



V-SHAPED LED LIGHTBARS

available in:



Federal Signal revolutionized the emergency warning industry with the introduction of its Vision® lighting system. Not only did it incorporate advanced electronic controls and state-of-the-art optical design, but it was also the first lightbar designed from the outset to address critical off-axis visibility issues. The patented V-Shaped system, with its offset lighting pods, maximizes the warning signal to vital 45- and 90-degree intersection angles, where most emergency vehicle accidents occur. This level of protection cannot be matched by conventional linear lightbars.

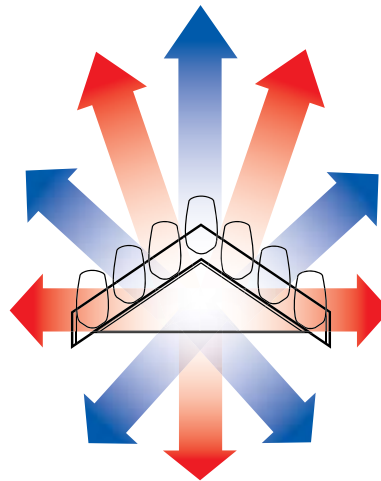
The latest evolution of the Federal Signal V-Shaped lightbar platform utilizes breakthrough Solaris® LED reflector technology for even better straight-ahead and off-axis performance.

Solaris LED Technology

The proprietary Solaris light assemblies use offset, compound reflector surfaces for accurate beam shaping and high optical efficiency. This maximizes the performance of the LEDs—creating the brightness necessary for officer safety and standards compliance, without adding the cost and complexity of more LEDs.

Solaris LED assemblies cut amperage draw to a minimum, reducing the demands on vehicle electrical systems. The LEDs stand up to the harsh environments, severe vibrations, and tough duty cycles that can dramatically shorten halogen and strobe performance—virtually eliminating downtime for lightbar repairs and bulb changing.

The V-Shaped lightbars can include 6-LED Solaris reflectors in amber, blue, red, and white to meet all requirements. All Solaris LED assemblies are backed by a 5-year warranty.



> Features

- Patented V-Shape platform delivers more warning light to critical off-axis angles.
- SOLARIS LED technology maximizes optical performance with minimal amperage draw.
- SmartPod options offer warning patterns in addition to powerful area lighting.
- Vision system includes a 100/200-watt electronic siren.
- Unique pod shape provides superior aerodynamic performance and light transmission.
- Modular design simplifies color customization and maintenance.
- Available with built-on LED SIGNALMASTER™ directional light.

> Approvals

- Rotating lights meet SAE J845
- Flashing LED lights meet SAE J595
- Steady burn light meets CAC Class B



Modular Design

The modular layout of the V-Shaped lightbars allows configuration flexibility and easy maintenance. The rugged polycarbonate domes are available in amber, red, blue, or clear to match the LED colors. For SmartPods, color inserts may be added within clear domes to customize the halogen light operation.

All components are optimized for reliability in the harshest conditions. All parts are easily replaceable. Each pod can be individually serviced by simply removing two Torx-head screws. This provides easy access to the lights without disassembly of the entire lightbar.

SmartPods

Vision SL and Smart Vector® SL lightbars contain five modular Solaris LED pods along with two microprocessor-based SmartPod options.



SmartPods are powerful 50-watt halogen pods that can be used in Steady Burn, Takedown, or Alley Light modes; have horizontal tracking (jogging) capability; and can home to a predetermined position all of which complement the primary warning function. Each SmartPod uses a gearless stepper motor for quiet operation and longer life.

SignalMaster Directional Light

The directional traffic warning option for the V-Shaped LED lightbars is the high intensity Cuda TriOptic™ LED SignalMaster® light. This low profile unit matches the lightbar platform perfectly reducing wind noise and a built-in appearance. The field-proven LED light and lens technology creates brighter, more effective traffic warnings—with very low amperage draw, which reduces the demands on vehicle electrical systems.



The SignalMaster™ directional light provides supplemental warning for any hazardous situation. The left arrow, right arrow, and center-out patterns can divert traffic around a dangerous situation or a warning pattern may be used to advise caution.

Vision SL lightbars include the SignalMaster option and integrate its functionality with the control panel. Smart Vector SL and Vector SL models offer SignalMaster lights as an option and require a SignalMaster capable siren or separate controller.

Opticom Priority Control System

All V-Shaped LED lightbars can use the 3M Opticom® Priority Control System. The 3M Model 792 is a compact, weather resistant, encoded signal device intended for use on emergency vehicles.



It interleaves programmed light pulses that carry the vehicle class and identification information. These pulses are sensed and processed by other fixed Opticom system components to cause activation of traffic signals. Federal Signal recommends only the 3M Opticom system and that the equipment is installed strictly per the instructions. The 3M Opticom system requires the Federal Signal external bracket Federal Signal part number V-3M792BKTY.

V-SHAPED LED MODELS

Vision SL Warning System

The top of the line Vision SL system is a complete visual and audible warning package for a vehicle, containing a microprocessor-controlled lightbar assembly with a directional traffic signal, the amplifier and control head.



