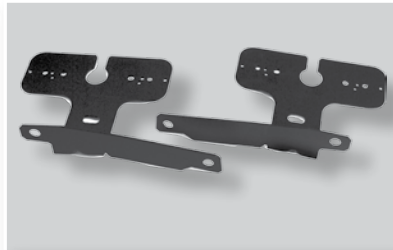
IPX-GRL3

Grille Bracket, IPX3/IPX6/VPX8, pair of grille brackets with hardware



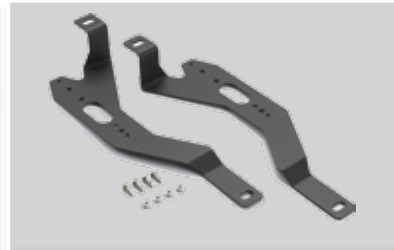
IPX-GRL4

Grille Bracket, IPX3-only, pair of grille brackets with each bracket holds (2) IPX3 light in a vertical orientation



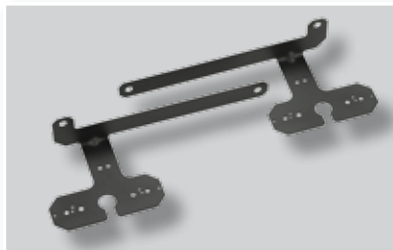
IPX-GRL5

Grille Bracket, IPX3/IPX6/VPX8/MPS300/MPS600, pair of grille brackets with hardware



IPX-GRL6

Grille Bracket, IPX3/IPX6/MPS300/MPS600, pair of grille brackets with hardware



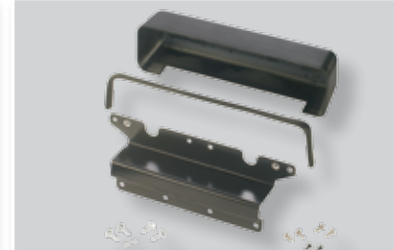
IPX-GRL7

Grille Bracket, IPX3/IPX6/MPS300/MPS600, pair of grille brackets with hardware



IPX-SW1

Rear Side Window Bracket, IPX3/VPX8, pair of rear side window mount brackets



VPX-SW

Rear Side Window Bracket, VPX8, pair of rear side window mount brackets, each bracket hold (2) Viper EXT lights



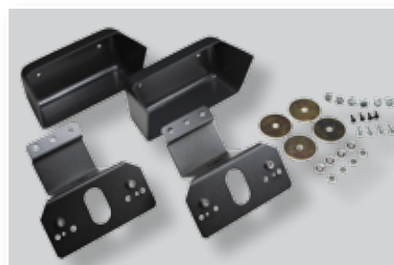
IPX-RDW2

Rear Side Window Bracket, IPX3/IPX6/VPX8, pair of rear side window mount brackets and covers, each bracket holds (2) IMPAXX or Viper EXT lights



IPX-ROW1

Rear Side Window Bracket, IPX3/IPX6, pair of rear side "Opera" window mount brackets



IPX-RSW1

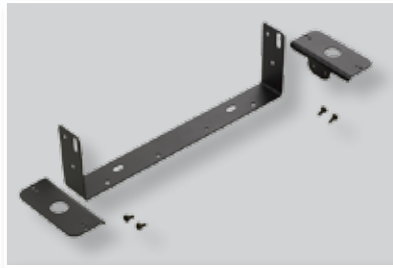
Rear Side Window Bracket, IPX3/IPX6/VPX8, pair of rear side window mount brackets and covers



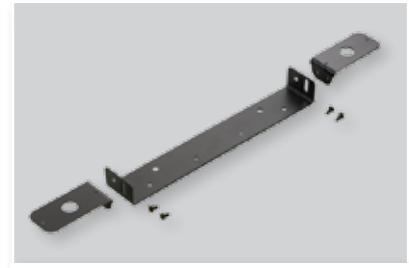
# IMPAXX® and Viper® EXT Brackets



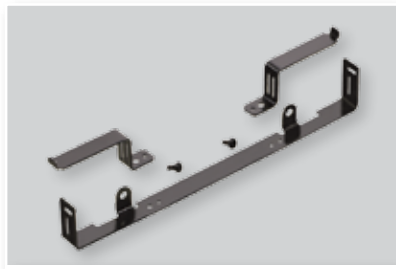
**IPX-RSW2**  
Rear Side Window Bracket, IPX3/IPX6/VPX8, pair of rear side window mount brackets and covers



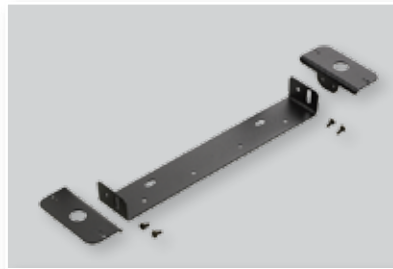
**IPX-LPVX1**  
License Plate Bracket, IPX3/IPX6/VPX8, extended license plate bracket for vehicles with a recessed license plate mount location



**IPX-LPH1**  
License Plate Bracket, IPX3/IPX6/VPX8, generic high side license plate holder with horizontal mount tab on each side, fits most vehicles



**IPX-LPF1**  
License Plate Bracket, IPX3 only, generic low side license plate holder for horizontal IMPAXX install, most vehicles



**IPX-LPV1**  
License Plate Bracket, IPX3/IPX6/VPX8, flat surface license plate mount, various vehicles without recessed plate mounting locations



**IPX-TRNK1**  
Trunk Lid Bracket, IPX3/IPX6/VPX8, pair of inner trunk lid brackets with hardware



**IPX-TRNK2**  
Trunk Lid Bracket, IPX3/VPX8, pair of inner trunk lid brackets with hardware



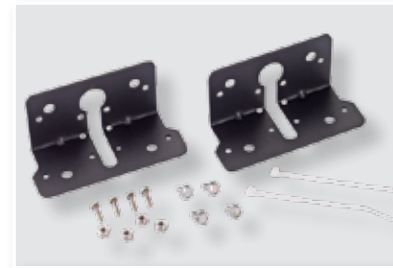
**IPX-TRNK3**  
Trunk Lid Bracket, IPX3/IPX6/VPX8, pair of inner trunk lid brackets with hardware



**IPX-PB45H**  
Push Bumper Bracket, IPX3/IPX6/VPX8, pair of 45-degree slanted push bumper mounts with hardware, horizontal light orientation, fits most push bumpers



**IPX-PB45V**  
Push Bumper Bracket, IPX3/IPX6/VPX8, pair of 45-degree slanted push bumper mounts with hardware, vertical light orientation, fits most push bumpers



**IPX-PBL1**  
Universal Mount Bracket, IPX3/IPX6/VPX8, pair, universal "L" bracket, horizontal orientation

# MicroPulse™ Wide Angle | Exterior Mount / Perimeter Lights

## Features

- Utilizes 9 LEDs; 180-degree light spread
- (12) flash patterns
- UV resistant polycarbonate lens
- Synchronizes with other MicroPulse products
- Black bezel included; optional chrome bezel available
- Available in Amber, Blue, Red and White
- Three-year product warranty

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## Approvals

- SAE J845, Class 1
- SAE J595, Class 1

## Applications

- Construction
- Municipal
- Tow & Recovery
- Utility



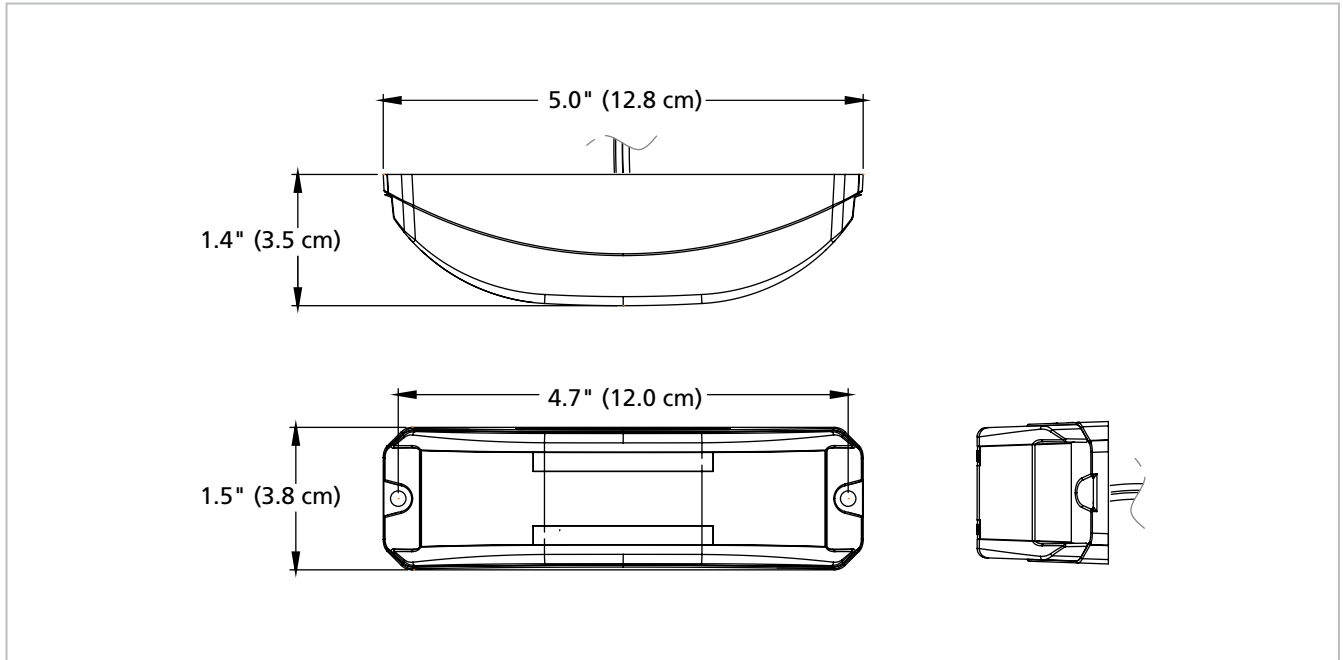
MPSW9-A

CLASS 1

Model	Description
MPSW9-A	9-LED lighthouse, Amber
MPSW9-B	9-LED lighthouse, Blue
MPSW9-R	9-LED lighthouse, Red
MPSW9-W	9-LED lighthouse, White
Accessories	
MPSMW9-1	Chrome bezel for (1) MPSW9
MPSMW9-LB	"L" bracket for (1) MPSW9
MPSMW9-SPACKIT	(4) 5-degree rubber mounting wedges for the use with MPSW9



MPSW9-A shown with optional Chrome bezel (MPSMW9-1)



<b>MPSW9</b>	
<b>Specifications</b>	
Voltage	12-24 VDC
Current Draw	0.58 Amp at 12 VDC 0.28 Amps @ 24 VDC
Operating Temp.	-40°C to 80°C
<b>Physical Specifications (L x H x D)</b>	
Surface Mount	5.04 in x 1.48 in x 1.5 in (12.8 cm) x (3.76 cm) x (3.81 cm)
<b>Ship Weight</b>	
	0.5 lbs (0.23 kg)

# MicroPulse™ Ultra

## Exterior Mount / Perimeter Lights

### Features

- Multiple mounting options for various applications
- Super warning with (6) high-powered LEDs
- Low-profile design offers wider range of mounting locations
- 19 (MP600U) selectable flash patterns
- Single/multi-unit synchronization
- Dimensions:  
MicroPulse 6  
5.0" (L) x 0.35" (H) x 0.7" (D)  
(surface mount)
- Three-year LED warranty

### Approvals

- SAE J845, Class 1 (solid colors)
- SAE J595, Class 1 (solid colors)

### Applications

- Construction
- Municipal
- Tow & Recovery
- Utility



MPS600U-AA

CLASS 1

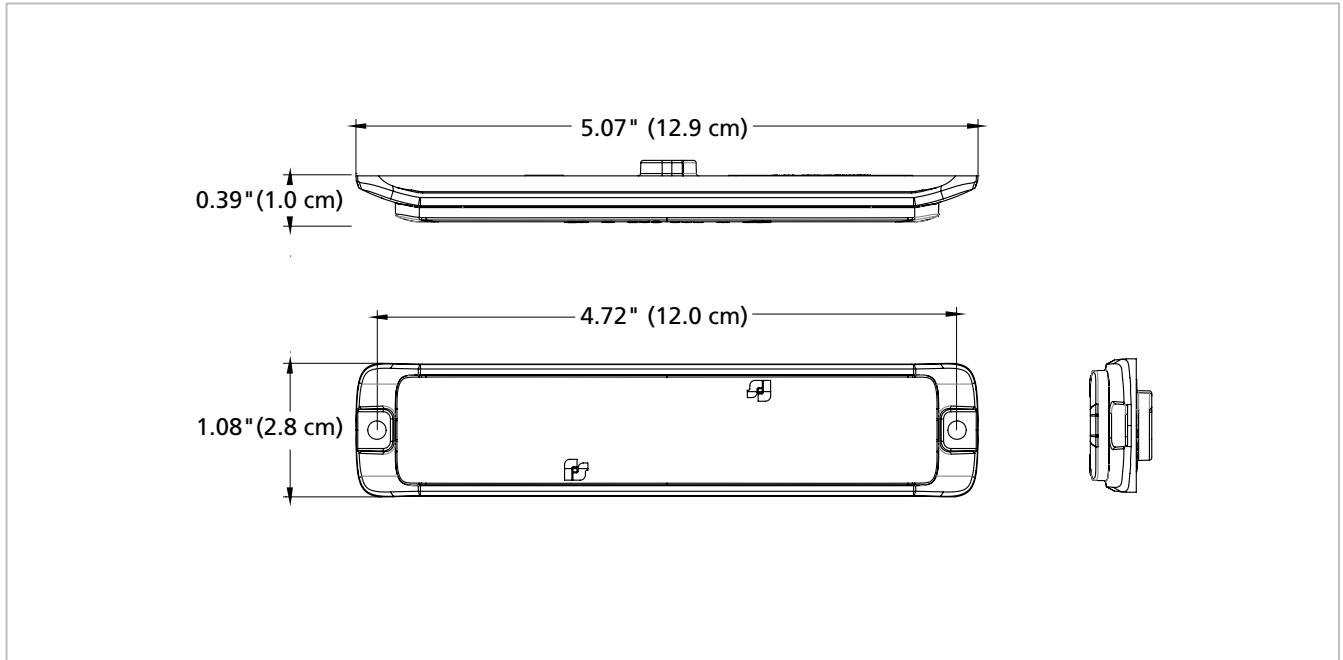
Model	Description
<b>MicroPulse Ultra 6</b> Surface mount, 12-24 VDC, Clear lens	
MPS600U-AA	6-LED lighthouse, Amber/Amber LEDs
MPS600U-BB	6-LED lighthouse, Blue/Blue LEDs
MPS600U-RB	6-LED lighthouse, Red/Blue LEDs
MPS600U-RR	6-LED lighthouse, Red/Red LEDs
MPS600U-WA	6-LED lighthouse, White/Amber LEDs
MPS600U-RW	6-LED lighthouse, Red/White LEDs
MPS600U-WW	6-LED lighthouse, White/White LEDs

#### NOTE

- See page 82-83 for mounting options



MicroPulse Ultra is only 0.35" thick



<b>MPS600U Models</b>	
<b>Specifications</b>	
Voltage	12-24 VDC
Current Draw	0.55 Amp at 12 VDC
	0.26 Amp at 24 VDC
Operating Temp.	-40°C to 80°C
<b>Physical Specifications (L x H x D)</b>	
Surface Mount	5.0 in x 0.35 in x 0.7 in (12.7 cm) x (0.89 cm) x (1.78 cm)
<b>Ship Weight</b>	
	0.75 lbs (0.34 kg)

# MicroPulse™

## Exterior Mount / Perimeter Lights

### Features

- Multiple mounting options for various applications
- Superior warning with (3), (6) or (12) high-powered LEDs
- Low-profile design offers wider range of mounting locations
- 12 (MPS3), 19 (MPS6), or 25 (MPS12) selectable flash patterns
- Single/multi-unit synchronization
- Dimensions:  
MicroPulse 12  
5.2" (L) x 1.9" (H) x 0.7" (D) (surface mount)  
MicroPulse 6  
5.0" (L) x 1.1" (H) x 0.7" (D) (surface mount)  
MicroPulse 3  
3.4" (L) x 1.1" (H) x 0.7" (D) (surface mount)
- Three-year LED warranty

### Approvals

#### MicroPulse 12 and MicroPulse 6

- SAE J845, Class 1 (solid colors)
- SAE J595, Class 1 (solid colors)

#### MicroPulse 3

- SAE J845, Class 1 (Red)
- SAE J595, Class 1 (Red)
- SAE J845, Class 2 (Amber)
- SAE J595, Class 2 (Amber, Blue and White)

