

# EV LED



## Architectural LED Emergency Light

Aesthetics  
Design  
Performance  
Sustainability  
Value

DUAL LITE

**“The Evolution of Emergency Lighting” has begun with the most technologically advanced emergency light on the market.**

The new LED based EV Series emergency light, once again proves Dual-Lite’s reputation as “Innovator” in the emergency lighting industry. The EV Series architectural emergency light has half the footprint of contemporary emergency lights and uses 2 high powered long-life LEDs to produce superior light output and improved fixture spacing. The EV Series LEDs will never require maintenance or replacement and the premium Nickel Metal Hydride battery requires only 1 watt of input power. This cutting edge design is centered around the LEDs and offers the latest in electronic technology for LED thermal maintenance and driver technology.

Dual-Lite’s EV unit uses only high power LEDs and has been designed around the reduced energy requirements of these LEDs. This approach has resulted in the use of a smaller, more environmentally friendly Nickel Metal Hydride battery. The tangible benefits of the EV Series are founded in the following characteristics: **Aesthetics, Design, Performance, Sustainability and Value.**

**Aesthetics | Sleek architectural styling**

Break-throughs in LED technology, increased energy-density batteries, and surface mount electronics have resulted in circuits and optics which are greatly reduced in size and require much less energy while providing increased amounts of light. These characteristics all contribute to a much smaller and more powerful emergency light. The EV packs these characteristics into a small housing with the following features.

**INCONSPICUOUS:**

The EV unit blends in to the environment while providing emergency lighting coverage in an attractive fixture.

**SLEEK:**

Visually appealing design with soft contours allows the EV to be unobtrusive in any setting.

**COMPACT:**

Measuring 8.5” wide by 5” high with a depth of 2.25”, the EV Series is the most compact, low profile emergency lighting unit on the market.

**ARCHITECTURAL:**

The EV unit is modeled after Dual-Lite’s popular PG Series LED and offers an elegant, architectural style.



Photo is actual product size.



## Design | Ease of Installation and Maintenance

Dual-Lite focused on ease of installation, maintenance, and longevity of service when designing the EV emergency lighting unit. The unique LED light engine and thermal management design are paired with beneficial options like intelligent dual-voltage input and redundant LED operation. Redundant LED operation ensures the unit will continue to operate at reduced light output in the event one of the LEDs fails. The EV also uses an environmentally friendly battery source as opposed to the traditional lead acid or Nickel Cadmium based batteries which contain elements that when disposed of improperly are harmful to the environment.