All warning functions and programmable features of the Vision SL system are at your fingertips. The control panel's rubberized push-buttons provide positive sensory feedback. When a button is pushed, a click is felt, a beep is heard, and the LED display indicates which lights are activated. It includes a four-position slide switch for quick command of selected warning functions.

The Vision SL control panel is also a full-featured siren controller. Six siren tones, horn ring transfer, radio rebroadcast, and public address are all available. Different functions can be assigned to each pushbutton and the configuration can be easily changed when required. Auxiliary relay outputs are available to control accessory functions, such as headlight flashers, grille lights, or rear deck lights. Four 20-amp relays are supplied with the system.



The Vision SL system can be installed on any vehicle with a 12-volt, negative ground electrical system. The interface/relay unit is small enough to be installed in the glove box, under the seat, or in the trunk. The unit connects to the control head with a simple telephone cable, and it connects to the lightbar via a small multi-conductor cable. A bracket is supplied for the control head and for the interface/relay unit, facilitating mounting in a variety of positions.

Vision SL lightbars include the high intensity Cuda TriOptic™ LED SignalMaster directional traffic warning light. The SignalMaster functions are fully integrated in the Vision SL panel so no additional controller is required.

Smart Vector SL Lightbar

Using the same lightbar included in the Vision SL system, the Smart Vector SL model provides maximum straight-ahead and off-axis warning light for emergency response vehicles. In addition to five Solaris LED pods, the Smart Vector SL includes two SmartPods for powerful area lighting capabilities.



The lightbar easily interfaces with any siren light controller; commonly used is the Federal Signal SS2000 Smartsiren®. These units combine a full-featured siren with warning light control in a single, compact control head. Or a switch box can be used, which also provides jogging control for the SmartPods. SignalMaster directional lighting options are available.

The Smart Vector SL lightbar can be installed in any vehicle with a 12-volt, negative ground electrical system and is equipped with hook-on or permanent mounting feet.

Vector SL Lightbar

Using the same revolutionary V-Shaped platform as the Vision SL and Smart Vector SL models, the Federal Signal Vector SL lightbar provides exceptional coverage to all angles. Warning power is specified where it is needed most—to the front, the sides, or the rear of a vehicle. With its offset lighting pods, the Vector SL offers a level of protection that cannot be matched by conventional linear lightbars.

The modular Vector SL lightbar includes five Solaris LED pods for maximum warning efficiency along with fixed 50-watt alley and takedown options in the remaining two pods. Those two pods can also accommodate Solaris LED assemblies facing to the rear. A SignalMaster directional warning light can be added as an option for additional warning in the rear.



The Vector SL lightbar system can be operated easily and efficiently using a full-featured siren and light controller such as the Federal Signal SS2000 SmartSiren models. Also, the FS model SW400SS is a highly effective and economical switching system.

The Vector SL lightbar can be installed in any vehicle with a 12-volt, negative ground electrical system and is equipped with hook-on or permanent mounting feet.

> How to Order

Choose a model from the catalog or configure a model with the Specify All Options (SAO) worksheets on the Federal Signal website at www.fedsig.com.

VISION SL-WKS	Vision SL and Smart Vector SL SAO worksheet
VCSL-WKS	Vector SL SAO worksheet
VC-WKS	Vector and Smart Vector worksheet
VCLED-WKS	Vector and Smart Vector with LED SignalMaster worksheet

For additional information on any V-Shaped LED lightbars, contact a local distributor or call Federal Signal at (800) 264-3578.

	Vision SL	Smart Vector SL	Vector SL
Module Specifications			
Number of Solaris LED pods	5		5-7
Number of SmartPods	2		n/a
Electrical Specifications			
Input Voltage and Polarity	12VDC negative ground systems only		
Operating Temperature	-30° C to +65° C		
Maximum Lightbar Current Draw			
all lights in warning mode*	19.6 amps		18.9 amps
with steady takedowns & alleys	19.6 amps		26.7 amps
additional for SignalMaster**	6.3 amps		6.3 amps
Audible Specifications			
Siren Power	100/200 watts		n/a
Siren Frequency Range (nominal)	700-1500Hz		n/a
Siren Current Draw	8 amps		n/a
Siren Voltage Output	64V peak-to-peak		n/a
Audio Power – PA mode (average)	45 watts		n/a
Input Impedance (nominal)	4000 ohms		n/a
Physical Dimensions			
Height	5.9 in (15.0 cm)		
Depth	28.0 in (71.1 cm)		
Width	44-inch model	44.0 in (111.8 cm)	
	48-inch model	47.8 in (121.4 cm)	
	60-inch model	60.0 in (152.4 cm)	
Average Ship Weight			
	44-inch model	53 lbs (24.0 kg)	
	48-inch model	54 lbs (24.5 kg)	
	60-inch model	57 lbs (25.9 kg)	
	added for SignalMaster models	4.2 lbs (1.9 kg)	

* Assumes 70% duty cycle for LEDs and 50% duty cycle for flashing halogen lights.

** Assumes 100% duty cycle for LED SignalMaster.



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