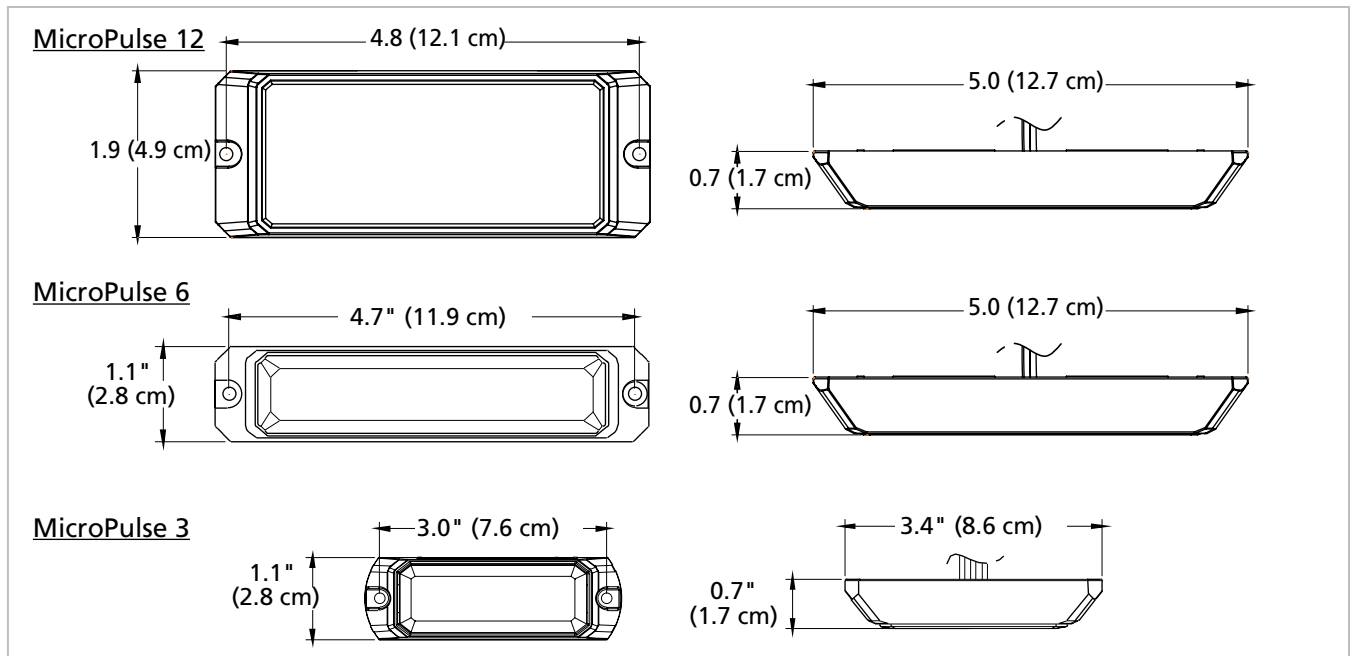
### Applications

- Construction
- Municipal
- Tow & Recovery
- Utility

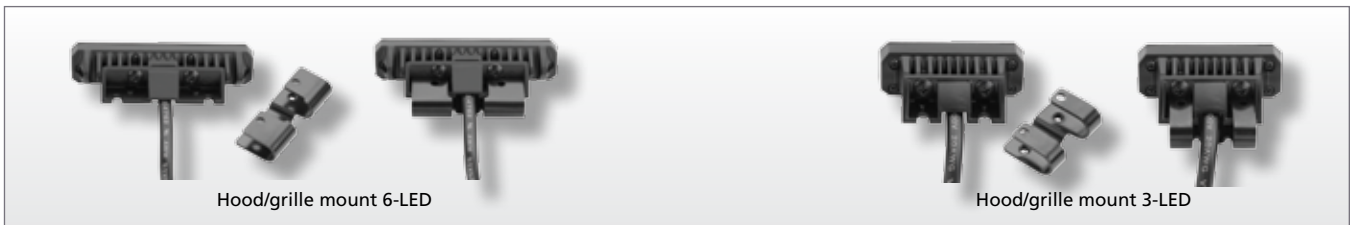


Model	Description
<b>MicroPulse 12</b>	
<b>Surface mount, 12-24 VDC, Clear lens</b>	
MPS1200-AA	12-LED lighthead, Amber/Amber, LEDs
MPS1200-AW	12-LED lighthead, Amber/White LEDs
MPS1200-BA	12-LED lighthead, Blue/Amber LEDs
MPS1200-BB	12-LED lighthead, Blue/Blue LEDs
MPS1200-BW	12-LED lighthead, Blue/White LEDs
MPS1200-RA	12-LED lighthead, Red/Amber LEDs
MPS1200-RB	12-LED lighthead, Red/Blue LEDs
MPS1200-RR	12-LED lighthead, Red/Red LEDs
MPS1200-RW	12-LED lighthead, Red/White LEDs
<b>MicroPulse 6</b>	
<b>Surface mount, 12-24 VDC, Clear lens</b>	
MPS600-AA	6-LED lighthead, Amber/Amber, LEDs
MPS600-AW	6-LED lighthead, Amber/White LEDs
MPS600-BB	6-LED lighthead, Blue/Blue, LEDs
MPS600-RB	6-LED lighthead, Red/Blue, LEDs
MPS600-RA	6-LED lighthead, Red/Amber, LEDs
MPS600-RR	6-LED lighthead, Red/Red, LEDs
MPS600-RW	6-LED lighthead, Red/White, LEDs
MPS600-WW	6-LED lighthead, White/White, LEDs
<b>Hood/Grille mount, 12-24 VDC, Clear lens</b>	
MPS650-AA	6-LED lighthead, Amber/Amber, LEDs
MPS650-AW	6-LED lighthead, Amber/White, LEDs
MPS650-BB	6-LED lighthead, Blue/Blue, LEDs
MPS650-RB	6-LED lighthead, Red/Blue, LEDs
MPS650-RR	6-LED lighthead, Red/Red, LEDs
MPS650-RW	6-LED lighthead, Red/White, LEDs
MPS650-WW	6-LED lighthead, White/White, LEDs

Continued on next page



	MPS3 Models	MPS6 Models	MPS12 Models
<b>Specifications</b>			
Voltage	12-24 VDC	12-24 VDC	12-24 VDC
Current Draw	0.2 Amp at 12 VDC 0.11 Amp at 24 VDC	0.55 Amp at 12 VDC 0.26 Amp at 24 VDC	0.55 Amp at 12 VDC 0.26 Amp at 24 VDC
Operating Temp.	-40°C to 80°C	-40°C to 80°C	-40°C to 80°C
<b>Physical Specifications (L x H x D)</b>			
Hood Version	2.5 in x 1.1 in x 1.5 in (3.7 cm) x (2.4 cm) x (6.5 cm)	4.2 in x 0.94 in x 1.7 in (10.8 cm) x (2.4 cm) x (4.3 cm)	—
Surface Mount	3.4 in x 1.1 in x 0.6 in (7.6 cm) x (2.8 cm) x (1.6 cm)	5.0 in x 1.1 in x 0.68 in (12.7 cm) x (2.8 cm) x (1.7 cm)	1.92 in x 5.0 in x 0.76 in (4.8 cm) x (12.7 cm) x (1.9 cm)
<b>Ship Weight</b>			
	0.5 lbs (0.23 kg)	0.75 lbs (0.34 kg)	1.0 lbs (0.45 kg)

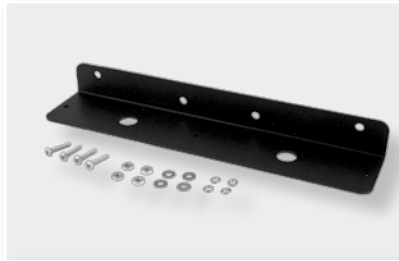


MicroPulse 3 (SAE J845/J595 Class 2) Surface mount, 12-24 VDC, Clear lens	
MPS300-A	3-LED lighthouse, Amber, LEDs
MPS300-B	3-LED lighthouse, Blue, LEDs
MPS300-R	3-LED lighthouse, Red, LEDs
MPS300-W	3-LED lighthouse, White, LEDs

Hood/Grille mount, 12-24 VDC	
MPS350-A	3-LED lighthouse, Amber, LEDs
MPS350-B	3-LED lighthouse, Blue, LEDs
MPS350-R	3-LED lighthouse, Red, LEDs
MPS350-W	3-LED lighthouse, White, LEDs

NOTE  
 • See page 82-83 for mounting options

# MicroPulse™ Brackets



MPSM12-DL

Generic, L-bracket for (2) MPS1200, side-by-side



MPSM12-SB

Swivel mount bracket for (1) MPS1200



MPSM12-BOOT

Rubber boot mount for (1) MPS 1200



MPSM12-SPACRKT

Kit for four 5-degree rubber mounting wedges for use with MPS1200 lights



MPSM3-LB

MicroPulse 3 Bracket, Generic L-Bracket for (1) MPS300



MPSM3-DS

MicroPulse 3 Bracket, Generic L-Bracket for (2) MPS300, stacked



MPSM3-DL

MicroPulse 3 Bracket, Generic L-Bracket for (2) MPS300, side-by-side



MPSM3-BOOT

MicroPulse 3 Bracket, Rubber boot mount for (1) MPS300



MPSM3-BOOTKIT

MicroPulse 3 Bracket, (2) Rubber boot mounts, (2) mounting plates for (2) MPS300



MPSM3-SPACRKT

MicroPulse 3 Bracket, Kit of four 5-degree rubber mounting wedges for use with MPS300 lights



MPSM3-SB

MicroPulse 3 Bracket, Swivel Mount Bracket for (1) MPS300



MPSM6-SB

MicroPulse 6 Bracket, Swivel Mount Bracket for (1) MPS600



# MicroPulse™ Brackets



MPSM6-LB

MicroPulse 6 Bracket, Generic L-Bracket for (1) MPS600



MPSM6-DS

MicroPulse 6 Bracket, Generic L-Bracket for (2) MPS600, stacked



MPSM6-DL

MicroPulse 6 Bracket, Generic L-Bracket for (2) MPS600, side-by-side



MPSM6-BOOT

MicroPulse 6 Bracket, Rubber boot mount for (1) MPS600



MPSM6-BOOTKIT

MicroPulse 6 Bracket, (2) Rubber boot mounts, (2) mounting plates for (2) MPS600



MPSM6-SPACRKT

MicroPulse 6 Bracket, Kit of four 5-degree rubber mounting wedges for use with MPS600 lights



MPSM12-LB

Generic L-bracket for (1) MPS1200



MPSM12-DS

Generic L-bracket for (2) MPS1200, stacked

# 3600 LED Lights

## Exterior Mount / Perimeter Lights

### Features

- Watertight seal make each unit extremely durable
- Models may be synchronized with each other and other Federal Signal products
- Variety of mounting options
- Clear and color lens options
- Ten (10) built-in selectable flash patterns
- LEDs offered in Amber, Blue, Red and White
- Dimensions:  
4.2" (L) x 1.8" (H) x 1.0" (D)  
(without bezel)
- Five-year LED warranty

### Approvals

- SAE J845, Class 1
- CAC Title 13

### Applications

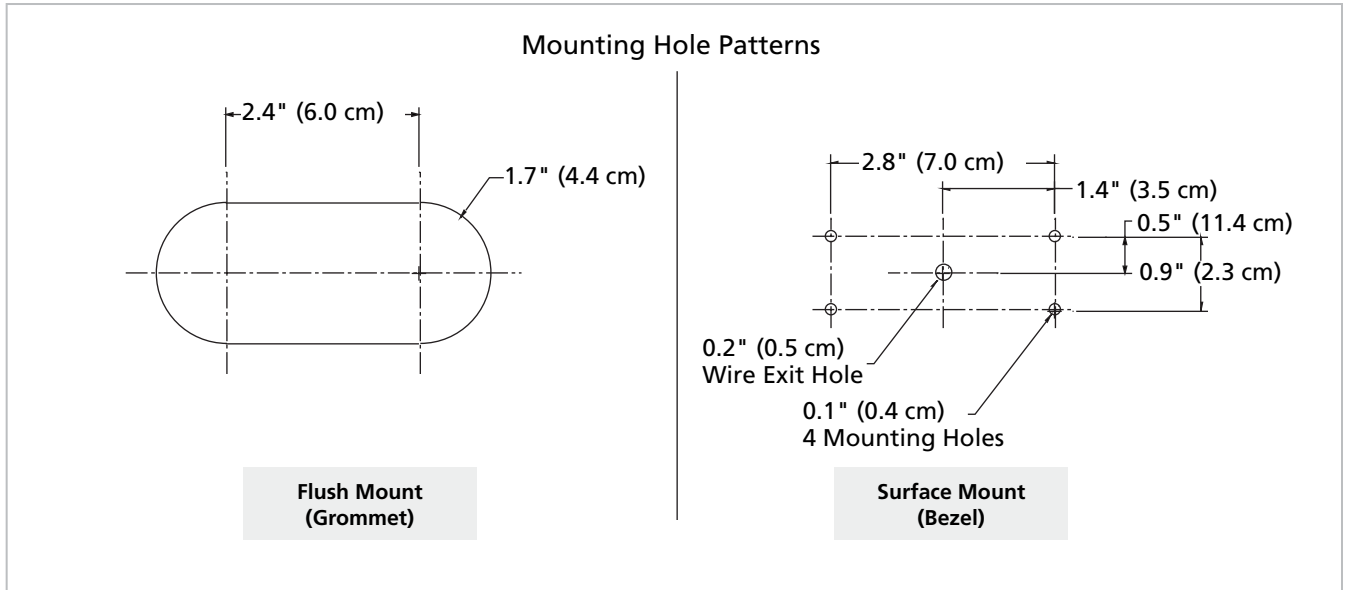
- Construction
- Municipal
- Tow & Recovery
- Utility



CLASS 1

CAC Title 13

Model	Description
<b>Colored lens, wide prescription</b>	
360401-02	Amber LED, Amber lens
360401-03	Blue LED, Blue lens
360401-04	Red LED, Red lens
<b>Clear lens, wide prescription</b>	
360411-02	Amber LED, Clear lens
360411-03	Blue LED, Clear lens
360411-04	Red LED, Clear lens
<b>Kits</b>	
330501	Kit, plastic surface mount (pair)
330502	Kit, flush mount (pair)
330503	Kit, side mirror mount with rubber grommet (pair)
330504	Kit, dash/deck mount, plastic bezel (sold individually)
330505	Kit, cast bezel, surface mount (sold individually)
330507	Kit, grommet, 6"



Specifications	
Voltage	12 VDC
Current Draw	0.4 Amp (all colors)
Physical Specifications (L x H x D)	
	4.2 in (10.6 cm) x 1.7 in (4.4 cm) x 1.0 in (2.5 cm)
Ship Weight	
	0.3 lbs (0.14 kg)



# QuadraFlare® 7x3

## Exterior Mount / Perimeter Lights

### Features

- Solaris® LED reflector technology
- Available with built-in flasher featuring a variety of OEM friendly selectable patterns
- LEDs offered in Amber, Blue, Green, Red, and White
- Optional chrome-plated trim bezel available
- Five-year LED warranty

### Approval

- SAE J595, Class 1

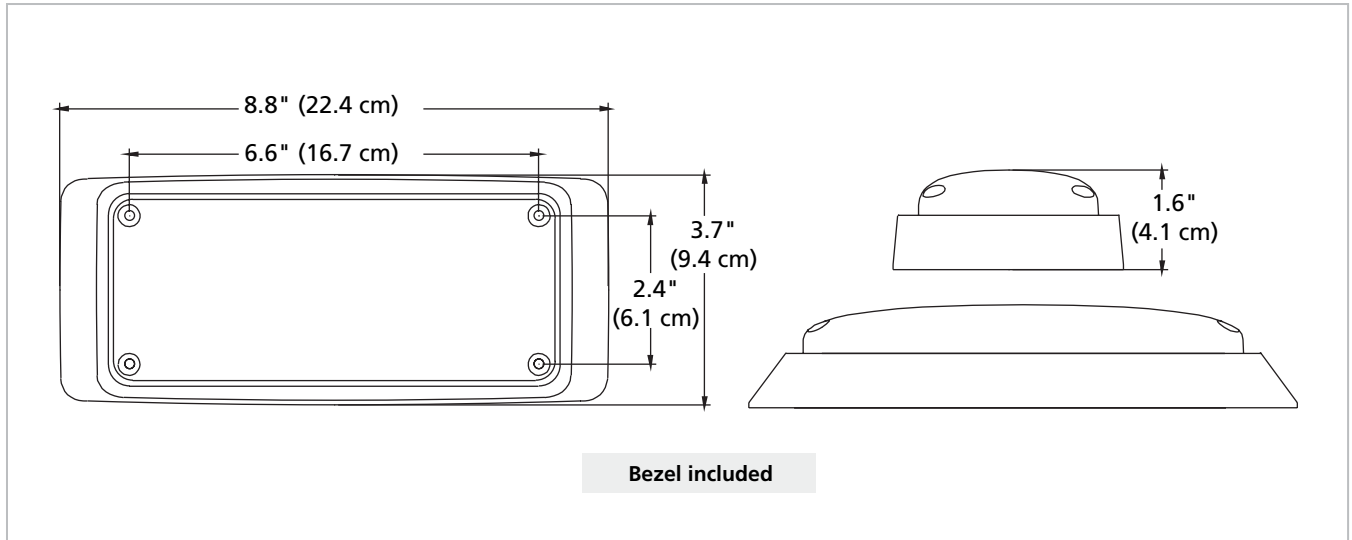
### Applications

- Construction
- Municipal
- Tow & Recovery
- Utility



CLASS 1 

Model	Description
<b>Color lens and built-in flasher</b>	
QL73XF-(color)	Amber, Blue or Red
QL73XF-G	Green
<b>Clear lens and built-in flasher</b>	
QL73XFC-(color)	Amber, Blue or Red
QL73XFC-C	Clear
<b>Split-LED warning lights with color lens and built-in flasher</b>	
QL73SF-AA	Amber/Amber
QL73SF-BB	Blue/Blue
QL73SF-RR	Red/Red
<b>Split-LED with Clear lens and built-in flasher</b>	
QL73SFC-AC	Amber/Clear
QL73SFC-BA	Blue/Amber
QL73SFC-RA	Red/Amber
QL73SFC-RB	Red/Blue
QL73SFC-RC	Red/Clear
QL73SFC-RG	Red/Green
QL73SFC-RR	Red/Red
<b>Kits</b>	
QL73MC	Trim bezel, Chrome with gasket
<b>Common Replacement Parts</b>	
Z8012078A	Lens, fluted, Red; -02(Clear)
Z8012110A	Gasket, 7x3 base/lens, molded



Warning Lights						
Model #	LED Color	Lens Color	LED Count	Internal Flasher	Split LED	Dimming
<b>7X3 Quadraflares</b>						
QL73XF-(color)	Amber, Blue, Red, White, Green	Amber, Blue, Red, Clear, Green	8	YES	NO	YES
QL73XFC-(color)	Amber, Blue, Red, White, Green	Clear	8	YES	NO	YES
QL73SF-(color)(color)*	Amber, Blue, Red, Green	Amber, Blue, Red, Clear, Green	8	YES	YES	YES
QL73SFC-(color)(color)	Amber, Blue, Red, White, Green	Clear	8	YES	YES	YES

\* Single color split LEDs. Example: red/red LEDs, red lens.

Specifications					
	Current Draw*	Input Voltage	Operating Temperature	Physical Specifications H x W x L	Ship Weight
<b>All QL73 Models</b>	Max 2.0 Amp	12.8 VDC	-40°C-+65°C	7.4 in x 3.7 in x 1.6 in (18.7 cm x 9.4 cm x 4.1 cm) (without bezel)	1.0 lbs (0.5kg)

# QuadraFlare® 6x4

## Exterior Mount / Perimeter Lights

### Features

- Solaris® LED reflector technology
- Offered with built-in flasher featuring a variety of selectable patterns
- Brake/Tail/Turn, Turn Arrow and Back-up light models also available
- LEDs offered in Amber, Blue, Green, Red, and White
- Optional chrome-plated trim bezel available
- Five-year LED warranty

### Approval

- SAE J595, Class 1

### Applications

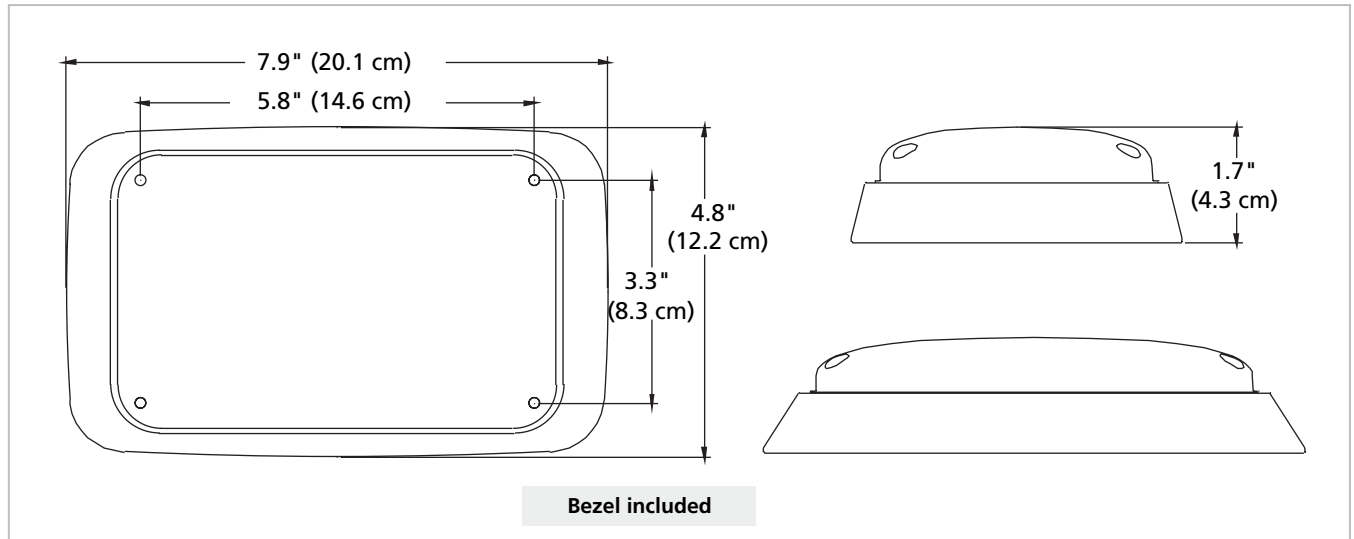
- Construction
- Municipal
- Tow & Recovery
- Utility



CLASS 1 SOLARIS

Model	Description
<b>Warning lights with color lens and built-in flasher</b>	
QL64XF-(color)	Amber, Blue or Red
<b>Warning lights with Clear lens and built-in flasher</b>	
QL64XFC-(color)	Amber, Blue or Red
QL64XF-C	Clear
<b>Split-LED warning lights with color lens and built-in flasher</b>	
QL64SF-AA	Amber/Amber
<b>Split-LED warning lights with Clear lens and built-in flasher</b>	
QL64SFC-(Color/Color)	Combinations of Amber/Blue/Red
QL64SFC-(Color/Color)	Combinations of Amber/Blue/Red with Green/White
<b>Brake/Tail/Turn and Back-up lights</b>	
QL64Z-BTT	Brake/Tail/Turn, Red LED, Red lens
QL64Z-ARROW	Turn arrow, Amber LED, Amber lens
QL64Z-TURN	Turn light, Amber LED, Amber lens
QL64Z-BACKUP	Back-up light, White LED, Clear lens
<b>3-Position Vertical Casting</b>	
QL64Z3V-LEFT	Installed QL64Z-BTT, QL64Z-ARROW (left facing), QL64Z-BACKUP
QL64Z3V-RIGHT	Installed QL64Z-BTT, QL64Z-ARROW (right facing), QL64Z-BACKUP
QL64Z3V-LED	Installed QL64Z-BTT, QL64Z-TURN, QL64Z-BACKUP
QL64Z3V	Casting with gasket
<b>4-Position Vertical Casting</b>	
QL64Z4V-LEFT	Installed QL64Z-BTT, QL64Z-ARROW (left facing), QL64Z-BACKUP, QL64XF-R
QL64Z4V-RIGHT	Installed QL64Z-BTT, QL64Z-ARROW (right facing), QL64Z-BACKUP, QL64XF-R
QL64Z4V-LED	Installed QL64Z-BTT, QL64Z-TURN, QL64Z-BACKUP, QL64XF-R
QL64Z4V	Casting with gasket

Continued on next page



Model	LED Color	Lens Color	LED Count	Internal Flasher	Split LED	Dimming
<b>6x4 QuadraFlares</b>						
QL64XF-(color)	Amber, Blue, Red, White, Green	Amber, Blue, Red, Clear, Green	10	YES	N/A	YES
QL64XFC-(color)	Amber, Blue, Red, White, Green	Clear	10	YES	N/A	YES
QL64SFC-(color)(color)	Amber, Blue, Red, White, Green	Clear	10	YES	YES	YES

\* Single color split LEDs. Example: red/red LEDs, red lens.

Specifications					
	Current Draw*	Input Voltage	Operating Temperature	Physical Specifications H x W x L	Ship Weight
<b>All QL64 Models</b>	Max 2.0 Amp	12.8 VDC	-40°C-+65°C	4.2 in x 6.6 in x 1.5 in (10.7 cm x 16.7 cm x 3.8 cm) (without bezel)	1.0 lb (0.5kg)
<b>QL64Z3V-LED</b>	Max 2.5 Amp	12.8 VDC	-40°C-+65°C	15.1 in x 7.4 in x 1.6 in (38.4 cm x 18.8 cm x 4.1 cm)	11.0 lbs (5.0 kg)
<b>QL64Z3V-Left/Right</b>	Max 2.5 Amp	12.8 VDC	-40°C-+65°C	15.1 in x 7.4 in x 1.6 in (38.4 cm x 18.8 cm x 1.6 cm)	11.0 lbs (5.0 kg)
<b>QL64Z3H-LED</b>	Max 2.5 Amp	12.8 VDC	-40°C-+65°C	5.0 in x 22.3 in x 1.6 in (12.7 cm x 56.6 cm x 4.1 cm)	11.0 lbs (5.0 kg)
<b>QL64Z3H-Left/Right</b>	Max 2.5 Amp	12.8 VDC	-40°C-+65°C	5.0 in x 22.3 in x 1.6 in (12.7 cm x 56.6 cm x 4.1 cm)	11.0 lbs (5.0 kg)
<b>QL64Z4V-LED</b>	Max 4.0 Amp	12.8 VDC	-40°C-+65°C	19.6 in x 7.4 in x 1.6 in (49.8 cm x 18.8 cm x 4.1 cm)	12.5 lbs (5.7 kg)
<b>QL64Z4V-Left/Right</b>	Max 4.0 Amp	12.8 VDC	-40°C-+65°C	19.6 in x 7.4 in x 1.6 in (49.8 cm x 18.8 cm x 4.1 cm)	12.5 lbs (5.7 kg)

Accessories and Kits	
QL64MHL	Headlight mount kit
QL64MC	Trim bezel, Chrome with gasket
Common Replacement Parts	
Z8012109A	Gasket, 6x4 base/lens molded
Z8012013B-01	Lens, fluted, 6x4, Amber; -02(Clear)

# QuadraFlare® 9x7

## Exterior Mount / Perimeter Lights

### Features

- Solaris® LED reflector technology
- Features unique Quad-X patterns
- Available with built-in flasher featuring a variety of OEM friendly selectable patterns
- LEDs offered in Amber, Blue, Green, Red and White
- Optional chrome-plated trim bezel available
- Five-year LED warranty

### Approvals

- SAE J595, Class 1
- CAC Title 13

### Applications

- Construction
- Municipal
- Tow & Recovery
- Utility



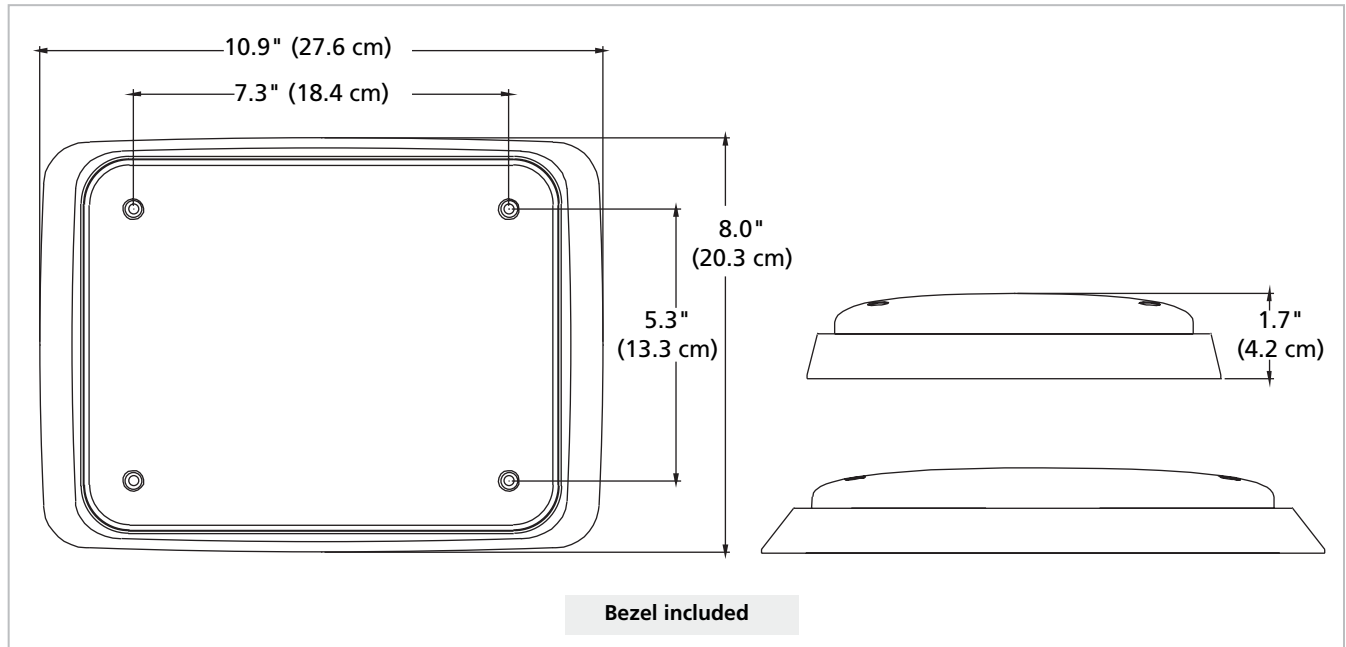
CLASS 1

CAC Title 13

SOLARIS

Model	Description
	<b>9x7 QuadraFlare, warning lights with color lens and built-in flasher</b>
QL97XF-(color)	Amber, Blue or Red
	<b>9x7, QuadraFlare, warning lights with Clear lens and built-in flasher</b>
QL97XFC-(color)	Amber, Blue or Red
QL97XFC-C	White
	<b>9x7 Split-LED warning lights with color lens and built-in flasher</b>
QL97SF-AA	Amber/Amber
QL97SF-RR	Red/Red
	<b>9x7 Split-LED warning lights with Clear lens and built-in flasher</b>
QL97SFC-AA	Amber/Amber
QL97SFC-AC	Amber/Clear
QL97SFC-BB	Blue/Blue
QL97SFC-CC	White/White
QL97SFC-RA	Red/Amber
QL97SFC-RB	Red/Blue
QL97SFC-RC	Red/White
QL97SFC-RR	Red/Red
	<b>GHSCENE Lights</b>
QL97LEDSCENE	LED SCENE
	<b>Accessory</b>
QL97MC	Trim bezel, Chrome with gasket
	<b>Common Replacement Parts</b>
Z8012062C-02	Lens, fluted, Clear
Z8012111A	Gasket, 9x7 base/lens, molded





Warning Lights						
Model	LED Color	Lens Color	LED Count	Internal Flasher	Split LED	Dimming
<b>9x7 Quadraflares</b>						
QL97XF-(color)	Amber, Blue, Red, White, Green	Amber, Blue, Red, Clear, Green	16	YES	NO	YES
QL97XFC-(color)	Amber, Blue, Red, White, Green	Clear	16	YES	NO	YES
QL97SF-(color)(color)*	Amber, Blue, Red, Green	Amber, Blue, Red, Clear, Green	16	YES	YES	YES
QL97SFC-(color)(color)	Amber, Blue, Red, White, Green	Clear	16	NO	YES	YES

Specifications					
	Current Draw	Input Voltage	Operating Temperature	Physical Specifications H x W x L	Ship Weight
<b>All QL97 models</b>	Max 4.0 Amp	12.8 VDC	-40°C-+65°C	7.3 in x 9.2 in x 1.7 in (18.4 cm x 23.4 cm x 4.2 cm) (without bezel)	2.0 lbs (0.9 kg)

# Latitude™ Warning Light | Exterior Mount / Perimeter Lights

## Features

- Solaris® LED reflector technology
- ROC (Reliable Onboard Circuitry™) technology
- Available in 4-head, 6-head and 8-head models
- Three LEDs per position
- Both interior and exterior mounting brackets are available; compatible with Federal Signal's SignalMaster brackets
- Innovative co-extrusion, polycarbonate housing provides moisture resistance
- (10) selectable flash patterns
- Five-year LED warranty

## Approval

- SAE J595 Class 1, CAC Title 13 Class B

## Applications

- Construction
- Street Sweepers
- Tow & Recovery
- Utility
- Waste Hauling



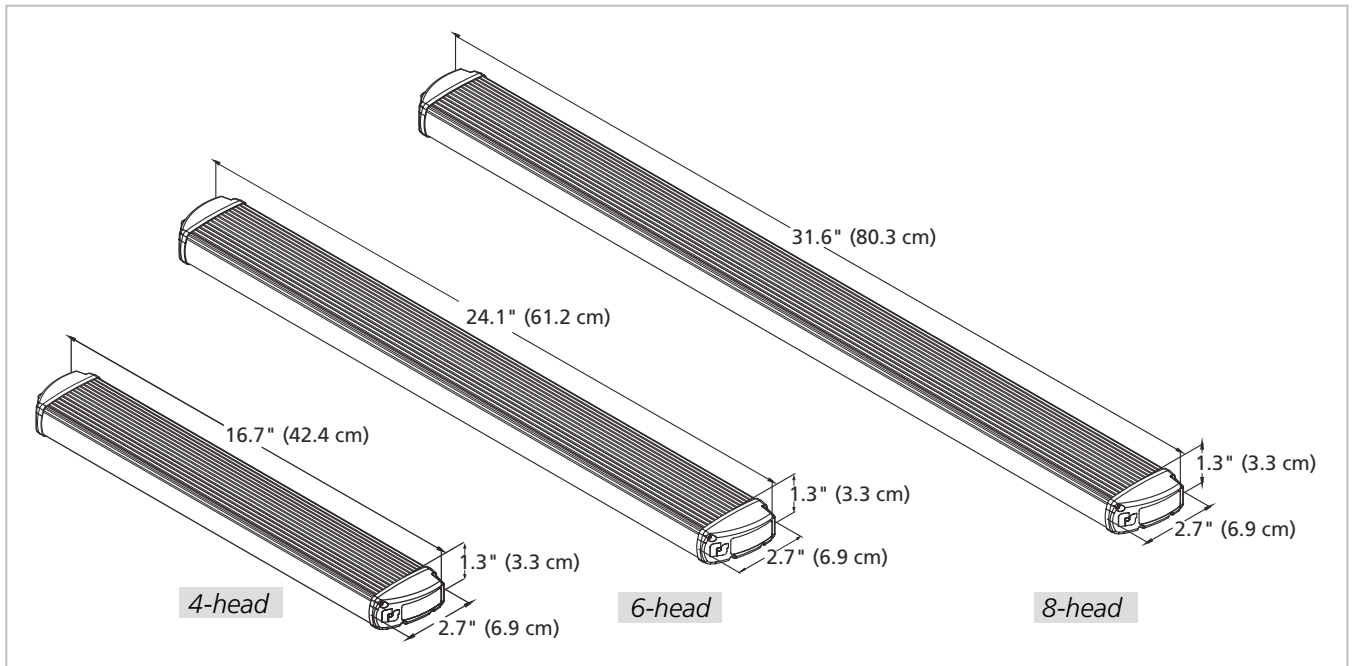
CAC Title 13

CLASS 1

ROC  
RELIABLE ONBOARD CIRCUITRY

SOLARIS

Model	Description
<b>4-head flashing model</b>	
SL4F-A	(4) Amber LED reflectors, A-A-A-A
<b>6-head flashing model</b>	
SL6F-A	(6) Amber LED reflectors, A-A-A-A-A-A
<b>8-head flashing model</b>	
SL8F-A	(8) Amber LED reflectors, A-A-A-A-A-A-A-A
<b>Accessories and Kits</b>	
320310	Kit, bracket, flush mount system
320330	Kit, bracket, system mount
320350	Kit, bracket, foot adapter
320320	Kit, bracket, double "L" mount
320340	Kit, bracket, universal vehicle mount



	4-Head	6-Head	8-Head
<b>Specifications</b>			
Voltage	12.8 VDC		
Amp Draw	2 Amp	4 Amp	6 Amp
Operating Temp	-22°F to +149°F (-30°C to +65°C)		
<b>Physical Specifications</b>			
Height	1.3 in (3.3 cm)	1.3 in (3.3 cm)	1.3 in (3.3 cm)
Length	16.9 in (42.9 cm)	24.1 in (61.2 cm)	31.6 in (80.3 cm)
Width	2.7 in (6.9 cm)	2.7 in (6.9 cm)	2.7 in (6.9 cm)
Ship Weight	3.1 lbs (1.4 kg)	3.8 lbs (1.7 kg)	4.0 lbs (1.8 kg)



320310



320320



320330



320340



320350

# 416500 Corner LED | Exterior Mount / Perimeter Lights

## Features

- Built-in (19) selectable flash patterns
- Multiple heads can be synchronized and can flash simultaneously or alternately
- Maintenance free
- Low-profile design
- Suitable for external or internal use
- Three-year LED warranty

## Applications

- Construction
- Municipal
- Tow & Recovery
- Utility



Model	Description
<b>In-line Corner LED Systems</b>	
416500-A	Amber LED head with in-line flasher
416500-B	Blue LED head with in-line flasher
416500-C	Clear LED head with in-line flasher
416500-R	Red LED head with in-line flasher

Specifications			
System Voltage	12/24 VDC		
Average Current	1.2 Amp @ 12.8 VDC/0.7 Amp @ 24 VDC		
Average Power	15 Watts		
Maximum Current	2.4 Amp @ 12.8 VDC/1.23 Amp @24 VDC		
Operating Temperature	-22 F to 149 F (-40°C to 80°C)		
LED	6 LEDs per head		
Physical Dimensions	Light Head	Flasher	Mounting Flange
Length	--	5.43 in (13.79 cm)	2.23 in (5.66 cm)
Width	Base- 2.36 in (5.99 cm) Bulb - 1.48 in (3.76 cm)	0.9 in (2.29 cm)	1.88 in (1.78 cm)
Height	Base & Bulb - 0.67 in (1.7 cm) Base - 0.49 in (1.24 cm) Bulb - 0.67 in (1.7 cm)	0.5 in (1.27 cm)	0.49 in (1.24 cm)
Ship Weight			
1.0 lb (0.45 kg)			

# 416200 In-Line Corner LED Systems

## Exterior Mount / Perimeter Lights

### Features

- Built-in (19) selectable flash patterns
- Multiple units can be synchronized and can flash simultaneously or alternately
- Maintenance free
- Low-profile design
- Three-year LED warranty

### Applications

- Construction
- Municipal
- Tow & Recovery
- Utility



Model	Description
<b>In-line Corner LED Systems</b>	
416200-22	Amber/Amber, (2) LED heads with in-line flasher
416200-32	Amber/Blue, (2) LED heads with in-line flasher
416200-33	Blue/Blue, (2) LED heads with in-line flasher
416200-43	Red/Blue, (2) LED heads with in-line flasher
416200-44	Red/Red, (2) LED heads with in-line flasher
416200-55	Clear/Clear, (2) LED heads with in-line flasher
<b>Common Replacement Parts</b>	
416200-EXT-LED	Kit, Cable, 4-ft extension
416201-02	LED lighthouse, Amber
416201-03	LED lighthouse, Blue
416201-04	LED lighthouse, Red
416201-05	LED lighthouse, Clear
416205	Flasher with cable, 2-channel

<b>Specifications</b>		
System Voltage	12/24 VDC	
Average Current	1.2 Amp @ 12.8 VDC/0.7 Amp @ 24 VDC	
Average Power	15 Watts	
Maximum Current	2.4 Amp @ 12.8 VDC/1.23 Amp @24 VDC	
Operating Temperature	-22 F to 149 F (-40°C to 80°C)	
LED	3W LED - 9 per head (total 18 LEDs in 2-head system)	
<b>Physical Dimensions</b>	<b>Light head</b>	<b>Flasher</b>
Length	NA	5.6" (14.2 cm)
Width	Base-1.5" (3.9 cm) Bulb-1.0" (2.5 cm)	1.0" (2.5 cm)
Height	Base & Bulb-1.8" (4.6 cm) Base-0.3" (0.1 cm) Bulb-0.91" (2.3 cm)	0.6" (1.5 cm)
<b>Ship Weight</b>		
Complete System Kit	1 lb (.45 kg)	

# SignalTech® LED Lights | Exterior Mount / Perimeter Lights

## Features

- Sealed wiring harness
- Random, alternating or synchronous flash patterns
- S/T/T and back-up/turn: FMVSS 108 compliant, SAE J1398, and SAE J593
- Three-year warranty

## Approvals

- Flashing: Class 1 and CAC Title 13 approved
- STT/Tail/Back-up/Marker lights all meet ECE and DOT requirements

## Applications

- Construction
- Municipal
- Tow & Recovery
- Utility



607106-02SB

607102-02SB

**CLASS 1** **CAC Title 13**

Model	Description
	<b>Random Flashing LED Light Kits, 12-24 VDC, 71 quad FPM</b>
	<b>Kits includes LED light, rubber mounting grommet, sealed wire harness</b>
	<b>4" Round LED Light Kits</b>
607123-02SB	PAR 36, Amber; -03SB(Blue); -04SB(Red); -05SB(Clear)
	<b>6" Oval LED Light Kit</b>
607101-02SB	Amber; -03SB(Blue); -04SB(Red)
	<b>S/T/T and Back-up Lights</b>
	<b>Kits includes LED light, rubber mounting grommet, sealed wire harness</b>
	<b>4" Round LED Light Kits</b>
607100-04SB	LED Stop/Tail/Turn light, 12-24 VDC, Red
607102-02SB	LED turn light, 12-24 VDC, Amber
607124-05SB	LED back-up light, 12-24 VDC, White
607124-05SB-DEU	LED back-up light, 12-24 VDC, White with deutsch
	<b>6" Oval LED Light Kits</b>
607105-04SB	LED Stop/Tail/Turn light, 12-24 VDC, Red
607106-02SB	LED turn light, 12-24 VDC, Amber
607125-05SB	LED back-up light, 12-24 VDC, White
	<b>Side Marker/Clearance Lights, 12VDC</b>
607120-02SB	2.5" round, Amber; -04SB(Red)
	<b>Accessories and Kits</b>
605501-02SB	6" oval flashing LED light head, Amber; -04SB(Red); -03SB(Blue); -05SB(Clear)
605520SB	Kit, rubber mounting grommet, 4" round
605510SSG	Kit, rubber mounting grommet, 6" oval
605523-02SB	4" round flashing LED light head, Amber; -03(Blue); -04(Red)
605500SSG	Sealed wire harness for flashing LED light heads
607109SB	Sealed wire harness for S/T/T and Turn LED light heads
605530SB	2.5" round mounting grommet

<b>Specifications</b>	
Voltage	12/24 VDC (all units operate at 9 to 32 VDC)
	Marker Lights: 12 VDC only
Operating Temp	-30° C to + 65° C
Amp Draw	Amber: 0.27 Amp (average)
Flashing Models @ 12.8V	Red: 0.27 Amp (average)
	Blue: 0.27 Amp (average)
S-T-T & Turn Models @ 12.8V	Red: Turn 0.27 Amp (average); Tail 0.27 Amp (average)
	Amber: Turn 0.25 Amp (average); Tail 0.22 Amp (average)
Back-Up Models @ 12.8V	Clear: 0.25 Amp (average)
<b>Physical Specifications</b>	
2" Round (Dia. x D.)	2.0 in x 0.78 in (5.08 cm x 0.1981 cm)
2.5" Round (Dia. x D.)	2.5 in x 0.78 in (6.35 cm x 0.1981 cm)
4" Round (Dia. x D.)	4.3 in x 1.75 in (109 cm x 4.45 cm)
5" Round (Dia. x D.)	5.65" x 1.75" (143.5 cm x 4.45 cm)
4" Rectangle (L. x D. x H.)	4.0 in x 1.2 in x 0.75 in (10.16 cm x 3.05 cm x 1.9 cm)
6.5" Oval (L. x D. x H.)	6.4 in x 1.9 in x 2.36 in (16.35 cm x 4.8 cm x 6.0 cm)
<b>Ship Weight</b>	
2" Round	0.20 lbs (0.9 kg)
2.5" Round	0.20 lbs (0.9 kg)
4" Round	0.47 lbs (0.17 kg)
4" Rectangle	0.20 lbs (0.9 kg)
6" Oval	0.48 lbs (0.18 kg)
5" Round	0.85 lbs (0.39 kg)
4" Tractor Lamp	1.50 lbs (0.68 kg)
5" Tractor Lamp	2.0 lbs (0.91 kg)

# Littlite® | Interior Mount Warning Lights

## Features

- Durable, high quality lighting for a vehicle's console
- Flexible gooseneck allows easy movement
- Clear bright light with either rheostat or on/off switch controls
- LED or halogen models available
- LED units offer choice of Red or White light from toggle switch selector
- Available in 12" and 18" models
- Two-year warranty on LED models



Model	Description
<b>LED Littlite, Neck extends from end of chassis, vertical mount</b>	
LF12ES-LED	12", On/Off switch control
LF18ES-LED	18", On/Off switch control
<b>Halogen Littlite, Neck extends from top of chassis, horizontal mount</b>	
LF12TR	12" Rheostat control
LF18TR	18", Rheostat control
<b>Common Replacement Parts</b>	
Z8550250A	Lamp, bi-pin
Z8550251A	Filter, Red; -01(Clear); -02(Green)





LittLite is available in 12" and 18" models

Model	12"	18"	Gooseneck extends from:		Lead extends from:		cigarette plug	rheostat control	on/off switch
			end of chassis	top of chassis	bottom of chassis	end of chassis			
LF12ES	•		•			•			•
LF12ES-LED	•		•			•			•
LF12TR	•			•		•		•	
LF12TRB	•			•	•			•	

Specifications	
Operating Voltage	12.8 VDC
Lamp Type	Bi-pin halogen, 5 W
Amp Draw	0.5 Amp nominal (halogen) 0.1 Amp nominal (LED)
Physical Dimensions	
Chassis (LxWxH)	3.0 in x 1.0 in x 0.7 in (7.62 cm x 2.54 cm x 1.78 cm)
Gooseneck	12 in or 18 in (30.5 cm or 45.7 cm)
Ship Weight	
	1.0 lbs (0.5 kg)

# Viper® S2 | Interior Mount Warning Lights

## Features

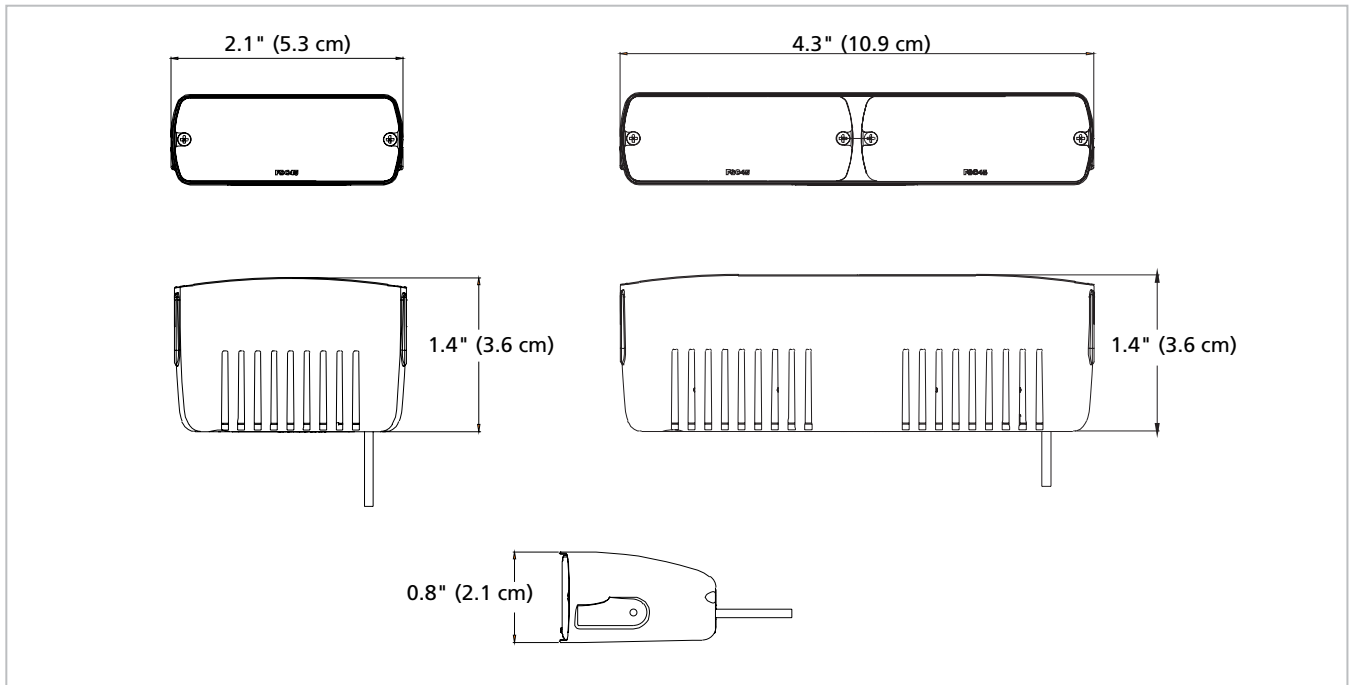
- Solaris® LED reflector technology
- Single and dual light head models
- Cigarette plug with LED on/off switch and synchronized models
- Simple push-button pattern control and 2-phase pattern synchronization
- Versatile mounting brackets with “snap-on” flash guard
- Library of more than twenty (20) flash patterns
- Five-year LED warranty



Model	Description
<b>Single-head models with wire leads (synchronization capable)</b>	
329001-02	Amber
<b>Dual-head models with cigarette plug</b>	
329000-22	Amber/Amber

## Applications

- Tow & Recovery
- Municipal



### Patterns

Single Units		Dual Units	
1	Null	1	Null
2	79 FPM Power Quad	2	Alternating 150 FPM Single
3	150 FPM Single	3	Alternating 240 FPM Single
4	151 FPM Single	4	Alternating 75 FPM Single
5	74 FPM Single	5	Alternating 150 FPM Triple
6	75 FPM Single	6	Alternating 75 FPM Triple
7	240 FPM Single	7	Precise Flip-Flop 63 FPM
8	241 FPM Single	8	Overlap 71 FPM Quad
9	240 FPM Double	9	Alt. Overlap 50 FPM Power Quad
10	241 FPM Double	10	Alt. Overlap 40 FPM Power Quad
11	150 FPM Double	11	Alt. Overlap 100 FPM Double
12	151 FPM Double	12	Alternating Progressive
13	74 FPM Double	13	Alt. 2 Quad. @ 70 FPM 4 Single @150 FPM
14	75 FPM Double	14	Alt. 5 Single @ 320 FPM 1 Power Quint @ 90 FPM
15	150 FPM Triple	15	Alt. 2 Quad @ 83 FPM 4 Single @ 272 FPM
16	75 FPM Triple	16	Overlap 3 Single @180 FPM 4 Single @ 706 FPM 3 Single @ 390 FPM 6 Single @ 660 FPM
17	5 Single @ 680 FPM 4 Single @ 216 FPM	17	Overlap Power Quad 75 FPM
18	4 Single @ 570 FPM 3 Single @ 246 FPM	18	Random
19	3 Single @ 460 FPM 2 Quad @ 75 FPM	19	Steady/166 FPM Single
20	Progressive	20	Steady/103 FPM Burst
21	4 Single @154 FPM 2 Quad @ 75 FPM	21	Steady/4 Single @ 700 FPM 2 Single @ 230 FPM
22	Random	22	166 FPM Single/Steady
23	Steady Burn	23	103 FPM Burst/Steady
		24	4 Single @ 700 FPM/Steady 2 Single @ 720 FPM/Steady
		25	Steady Burn

	Single Unit	Dual Unit
<b>Specifications</b>		
Volts	12.8 VDC	
Current Draw	1.5 Amp	2.2 Amp
Operating Temp	-30°C to +65°C	
<b>Physical Dimensions</b>		
Width	2.1 in (5.3 cm)	4.3 in (10.9 cm)
Height	0.8 in (2.1 cm)	0.8 in (2.1 cm)
Depth	1.4 in (3.6 cm)	1.4 in (3.6 cm)
<b>Ship Weight</b>		
	1.0 lb (0.45 kg)	1.5 lbs (0.68 kg)

# Commander™ | Area Lighting

## Features

- Generates up to 20,000 lumens of bright white light
- Available in 12/24VDC or 120VAC models at either 20K lumens or 15K lumens
- Regardless of power source— same high-powered light output
- Slimmest LED lamp head profile in the industry
- Innovative cooling fins provide higher efficiency and more light
- Advanced lens and arrangement of LEDs generate a uniform flood and spot combination light pattern
- Instant-on at full intensity
- White bezel standard; Chrome or Black bezel is optional
- Five-year warranty

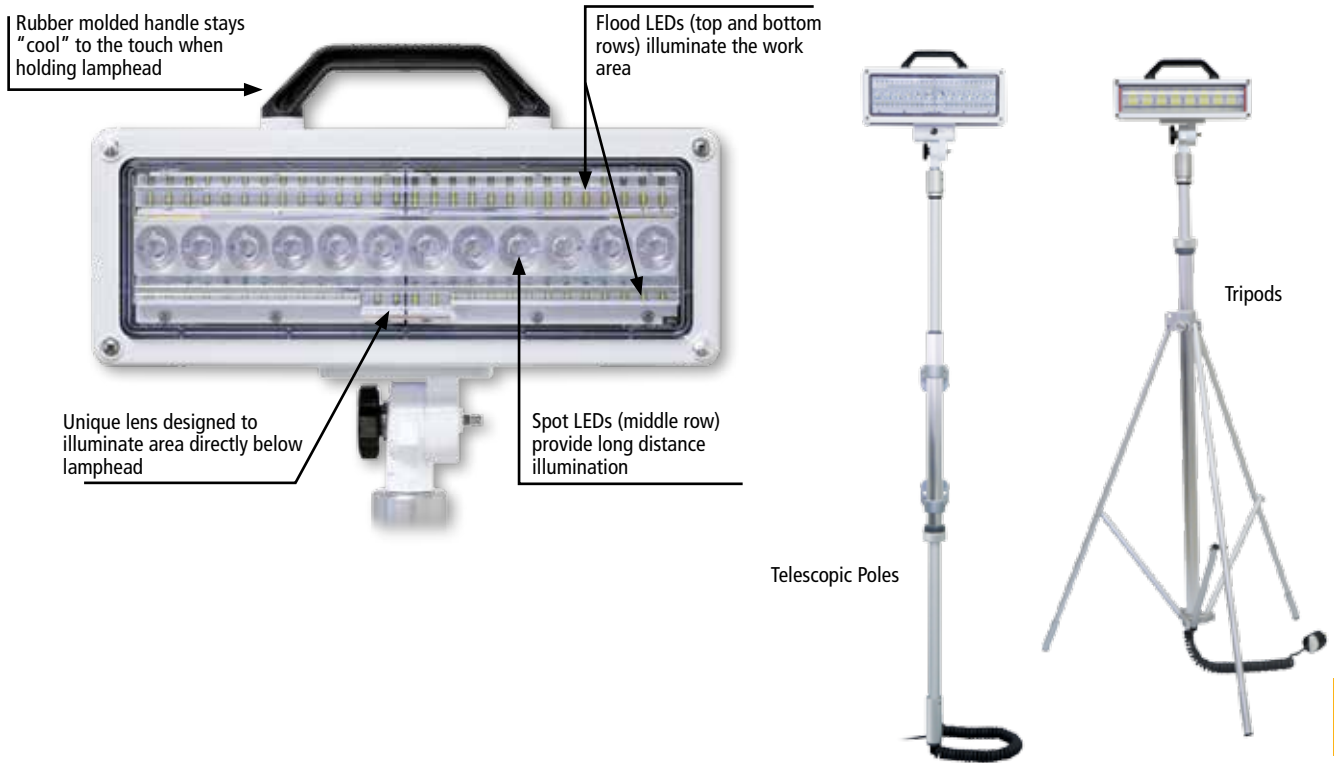
## Applications

- Construction
- Material Handling
- Tow & Recovery
- Utility



Model	Description
<b>Lighthead</b>	
COM120	Commander, 20K lumens, 120VAC spot/flood LED lamphead
COM15K	Commander, 15K lumens, 12/24VDC spot/flood LED lamphead
COM20K	Commander, 20K lumens, 12/24VDC spot/flood LED lamphead
COM15K-8K	Commander LC, 8K lumens, 12/24VDC flood LED lamphead
COM15K-15K	Commander LC, 15K lumens, 12/24VDC flood LED lamphead
<b>Lighthead with poles</b>	
COM120-ON-530	Commander, 20K lumens, on/off switch, 120VAC, side mount bottom-raise pole, 2.75" offset brackets
COM120-ON-530SW	Commander, 20K lumens, on/off switch, 120VAC, side mount bottom-raise pole, 2.75" offset brackets
COM120-ON-540SW	Commander, 20K lumens, on/off switch, 120VAC, side mount top-raise pole, 2.75" offset brackets
COM120-ON-600-603	Commander, 20K lumens, 120VAC, on/off switch, tri-pod and quick release bracket
COM15K-530	Commander, 15K lumens, 12VDC, side mount bottom-raise pole, 2.75" offset brackets
COM15K-530SW	Commander, 15K lumens, 12/24VDC, side mount bottom-raise pole, 2.75" offset brackets
COM15K-540	Commander, 15K lumens, 12VDC, side mount pull-up, top-wire exit, 2.75" offset brackets
COM15K-540SW	Commander, 15K lumens, 12/24VDC, side mount top-raise pole, 2.75" offset brackets
COM20K-530SW	Commander, 20K lumens, 12VDC, side mount bottom-raise pole, indicator switch, 2.75" offset brackets
COM20K-ON-530SW	Commander, 20K lumens, 12VDC, on/off switch, side mount bottom-raise pole, indicator switch, 2.75" offset brackets
COM20K-540SW	Commander, 20K lumens, 12/24VDC, side mount top-raise pole, indicator switch, 2.75" offset brackets
COM20K-ON-540TW	Commander, 20K lumens, 12VDC, on/off switch, side mount pull-up, top-wire exit, 2.75" offset brackets

*Continued on next page*



Lightheads with poles	
COMLC8K-530	Commander LC, 8K lumens, 12/24VDC, side mount bottom-raise pole, 3.5" offset brackets
COMLC8K-540	Commander LC, 8K lumens, 12/24VDC, side mount pull-up, 3.5" offset brackets
COMLC15K-530SW	Commander LC, 15K lumens, 12/24VDC, side mount bottom-raise pole, indicator switch, 3.5" offset brackets
COMLC15K-540SW	Commander LC, 15K lumens, 12/24VDC, side mount top-raise pole, indicator switch
COMLC15K-540TW	Commander LC, 15K lumens, 12/24VDC, side mount pull-up, Top Wire Exit, 3.5" offset brackets
Portables, Surface and Contour Brow mount lights	
COM5K-900	Commander, 7K lumens, 12/24VDC, surface mount lighthead
COM15K-260	Commander, 15K lumens, 12/24VDC, low profile surface mount lighthead
COM15K-800	Commander, 15K lumens, 12/24VDC, brow mount
COM20K-800	Commander, 20K lumens, 12/24VDC, brow mount
COM120-ON-700	Commander, 20K lumens, 120VAC, on/off switch, portable mount
COM120-260	Commander, 15K lumens, 120VAC, low profile surface mount lighthead
COM120-800	Commander, 20K lumens, 120VAC, contour brow mount
COMLC12K-210	Commander LC, 12K lumens, 12/24VDC, recessed mount
COMLC15K-300	Commander LC, 15K lumens, 12/24VDC, brow mount, under aerial mount
Strip Lighting	
COMSTR-9	Compartment light strip LED 9"
COMSTR-18	Compartment light strip LED 18"
COMSTR-27	Compartment light strip LED 27"
COMSTR-36	Compartment light strip LED 35"
COMSTR-45	Compartment light strip LED 45"
COMSTR-54	Compartment light strip LED 54"
COMSTR-63	Compartment light strip LED 63"

# 9x7 Scene Light

## Area Lighting

### Features

- Surface mounted LED models
- Solaris® LED reflector technology
- Industry standard mounting dimensions

### Applications

- Construction
- Municipal
- Tow & Recovery
- Utility

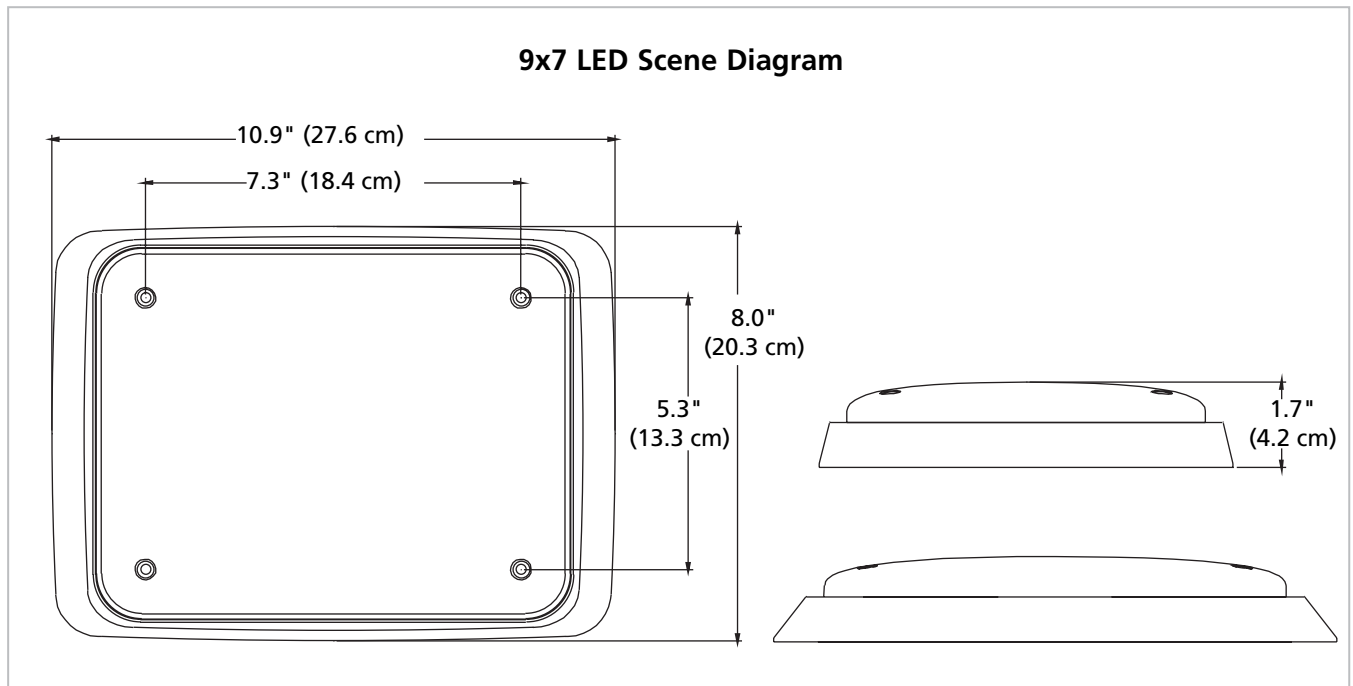


QL97LEDSCE



Model	Description
<b>9x7 Scene Light</b>	
QL97LEDSCE	Area light, LED, surface mount
<b>Common Replacement Parts</b>	
Z8012075B	Lens, fluted, Clear, 9x7 Scene Light

# 9x7 Scene Light | Area Lighting



105

	Without Bezel	With Trim Bezel / Gasket
<b>9 x 7 LED Scene Light Specifications</b>		
Input Volts		12.8 VDC
Operating Temp		-40°C to 65°C
Current Draw		4.0 Amp
<b>Physical Dimensions</b>		
Width	9.2 in (59.3 cm)	11.2 in (72.3 cm)
Height	7.4 in (46.5 cm)	8.4 in (54.2 cm)
Depth	1.7 in (10.9 cm)	1.9 in (12.3 cm)
<b>Ship Weight</b>		
	3.2 lb (1.5 kg)	3.2 lb (1.5 kg)

<b>9 x 7 LED Scene Light Specifications</b>	
Input Volts	12.8 VDC
Watts	20
Current Draw	3.5 Amp
<b>Physical Dimensions</b>	
Width	7.1 in (18.0 cm)
Height	3.3 in (8.4 cm)
Depth	5.3 in (13.5 cm)
<b>Ship Weight</b>	
	1.3 lb (0.6 kg)

# Wireless VisiBeam® / VisiBeam® | Area Lighting

## Features

- High-power spotlight for superior work area illumination
- Ergonomically designed wireless transmitter operates at over 100-ft (Wireless VisiBeam®)
- Up to four (4) transmitters programmable to operate one light (Wireless VisiBeam®)
- Graduated start for pinpoint light beam placement
- Continuous 360-degree horizontal and 140-degree vertical adjustment
- Three-year warranty

## Approval

- FCC Approved

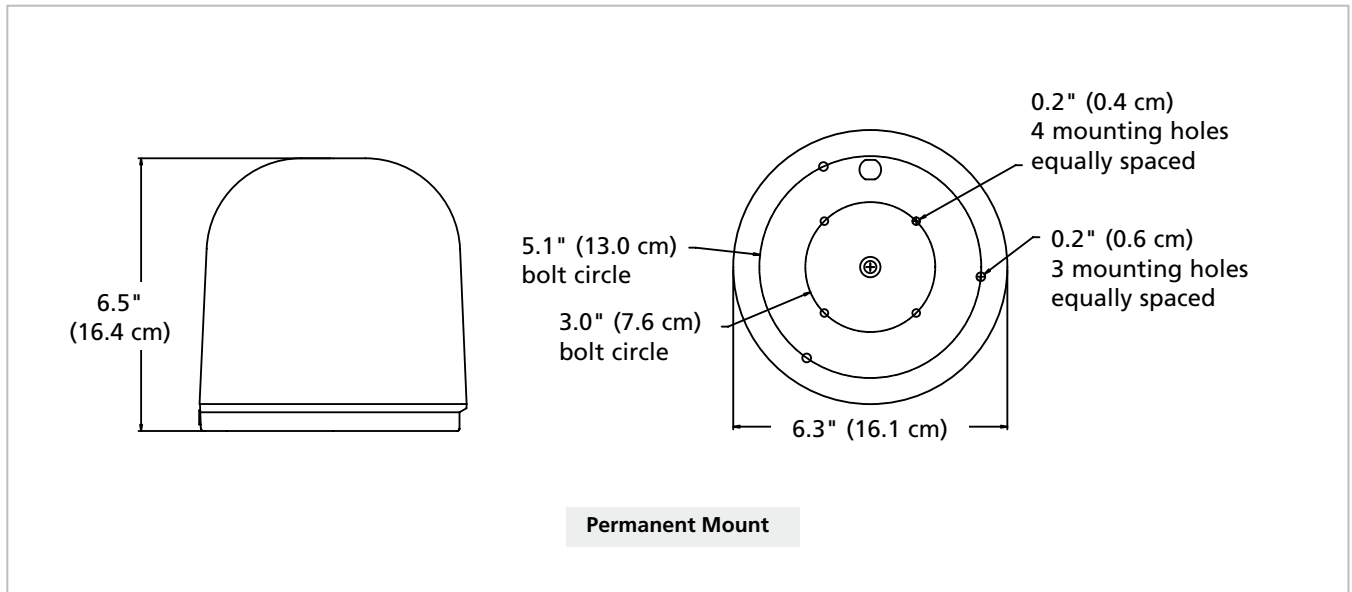
## Applications

- Construction
- Municipal
- Tow & Recovery
- Utility



Model	Description
<b>Wireless VisiBeam, 12 VDC, 100 W, wireless controller</b>	
620200	Permanent mount
620201	Magnetic mount with cigarette lighter plug
<b>Wireless VisiBeam, 24 VDC, 65 W, wireless controller</b>	
620202	Permanent mount
<b>VisiBeam II</b>	
620102	55 W, 12 VDC, adjustable spot light, permanent mount
620104	65 W, 24 VDC, adjustable spot light, permanent mount
620122	100 W, 12 VDC, adjustable spot light, permanent mount
620122-40	100 W, 12 VDC, adjustable spot light, permanent mount, 40-ft cable
620142	100 W, 12 VDC, adjustable spot light, magnetic mount with cord and cigarette plug
620152	100 W, 12 VDC, adjustable spot light, pipe mount
<b>Common Replacement Parts</b>	
620502	Bulb, 12 VDC, 100 W, for models 620122, 620142, 620152, 620200 and 620201
620504	Bulb, 24 VDC, 65 W, for models 620104 and 620202
620510	Bulb, 12 VDC, 55 W, for model 620102
448500-05	Dome, Clear
Z146903B	Cable assembly, 25-ft
Z8433039B	Remote control
Z8422B399A-01	Motor, 12 VDC
Z8422528A	Motor, 24 VDC
Z8433113A	Transmitter, wireless





Wireless VisiBeam Specifications	
Voltage	12/24 VDC
Amp Draw	7.8 Amp @ 12.8 VDC (100 W)
	2.7 Amp @ 25.6 VDC (65 W)
Candelas	90,000 (65 W)
	125,000 (100 W)
Operating Frequency	433.92 MHz
Dimensions	
Diameter	6.3 in (16.1 cm)
Height	6.5 in (16.4 cm) — permanent mount
	6.9 in (17.5 cm) — magnetic mount
Ship Weight	
	2.0 lbs (0.9 kg)



*Wireless controller has a belt clip design for easy storage when not in use*

# Tractor and Utility | Area Lighting

## Features

- High-powered, sealed beam and halogen work lights
- Available in 4.75" — PAR 36; 6.50" — PAR 46 and rectangle
- Adjustable vertical and horizontal mounts
- Vibration resistant construction
- Resistant to heat and inclement weather
- Heavy gauge metal brackets
- Standard flood beam pattern
- Three-year product warranty

## Applications

- Off-road
- Pick-up trucks
- Recreational
- Tow & Recovery
- Tractors

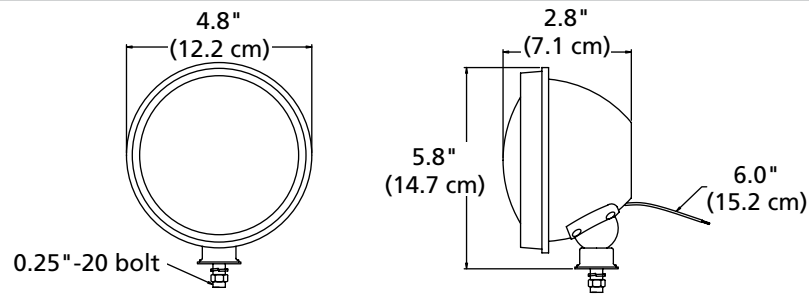


325541

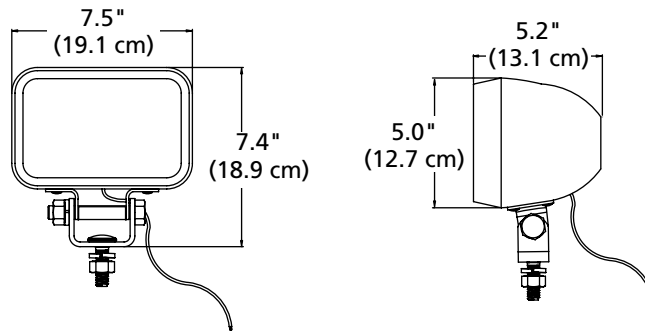


325039

Model	Description
<b>5.0" PAR 36</b>	
325039	Work lamp, 12.8 VDC, 4.3 Amp, 55 W, round, halogen, flood pattern, 4.8" (diameter) x 2.8" (depth)
325048	Utility lamp, 12.8 VDC, 2.7 Amp, 35 W, round, sealed beam incandescent, flood pattern, magnetic mount with cigarette plug, 4.8" (diameter) x 3.0" (depth)
<b>6.5" PAR 46</b>	
323552	Utility lamp, 12.8 VDC, 7.7 Amp, 100 W, round, high-intensity, sealed beam incandescent, 6.5" (diameter) x 4.4" (depth)
<b>Rectangular</b>	
325541	Work lamp, 12.8 VDC, 3.9 Amp, 50 W, sealed beam incandescent, flood pattern, 7.5" x 5.0" x 5.2"
325542	Work lamp, 12.8 VDC, 3.9 Amp, 50 W, halogen, flood pattern, 7.5" x 5.0" x 5.2"
<b>Accessories or Kits</b>	
360800	Wire guard for PAR 36 models
360900	Wire guard for PAR 46 models
<b>Common Replacement Parts</b>	
325045	4.75" rubber housing with bolt
325046	6.50" rubber housing with bolt



**Standard Round Tractor Lamp- 325039**



**Rectangular Tractor Lamp - 325541**

	325039	325541	325048	323552	325542
<b>Specifications</b>					
Amp Draw	4.30 Amp	3.90 Amp	2.73 Amp	7.69 Amp	3.9 Amp
Wattage Lamp	55 W	55 W	35 W	100 W	55 W
Beam Spread (H. x V.)	Flood	Flood	30° x 25°	11° x 6° or Flood	Flood
<b>Physical Specifications</b>					
Height	5.8 in (14.7 cm)	7.4 in (18.9 cm)	6.2 in (15.8 cm)	6.8 in (17.3 cm)	7.4 in (18.9 cm)
Diameter	4.8 in (12.2 cm)	7.5 in (19.1 cm)	4.8 in (12.2 cm)	6.5 in (16.5 cm)	7.5 in (19.1 cm)
<b>Ship Weight</b>					
	1.4 lbs (0.6 kg)	3.6 lbs (1.6 kg)	2.6 lbs (1.2 kg)	2.1 lbs (0.9 kg)	3.6 lbs (1.6kg)

# 2012 Series Alarms | Back-up Alarm

## Features

- Available in 87 dB(A), 97 dB(A) and 102 dB(A) models with wires or stud terminals
- Built-in universal mounting bracket with industry-standard 3.25" centers and self-grounding strap (on "-S" models) eases installation
- Alarms operate at 12-24 VDC drawing only 0.5 Amp
- Meet SAE J994, CE, OSHA and MSHA requirements
- Steam-cleanable and pressure washable
- Epoxy encapsulation protects against vibration, as well as debris and moisture ingress
- Three-year product warranty



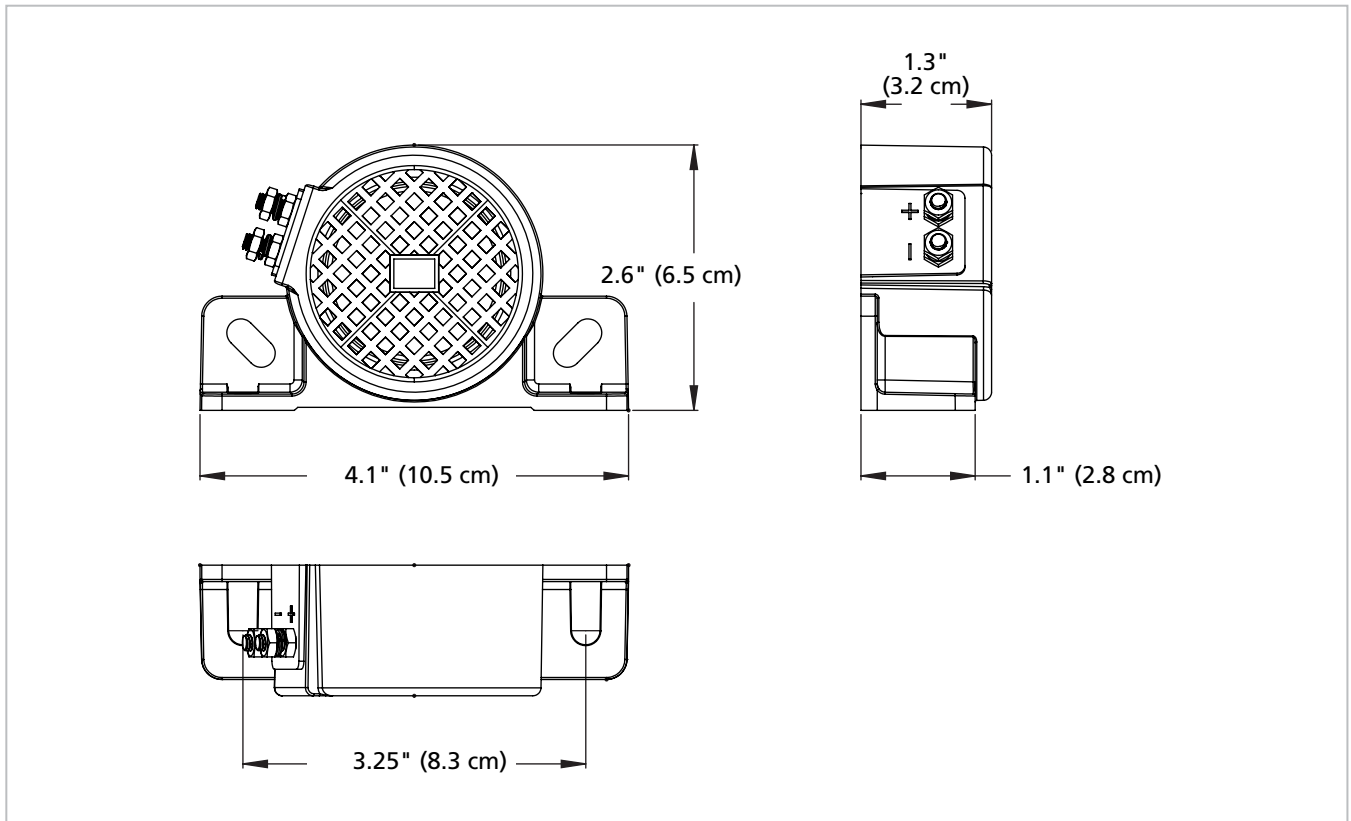
Model	Description
210238-S	87 dB(A), 12-24 VDC, SAE J994 Type D, stud terminals, 4.13" x 2.44" x 1.26"
210239-S	97 dB(A), 12-24 VDC, SAE J994 Type C, stud terminals, 4.13" x 2.44" x 1.26"
210239-W	97 dB(A), 12-24 VDC, SAE J994 Type C, wires, 4.13" x 2.44" x 1.26"
210240-S	102 dB(A), 12-24 VDC, SAE J994 Type F, stud terminals, 4.13" x 2.44" x 1.26"

## Approvals

- SAE J994
- CE
- OSHA
- MSHA

## Applications

- Construction
- Material Handling
- Tow & Recovery
- Utility



Specifications		
Operating Voltage	12/24 VDC	
Conformance	SAE J994, CE, OSHA and MSHA	
Sound Output	210238-S	87 dB(A)
	210239-S	97 dB(A)
	210240-S	102 dB(A)
	210239-W	97 dB(A)
Current Draw	210238-S	0.3 Amp
	210239-S	0.3 Amp
	210240-S	0.5 Amp
	210239-W	0.3 Amp
SAE J994 Type	210238-S	Type D
	210239-S	Type C
	210240-S	Type F
	210239-W	Type C
Dimensions		
Width	1.1 in (2.8 cm)	
Height	2.6 in (6.5 cm)	
Length	4.1 in (10.5 cm)	

# Evacuator® | Back-up Alarm

## Features

- Meets SAE J994, OSHA and MSHA requirements
- “Plus” models offer dual-tone function (pulse or constant)
- A wide range of decibel levels and operating voltages are offered for enhanced application flexibility
- Universal mounting bracket included
- Maximum current draw of 0.15 Amp
- Unique Piezo electric design incorporates a tear-free Mylar speaker cone that is impervious to moisture
- Solid-state electronics and a sealed design protect against moisture, contaminants and vibration
- Three-year product warranty

## Approvals

- SAE J994
- OSHA
- MSHA

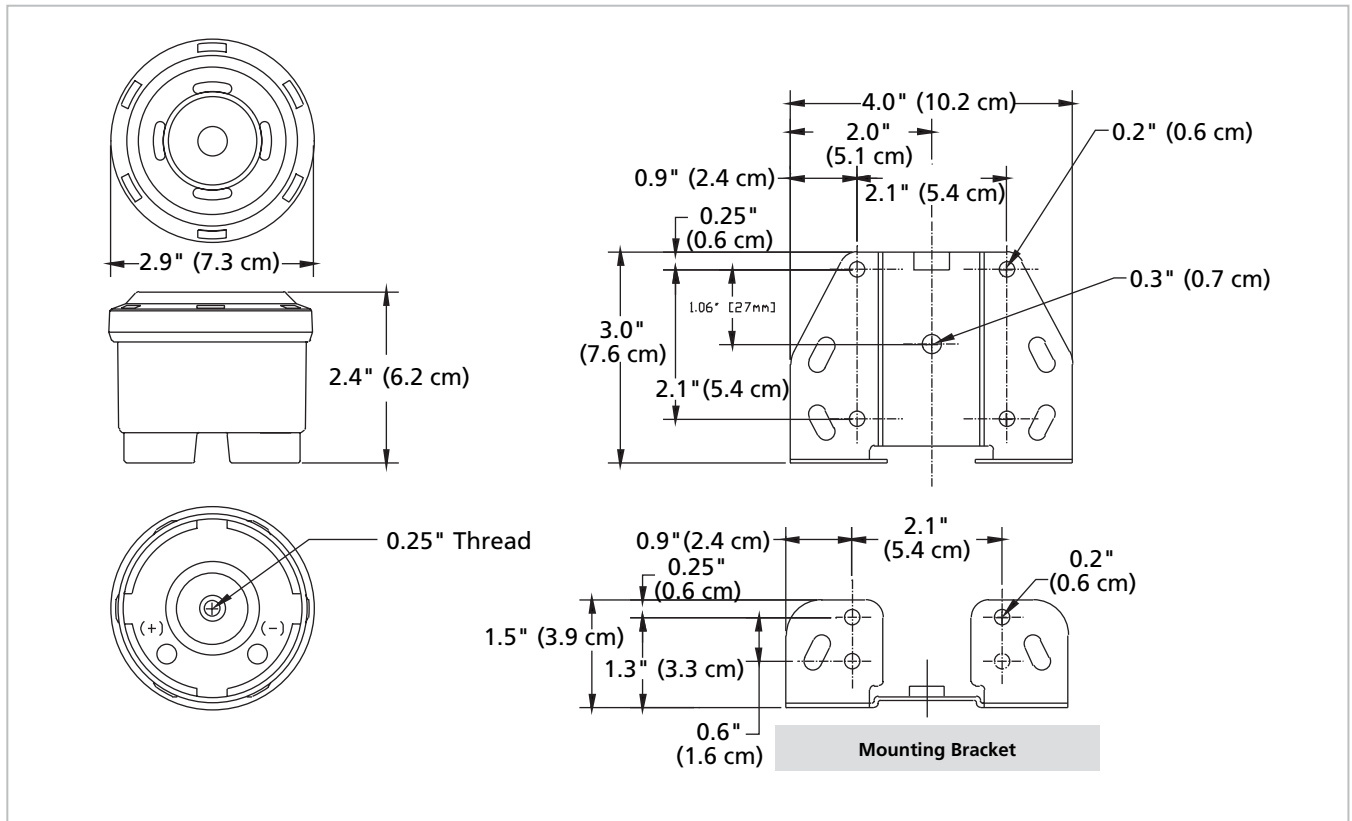
## Applications

- Construction
- Material Handling
- Tow & Recovery
- Utility



210331SSG  
(shown with mounting bracket included)

Model	Description
<b>Evacuator, Single Functions, 12-24 VDC</b>	
210339SSG	97 dB(A), 12-24 VDC, SAE J994 Type C, nickel-plated threaded terminals
210340SSG	102 dB(A), 12-24 VDC, SAE J994, nickel-plated threaded terminals
210341SSG	107 dB(A), 12-24 VDC, SAE J994 Type B, nickel-plated threaded terminals
<b>Evacuator Plus, Dual Functions, 12-48 VDC</b>	
210330SSG	87 dB(A), 12-48 VDC, SAE J994 Type D, nickel-plated threaded terminals
210331SSG	97 dB(A), 12-48 VDC, SAE J994 Type C, nickel-plated threaded terminals
210333SSG	107 dB(A), 12-48 VDC, SAE J994 Type B, nickel-plated threaded terminals
210335SSG	112 dB(A), 12-48 VDC, SAE J994 Type A, nickel-plated threaded terminals



	210330SSG	210331SSG	210335SSG
<b>Technical Specifications</b>			
Amp Draw	0.02 Amp @ 12 VDC	0.03 Amp @ 12 VDC	0.17 Amp @ 12 VDC
Voltage	12-48 VDC	12-48 VDC	12-48 VDC
Sound Level	87 dB	97 dB	107 dB
Sound Frequency	2.75 kHz	2.4 kHz	2.7 kHz
<b>Physical Specifications</b>			
Length	2.9 in (7.4 cm)		
Width	2.9 in (7.4 cm)		
Height	2.4 in (6.1 cm)		
<b>Ship Weight</b>			
	0.6 lbs (0.3 kg)		

# Speciality Alarms and Switches

## Back-up Alarm

### Features

#### Speciality Alarms

- Automatically adjusts to at least 5 dB(A) above ambient noise level (210502SSG is manually adjustable)
- Epoxy-sealed for protection against vibration, dirt and moisture
- Glass-filled nylon housing is steam-cleanable
- Integrated universal mounting bracket
- Maximum current draw between 0.2 Amp and 1.0 Amp
- Meet SAE J994, OSHA and MSHA requirements
- Three-year product warranty

#### Switches

- For installations where it is not possible to wire a back-up alarm into the vehicle's back-up light circuit
- Installed adjacent to the gear-shift lever or linkage, the switch activates the alarm when the activating shaft is removed

#### Speciality Alarm Approvals

- SAE J994
- OSHA
- MSHA

#### Applications

- Construction
- Material Handling
- Tow & Recovery
- Utility



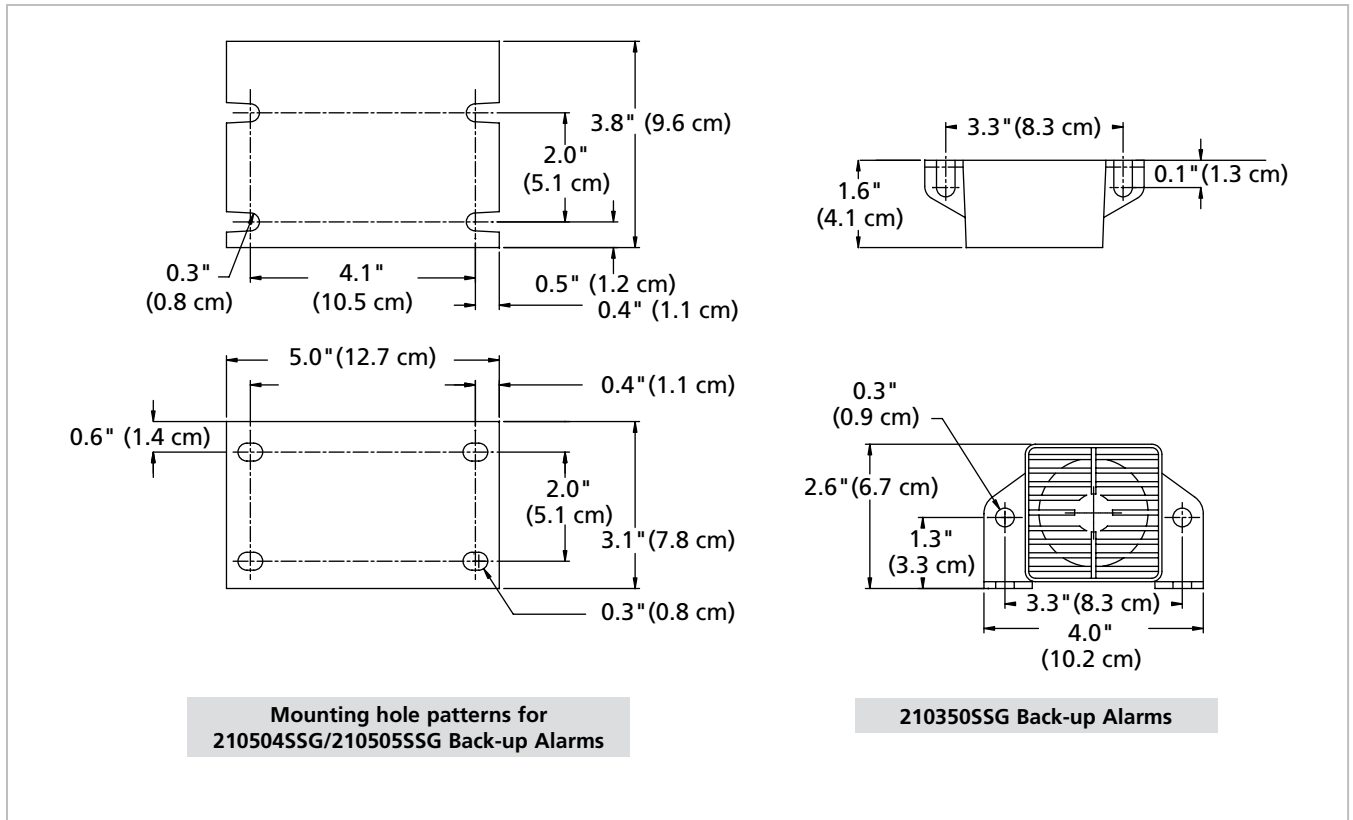
210298



210350SSG

Model	Description
<b>Speciality Alarms</b>	
210350SSG	77-102 dB(A), auto-adjusting, 12-24 VDC, SAE J994 Type E-F, 4.02" x 2.64" x 1.60"
210502SSG	107-112 dB(A), manually adjustable, 12-24 VDC, SAE J994 Type B or A, 5.00" x 3.06" x 3.78"
210504SSG	87-112 dB(A), auto-adjusting, 6-24 VDC, SAE J994 Type D-A, 5.00" x 3.06" x 3.78"
210505SSG	87-107 dB(A), auto-adjusting, 12-48 VDC, SAE J994 Type D-B, 5.00" x 3.06" x 3.78"
<b>Switches</b>	
210298	Multi-directional 360-degree switch, 5 Amp, water-resistant, with adjustable mounting bracket
210299SSG	Unidirectional switch, 5 Amp
200053-95	Replacement mounting bracket for 210298 switch





**Mounting hole patterns for 210504SSG/210505SSG Back-up Alarms**

**210350SSG Back-up Alarms**

	210504SSG	210505SSG	210350SSG	210502SSG
<b>Evacuator Plus</b>				
Amp Draw	0.5 max	0.3 max	0.3 max	0.2 max
Voltage	6-24 VDC	12-48 VDC	12-24 VDC	12-24 VDC
Output	87-112 dB	87-107 dB	77-102 dB	107-112 dB
Sound Frequency	1150 Hz	1150 Hz	1300 Hz	1200 Hz
<b>Ship Weight</b>				
	2.0 lbs (0.9 kg)			

# Mobile Camera Systems | Reverse Cameras

## Features

- All cameras are high-resolution, color Sony® CCD cameras
- TFT-LCD color monitors available in 5.6" or 7.0"
- Most cameras equipped with automatic day/night sensor and infrared LEDs for night vision
- Multiple camera cable lengths available
- Wide operating temperature range for all cameras: -22°F to 149°F
- Multi-voltage capability (12/24 VDC)
- Two-year year limited warranty

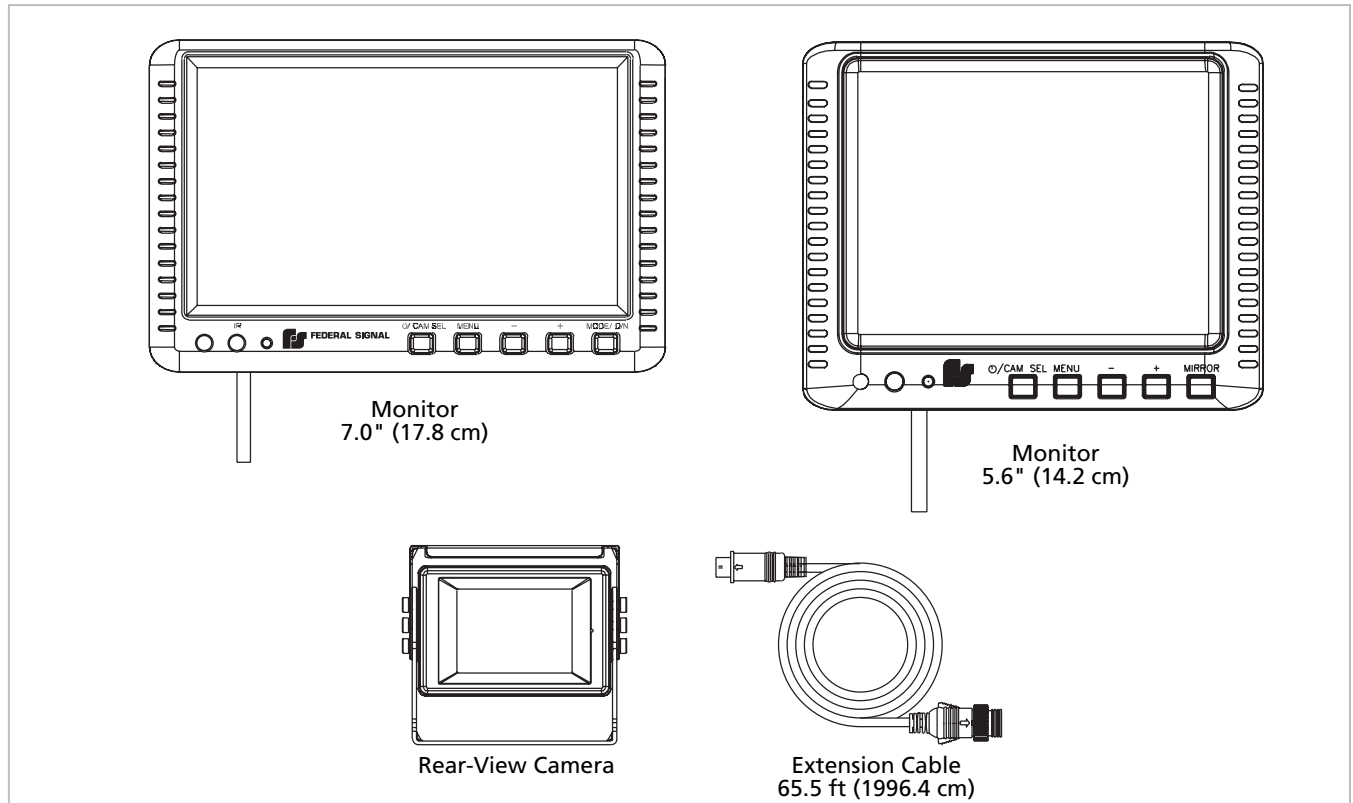
## Applications

- Construction
- Material Handling
- Tow & Recovery
- Utility



Model	Description
<b>Systems</b>	
CAMSET56-NTSC-2	5.6" Monitor with two-camera input, (1) standard rear-view camera, (1) 65.5-ft extension cable
CAMSET70-NTSC4B	7.0" Monitor with four-camera input, (1) standard rear-view camera, (1) 65.5-ft extension cable
<b>Monitors</b>	
CAMLCD-INT-56	5.6" TFT-LCD monitor with two camera inputs
CAMLCD-INT-70-B	7.0" TFT-LCD monitor with four camera inputs and intelligent split-screen capability
CAMLCD-MIR	4.3" TFT-LCD rear-view mirror monitor with two camera inputs
<b>Cameras - Camera cables sold separately</b>	
CAMCCD-REARNTSC	Standard rear-view CCD camera with photosensor, 16 infrared LEDs, and microphone, IP68
CAMCCD-SIDENTSC	Standard side-view CCD camera with photosensor, 16 infrared LEDs, and microphone, IP68
CAMCCD-FLSHNTSC	Bullet/flush-mount CCD camera, IP68, U-bracket included
CAMCCD-FLS2NTSC	Bullet/flush-mount CCD camera with photosensor and 10 infrared LEDs for night vision, IP68
CAMCCD-BALLNTSC	Ball CCD camera with photosensor and 16 infrared LEDs for night vision, microphone, IP68
CAMCCD-DOMENTSC	Dome CCD camera with photosensor and 18 infrared LEDs for night vision, microphone, IP65
<b>DVR</b>	
DTX-DVR-400SD	lite DVR, 4 channels with SD card slot, with GPS and DTX-COMMAND-2 software
DTX-MON	7" LCD Monitor for viewing up to 4 cameras
<b>Cables</b>	
CAMCABLE-5	Camera-to-monitor extension cable, 16.5-ft/5-m
CAMCABLE-10	Camera-to-monitor extension cable, 33-ft/10-m
CAMCABLE-15	Camera-to-monitor extension cable, 49-ft/15-m
CAMCABLE-20	Camera-to-monitor extension cable, 65.5-ft/20-m
CAMCABLE-40	Camera-to-monitor extension cable, 131-ft/40-m

Continued on next page



CAMCCD-FLSHNTSC  
Bullet/Flush mount



CAMCCD-FLS2NTSC  
Flush mount  
with IR LEDs



CAMCCD-SIDENTSC  
Side mount



CAMCCD-REARNTSC  
Standard rear-view



CAMCCD-DOMENTSC  
Dome  
(indoor use only)



CAMCCD-BALLNTSC  
Ball mount

DTX-DVR-400SD



CAMLCD-MIR  
Rearview mirror  
monitor

Cables	
CAMCABLE-TRK	Truck/trailer camera connection kit
CAMCABLE-SHORT	Camera-to-monitor extension cable, 4-in/102-mm
CAMCABLE-DTX-SH	DTX 1-FT (0.3m) camera extension cable
CAMCABLE-DTX-5	DTX 16-5t (5m) camera extension cable
CAMCABLE-DTX-10	DTX 33-FT (10m) camera extension cable
CAMCABLE-DTX-15	DTX 49-FT (15m) camera extension cable
CAMCABLE-DTX-20	DTX 66-FT (20m) camera extension cable

Accessories	
CAMADP-EXT	Camera cable adapter for connecting two camera-to-monitor extension cables together
CAMADP-RCA-IN	System adapter for connecting external RCA - equipped video source to F5 monitor or DVR
CAMADP-RCA-OUT	System adapter for connecting CAMCCD-XXXXNTSC to external RCA destination input
CAMBRK-HD	Heavy-duty monitor mount
CAMLCD-BRACKET	Replacement mounting bracket for monitor

Common Replacement Parts	
CAMADP-INT-2	Replacement wiring harness, CAMLCD-INT-56/ CAMLCD-INT-70
CAMADP-INT-4	Replacement wiring harness, CAMLCD-INT-70-B

# Headlight/Taillight Flashers | Accessories

## Features

- Headlight and taillight flashers are available for high-side and ground switched systems
- “Plug-n-play” models available
- Multiple flash rates
- Easy to install
- Three-year product warranty

## Applications

- Construction
- Material Handling
- Tow & Recovery
- Utility



FHL2-SC



FHL-HL



FHL-TAIL

Model	Description
<b>High-Side switched headlight flasher systems</b>	
FHL2-SC	Flasher, headlight, 90 FPM, standard headlight system, high beam override (2) 10 Amp loads
FHL-HL	Flasher, headlight, multiple flash patterns, (2) 10 Amp outputs, 18" wire leads
<b>High-Side switched taillight flasher system</b>	
FHL-TAIL	Flasher, taillight, low stand-by current draw, multiple flash patterns

	Headlight Flashers		Taillight Flasher
	FHL-HL	FHL2-SC	FHL-TAIL
Vehicle Application	Universal	Universal	Universal
<b>Specifications</b>			
Vehicle Electrical System	10-30 VDC negative ground	12 VDC negative ground	12 VDC negative ground
Maximum Output Current	Two 9.5 Amp circuits per side	Two 10 Amp circuits per side	Two 5 Amp circuits per side
Circuit Switching	High-Side	High-Side	High-Side
Low Voltage Protection	✓	✓	✓
Reverse Polarity Protection	✓	✓	✓
Daytime Running Lights	–	–	–
Plug-n-play Connections	–	–	–
High Beam Deactivation	✓	✓	–
Automatic Nighttime Cut-off	✓	–	–
Flash Patterns	7 selectable patterns	90 FPM	2.4 FPS
Mounting Bracket	Universal	Universal	Universal
<b>Physical Specifications</b>			
Height	0.7 in (1.78 cm)	1.0 in (2.5 cm)	0.7 in (1.78 cm)
Length	4.7 in (11.9 cm)	3.0 in (7.6 cm)	4.7 in (11.9 cm)
Width	2.1 in (5.3 cm)	2.0 in (5.1 cm)	2.1 in (5.3 cm)
<b>Shipping Weight</b>			
	1.0 lb (0.5 kg)	1.0 lb (0.5 kg)	1.0 lb (0.5 kg)

# Intelli-Flash® Flashers | Accessories

## Features

- Specifically designed for use with auxiliary LED lighting
- Designed to perform in a variety of applications
- Can be used to synchronize multiple light heads
- Three-year product warranty

## Applications

- Construction
- Material Handling
- Tow & Recovery
- Utility



Model	Description
650201	(2) 6 Amp loads, (8) flash patterns, ground-side switching
650202	(4) 4 Amp loads, (8) flash patterns, ground-side switching
650205	(2) 10 Amp loads, (10) flash patterns, high-side switching
FA3-SC	90 FPM, (2) 10 Amp loads, high-side switching

Intelli-Flash Flasher Chart					
<b>Model Number#</b>	<b>650201</b>	<b>650202</b>	<b>650205</b>	<b>650302</b>	<b>FA3-SC</b>
Vehicle Electrical System	12-24 VDC negative ground	12-24 VDC negative ground	12-24 VDC negative ground	12-24 VDC negative ground	12 VDC negative ground
Circuit Switching	Ground-Side	Ground-Side	High-Side	High-Side	High-Side
Output Current/Channel	6 Amp	4 Amp	10 Amp	10 Amp	10 Amp
Number of Channels	Two	Four	Two	Sixteen	Two
Total Output Current Capacity	12 Amp	16 Amp	20 Amp	40 Amp	20 Amp
Connection	Wire Leads	Wire Leads	Screw Terminals	Screw Terminals	Wire Leads
Flash Patterns (Details on Instruction Sheets)	Eight	Eight	Ten	Twenty-nine	One -90/FPM
Operating Modes	Primary/Secondary	Primary/Secondary	Primary/Secondary	Primary/Secondary	Primary
Outlet Switching	N/A	2 X 2	N/A	4 X 4 / KKK-E Compliant	N/A
Recommended Applications	Police/Motorcycle	Police/Motorcycle/DOT	Command and Fire/Rescue	Ambulance and Fire/Rescue	Variable
<b>Physical Dimensions</b>					
Length	4.0 in (10.2 cm)	4.0 in (10.2 cm)	5.1 in (13.0 cm)	10.5 in (26.7 cm)	2.5 in (6.4 cm)
Width	2.0 in (5.1 cm)	2.0 in (5.1 cm)	3.0 in (7.6 cm)	4.0 in (10.2 cm)	1.4 in (3.6 cm)
Height	0.5 in (1.3 cm)	1.0 in (1.3 cm)	1.2 in (3.1 cm)	1.2 in (3.1 cm)	1.3 in (3.3 cm)

# Switch Controls

## Accessories

### Features

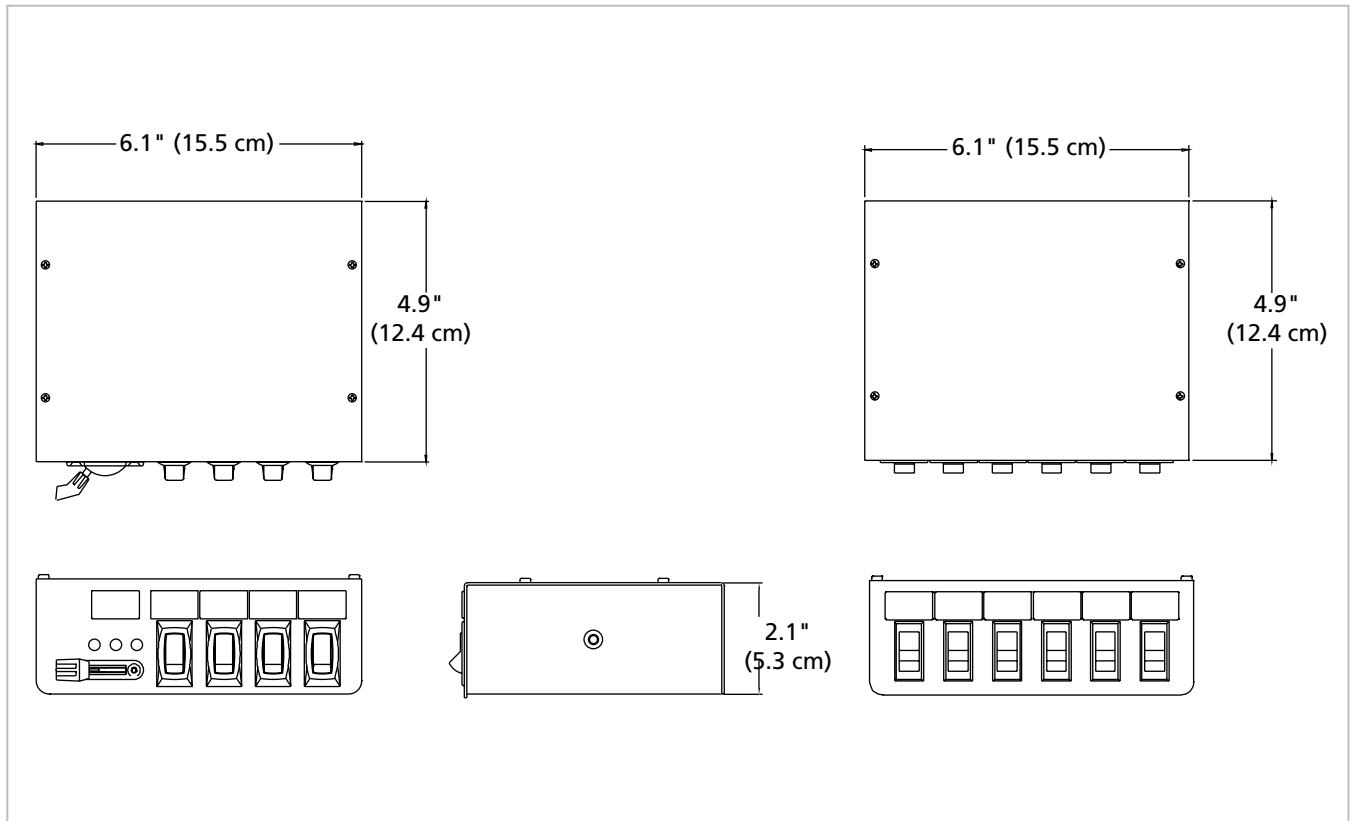
- Switching of up to seven auxiliary functions
- 20 Amp fuses and 20 Amp switches are standard
- Standard, high current slide switch and non-slide switch models available
- Backlit or LED function identification
- Easy installation
- Three-year warranty

### Applications

- Construction
- Material Handling
- Tow & Recovery
- Utility



Model	Description
<b>"SW" Switch Control Panel Models</b>	
SW1	One rocker switch
SW2	Two rocker switch
670132	Three rocker switches
SW200-012	SW200 Series, (4) 20 Amp fused switches
SW30	SW30 Series, (3) 20 Amp toggle switches on "L" bracket housing
SW300-012	SW300 Series, (1) 40 Amp and (5) 20 Amp fused switches
SW300-BK	SW300 Series, SW300-012 control panel and SW-BK mount bracket
SW400SS	SW400 Series, slide control and (4) 20 Amp switches
<b>Toggle Switch Models</b>	
210620SSG	Toggle switch, Black
210633SSG	Toggle switch, Chrome on metal
<b>Accessories and Kits</b>	
SW-BK1	Mount bracket for SW200-012
SW-BK	Mount bracket for SW300-012 and SW400SS
210624SSG	Single-hole switch panel for use with 1/2" diameter toggle switches
<b>Common Replacement Parts</b>	
671512	Rocker switch, 20 Amp, illuminated
Z122374A	Slide-switch
Z122385B	Rocker switch, 20 Amp, on/off, illuminates, Red
Z124A058A	Kit, multiple legends, backlit



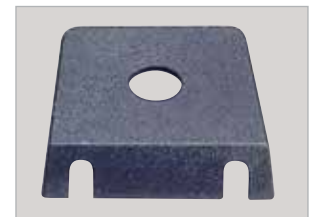
Physical Specifications			
	SW400	SW300	SW200
Height	2.1 in (5.3 cm)	2.1 in (5.3 cm)	2.1 in (5.3 cm)
Width	6.1 in (15.5 cm)	6.1 in (15.5 cm)	4.7 in (11.9 cm)
Depth	4.9 in (12.4 cm)	4.9 in (12.4 cm)	4.9 in (12.4 cm)
Ship Weight			
	3.0 lbs (1.4 kg)	3.0 lbs (1.4 kg)	2.5 lbs (1.1 kg)



SW-BK1



SW-BK



210624

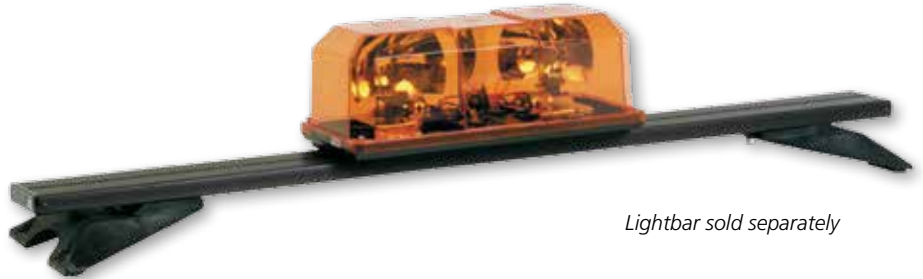
# Mounting Bars | Accessories

## Features

- Mounts any type of warning light, directional light or work light
- Accommodates mini-lightbars, as well as full-length lightbars
- Sliding carriage bolt design for ease of installation when mounting any lighting device
- Available for permanent mount or hook-on mount applications
- Available in 46", 54" and 65" lengths

## Applications

- Construction
- Material Handling
- Tow & Recovery
- Utility



*Lightbar sold separately*

Model	Description
210960-46	46", Roof mount bar
210960-54	54", Roof mount bar
210960-65	65", Roof mount bar
Accessories and Kits	
UNPK	Mounting kit, permanent
UNHK	Mounting kit, hook mount feet (requires use of hook kit)
HKB-(Model)	Hook required with hook-on mount, (specify vehicle)
210962SSG	Kit, mounting bar endcap (contains endcap and two screws)
210961SSG	Kit, mounting plate, beacon (mounts LED and halogen beacons and VisiBeams)
454219	Kit, roof mount bar (must be used when mounting HighLighter on a Roof Mounting bar)



# Replacement Lamps



Z211800B  
Replacement flash tube Model 1262/1682



Z8107141A  
Lamp, rotator, vertical filament, 795X, 50W, bayonet



Z8107146C  
Strobe tube, Fireball



Z8107152A  
Bulb, H3 halogen, 55W 12 VDC



Z8107156A  
Bulb, 25W, G4, 12V, halogen, GH1



Z8107158A  
Bulb, H3 halogen, 100W, 12VDC



Z8107165A  
Bulb, 35W, G4, 12V, halogen, GH1F



Z8107169A  
Bulb, GH8, Bi-pin alley/takedown light, 50W halogen



Z8107170A  
Bulb, GH9, Bi-pin flashing light, 35W halogen



Z8107232A  
Strobe tube assembly, 413250/GS1/GS1F



Z8107241A  
Lamp, alley, Arjent SL, MR11, 10-degrees



Z8107A027  
Bulb, 4505, 50W, 24VDC, Model 14



Z8107A033  
Bulb, 4416, 30W, Model 14



Z8107A095A  
Bulb, Stop/Tail/Turn, GE1157, dual filament



Z8107A119A  
Bulb, alley/takedown light, horizontal filament, 50W bayonet



Z8440A265A-02  
Bulb, Rotator, H1 vertical filament, long life, 12VDC



Z8444A151A  
Bulb, H1, vertical filament, 70W halogen, 24VDC



Z8548A028A  
Bulb, flashing light, horizontal filament, 796, 35W



Z8550250A  
Lamp, Littlite, Bi-pin



Z8550269A  
Replacement flash tube, Firebolt



Z8560082A  
Strobe assembly, Highlighter Strobe



Z8573007A  
Bulb, GH22 Bi-pin, SignalMaster, 27W halogen



Z8575067A  
Strobe tube and reflector assembly, GS2



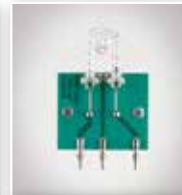
Z8575107A  
Lamp and reflector assembly, GHSCENE



Z8583052A  
Strobe tube, Vistabeam/directional, helical, lower level



Z8583292A  
Strobe tube and reflector assembly, linear, upper level



211200-95  
Replacement flash tube, Model 651/901



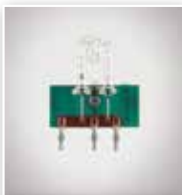
211400-95  
Replacement flash tube, Model 851/951



413201-05  
Strobe tube, Ricochet/Silver Series Clear with amp connector



439290-95  
Replacement flash tube, 551 HD



439411-95  
Replacement flash tube, 451 HD



462510  
Strobe tube assembly, Renegade



521592  
Strobe tube and reflector assembly, JetStrobe



602111-02/03/04  
Corner strobe tube, Amber, Blue, or Red CS1



602111-05  
Corner strobe tube, Clear CS1



8107230A-95  
Replacement flash tube, Model 401

Part Number	Page
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210539	36, 56
210676	56
210728	36, 56
210782	50, 52
210846	44, 50, 52
210862	36
210878	50, 52
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# Terms and Conditions

- (1) **AGREEMENT AND LIMITATIONS.** The agreement between Seller and Buyer (the "sales contract") with respect to the sale of goods (the "goods") described herein shall consist of the terms appearing herein with any additions or revisions of such terms mutually agreed to in writing by Seller and Buyer. Seller objects to and shall not be bound by any additional or different terms, whether printed or otherwise, in Buyer's purchase order or in any other communication from Buyer to Seller unless specifically agreed to by Seller in writing. Except as expressly stated in the sales contract, no reference to Buyer's purchase order or other communication from Buyer shall be deemed to incorporate by reference any terms appearing therein. The sales contract shall be for the benefit of Seller and Buyer and not for the benefit of any other person. Prior courses of dealing, trade usage and verbal agreements not reduced to a writing signed by Seller, to the extent they modify, add to, detract from, supplant or explain the sales contract, shall not be binding on Seller.
- (2) **TERMINATION OR MODIFICATION.** The sales contract may be modified or terminated only upon Seller's written consent except that stenographic and clerical errors are subject to correction by Seller or upon Seller's written consent. If Seller shall declare or consent to a termination of the sales contract, in whole or in part, Buyer, in the absence of contrary written agreement signed by Seller, shall pay termination charges based upon expenses and costs incurred in the production of the goods or in the performance of the services to the date such termination is accepted by Seller including, but not limited to, expenses of disposing of materials on hand or on order from suppliers and the losses resulting from such disposition, plus a reasonable profit. Notwithstanding the foregoing any goods substantially completed or services performed on or prior to such termination shall be accepted and paid for in full by Buyer.
- (3) **PRICE AND PAYMENT.** Prices are subject to increase by Seller based on Seller's prices in effect at the time of shipment in all instances where specified shipment date is later than 30 days from date of order. Unless otherwise specified in the sales contract or Seller's applicable price list, prices are F.O.B. Seller's point of shipment, and the terms of payment are NET 30 days from the date of invoice. If the sales contract is for more than one unit of goods, the goods may be shipped in a single lot or in several lots at the discretion of Seller. In such event each such shipment shall be paid separately and Buyer shall be responsible for all transportation charges. Seller may require full or partial payment or payment guarantee in advance of shipment whenever, in its opinion, the financial condition of Buyer so warrants. Payment by credit card may be subject to a service charge.
- (4) **PAST DUE INTEREST:** Amounts not paid when due shall be subject to past due interest at the rate of 18% per year or the highest rate permitted by law, whichever is less.
- (5) **RISK OF LOSS.** The risk of loss or the goods or any part thereof shall pass to the buyer upon delivery thereof by Seller to the carrier. Buyer shall have sole responsibility for processing and collection of any claim of loss against the carrier.
- (6) **TAXES.** Prices do not include taxes. Buyer shall pay Seller, in addition to the price of the goods, any applicable excise, sales, use or other tax (however designated) imposed upon the sale, production, delivery or use of the goods ordered to the extent required or not forbidden by law to be collected by Seller from Buyer, whether or not so collected at the time of the sale, unless valid exemption certificates acceptable to the taxing authorities are furnished to Seller before the date of invoice.
- (7) **DELIVERY.** Promises of delivery from stock are subject to prior sale. Delivery dates are not guaranteed but are estimated on the basis of immediate receipt by Seller of all information to be furnished by Buyer and the absence of delays, direct or indirect, resulting from or contributed to by circumstances beyond Seller's reasonable control. Seller shall in good faith endeavor to meet estimated delivery dates but shall not be liable to Buyer for any damages as a result of any delay caused or contributed to by circumstances beyond Seller's reasonable control.
- (8) **DEDUCTIONS AND RETURNS.** Please contact the factory before returning any merchandise. A Return Material Authorization (RMA) must be obtained before returning merchandise for credit. All returns are subject to inspection of merchandise and any defects in the units will be charged back to the Buyer at the cost of parts and labor. Credit deductions will not be honored unless covered by a credit memorandum. Goods shipped to the Buyer may be returned to Seller for credit only upon the Seller's prior written consent (such consent to be in the sole discretion of Seller) and upon terms specified by Seller, including prevailing restocking, freight, and handling charges. Buyer assumes all risk of loss for such returned goods until actual receipt thereof by Seller. Agents of Seller are not authorized to accept returned goods or to grant allowances or adjustments with respect to Buyer's account.
- (9) **INSPECTION.** Buyer shall inspect the goods immediately upon the receipt thereof. All claims for any alleged defect in Seller's performance under this sales contract, capable of discovery upon reasonable inspection, must be fully set forth in writing and received by Seller within thirty days of Buyer's receipt of the goods. Failure to make any such claim within said thirty-day period shall constitute a waiver of such claim and an irrevocable acceptance of the goods by Buyer.
- (10) **LIMITED WARRANTY** Federal Signal Corporation, Public Safety Systems, Federal warrants each new product, except speakers and products otherwise noted, to be free from defects in material and workmanship, under normal use and service, for a period of (3) years on parts replacement from the date of manufacture stamped on the product and (1) year on factory labor from the date of delivery to the first user-purchaser. Speakers are warranted for a period of (2) years on parts replacement from the date of manufacture stamped on the product and (1) year on factory labor from the date of delivery to the first user-purchaser. The following products are warranted for (5) years on parts replacement from the date of manufacture stamped on the product and (1) year on factory labor from the date of delivery to the first user-purchaser: "Light Emitting Diode" (LED) products (MicroPulse and some Corner LED products not included), rotating light assemblies from all lightbars, all rotating beacons and mini-lightbars (Sentinel not included), all Phase II strobe beacon models, all 901 and 951 strobe beacon models, all 651 and 851 strobe beacon models, all US5, US6, and US7 UltraStar strobe beacon models, and all Arctic strobe beacon models.  
Strobe flashtubes are warranted for (1) one year parts replacement from the date of delivery of the first user-purchaser. During this warranty period, the obligation of Federal is limited to repairing or replacing, as Federal may elect, any part or parts of such product which after examination by Federal, is found to be defective as the result of a defect in material and/or workmanship. Federal will provide warranty for any unit which is delivered, transported prepaid, to the Federal factory or designated authorized warranty service center for examination and such examination reveals a defect in material and/or workmanship. This warranty does not cover travel expenses, the cost of specialized equipment for gaining access to the product, or labor charges for removal and re-installation of the product. Domes & lenses, lamps or batteries are not covered under warranty. This warranty does not extend to any unit which has been subjected to abuse, misuse, improper installation or which has been inadequately maintained, nor damage resulting from incompatible chemicals or cleaning material, nor to units which have problems relating to service or modification at any facility other than the Federal factory or authorized service centers. This warranty is in lieu of all other warranties, express or implied, including warranties of merchantability and fitness for a particular purpose.  
This warranty is in lieu of all other warranties, express or implied, including warranties of merchantability and fitness for a particular purpose.
- (11) **REMEDIES AND LIMITATIONS OF LIABILITY.** In the event Seller is claimed to have breached any of its obligations under the sales contract, whether of warranty or otherwise, Seller may repair any defective goods, request the return of the goods and tender, at Seller's options, a replacement shipment of goods or the purchase prices theretofore paid to Seller. Seller shall tender a refund of the purchase price at its option upon actual receipt of the goods by Seller. If Seller so requests the return of the goods, the goods will be re-delivered to Seller, transportation prepaid, in accordance with Seller's instructions. The remedies contained in this and the preceding paragraph constitute the sole recourse against Seller for breach of any of Seller's obligations under the sales contract whether of warranty or otherwise. In no event shall Seller be liable for consequential damages nor shall Seller's liability on any claim for any direct, incidental, consequential or special damages arising out of or connected with the sales contract or the manufacture, sale, delivery or use of the goods exceed the purchase price of the goods.  
Seller shall not be liable for failure to perform its obligations under the sales contract, resulting directly or indirectly from or contributed to by acts of God; acts of Buyer; civil or military authority; priorities; fires; war; riot; delays in transportation; lack of or inability to obtain raw materials, components, labor, fuel or supplies; or other circumstances beyond Seller's reasonable control, whether similar or dissimilar to the foregoing.
- (12) **PATENTS.** Seller shall hold Buyer harmless, to the extent herein provided, against any rightful claim of any third person by way of infringement of any United States Letters patent by such goods as are of Seller's own manufacture, but if Buyer furnished specifications to Seller, Buyer shall hold Seller harmless against any such infringement claims which arise out of compliance with such specifications. Seller's agreement in this paragraph to hold Buyer harmless shall not apply to any infringement consisting of the use of goods manufactured by Seller as a part of any combination with goods manufactured by Buyer or others. In the event that any goods manufactured by Seller are in any suit held to constitute infringement and their use is enjoined, Seller, if unable within a reasonable time to secure for Buyer the right to continue using such goods, either by suspension of the injunction, by securing for Buyer a license, or otherwise, shall at its own expense, either replace such goods with non-infringing goods or modify such goods so that they become non-infringing, or accept the return of the enjoined goods and refund the purchase price theretofore paid by Buyer less allowance for any period of actual use thereof.  
Except as in this paragraph provided, Seller makes no warranty that the goods will be delivered free of the rightful claim of any third person by way of infringement or the like and Buyer's remedies will be limited to those provided in this paragraph.
- (13) **ASSIGNMENT AND DELEGATION.** No right or interest in this sales contract shall be assigned by Buyer without Seller's prior written consent, and no delegation of any obligation owed, or of the performance of any obligation, by Buyer shall be made without Seller's prior written consent. Any attempted assignment or delegation shall be void and totally ineffective for all purposes unless made in conformity with this paragraph 9, 10 and 11 hereof, and if effective shall be subject to all limitations of this sales contract.
- (14) **SEVERABILITY.** If any term, clause or provision contained in the sales contract is declared or held invalid by a court of competent jurisdiction, such declaration or holding shall not affect the validity of any other term, clause or provision herein contained.
- (15) **INSTALLATION.** Installation shall be by Buyer unless otherwise specifically stated on the sales contract.
- (16) **GOVERNING LAW AND LIMITATIONS.** The formation and performance of the sales contract shall be governed by the laws of the State of Illinois. Whenever a term defined by the Uniform Commercial Code as adopted in Illinois is used in these standard terms, the definition contained in said Uniform Commercial Code is to control. Any action for breach of the sales contract or any covenant or warranty contained herein must be commenced within one year after the cause of action accrued.

# Contact Information

## **Federal Signal**

Main Office / Factory  
2645 Federal Signal Drive  
University Park, IL 60484  
(708) 534-3400

## **Customer Support:**

(800) 824-0254  
amberorders@fedsig.com

## **Service Department:**

(800) 433-9132  
empserviceinfo@fedsig.com

Join Us:    
FederalSignalFR

[www.fedsig.com](http://www.fedsig.com)



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