### ADDITIONAL DESIGN FEATURES:

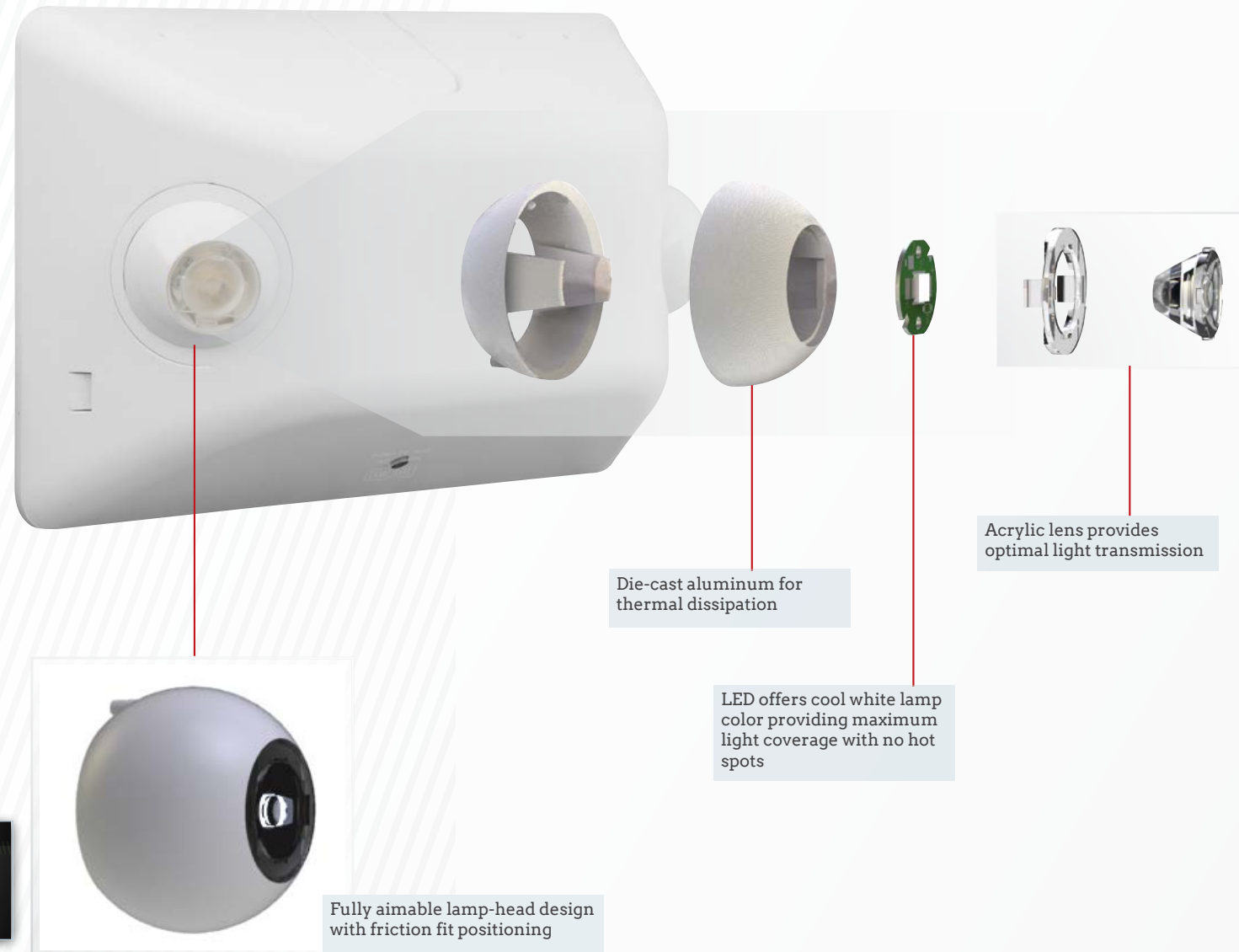
- Quick installation with "third hand" strap which supports the housing while performing connections
- 50% less plastic than traditional units
- Long life-cycle LEDs rated at 100,000 hours
- RoHS Compliant
- Fully aimable lamp-head design with friction fit positioning
- Wall or ceiling mount
- Intelligent 120 or 277 VAC input wiring

## Performance | Sophisticated LED based lamp-head

While most contemporary emergency lights use a minimum of 10 watts to light a given space, the EV Series offers superior spacing of up to 27' while requiring only 2 watts to power. The EV uses a high energy density Nickel Metal Hydride (NiMH). This battery technology is used extensively in hybrid automobiles and other applications due to their high energy density. The use of NiMH batteries combined with the low wattage required to power the LEDs allows for a reduced amount of input power required to maintain a full battery charge while providing a superior performing emergency lighting unit.

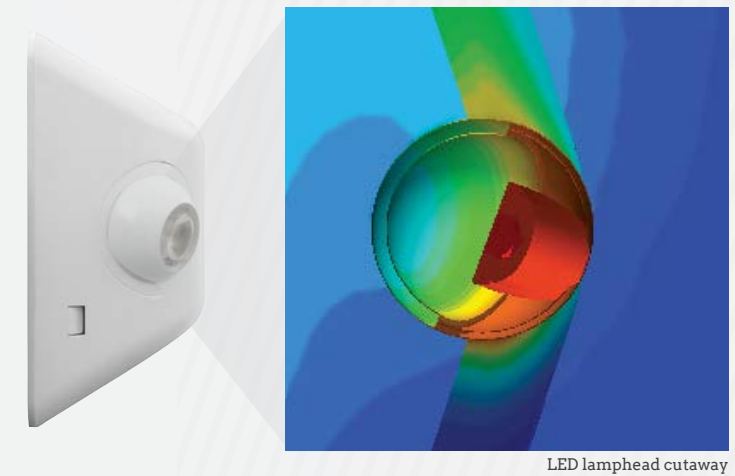
### ADDITIONAL PERFORMANCE FEATURES:

- The LEDs are mounted inside a die-cast housing which utilizes precision components to offer adjustability and thermal stability
- Superior light output with optimized spacing and uniform bright LED light with no irregular light patterns or hot-spots
- Optional Spectron® self-test/self-diagnostics offers user initiated testing for 1 or 90 minutes by pushing a test switch and automatic testing on a monthly basis
- The EV unit with remote capacity will also run a 2 headed remote (EV2R) to double overall coverage and offer initial product savings.

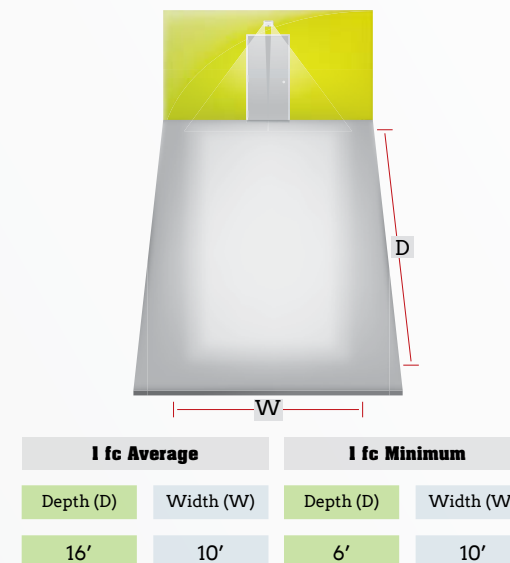


## THERMAL MANAGEMENT

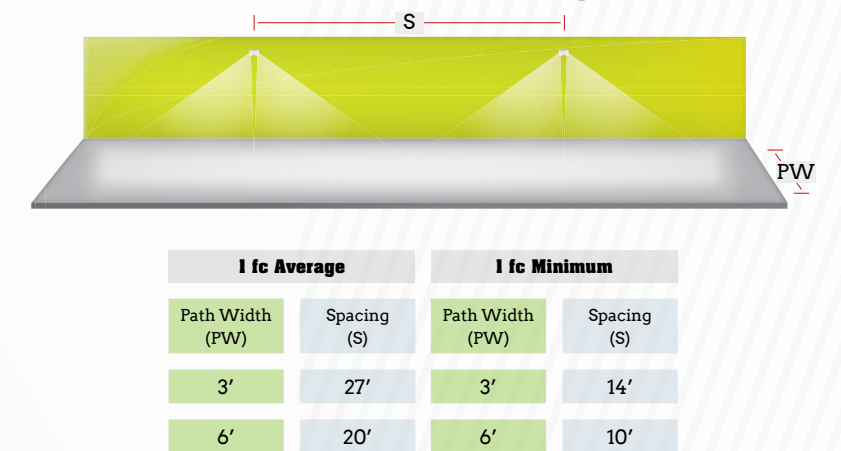
The illustration shows the thermal effects of the LED and the heat dissipative qualities designed into the "eyeball". The red areas have the highest temperature while the green areas are virtually unaffected. This thermal image shows that the eyeball does not conduct any of the heat to the inside of the fixture, but that heat generated from the LED is carried equally around the die-cast aluminum heat-sink.



### Single Unit Coverage



### Multi-Unit Spacing



Meets Life Safety Code minimum illuminance of 0.1 fc and average illuminance of 1.0 fc. Assumes open space with no obstructions, mounting height of 7.5', ceiling height of 9' and reflectances of 80/50/20.

## Sustainability | Our Future

Dual-Lite's sustainability mission, "To achieve an ongoing culture of environmental responsibility with our employees, community, and industry by implementing educational programs and sustainable practices." and vision serve as a foundation for our new product development efforts. Dual-Lite's vision for this initiative is to be recognized as a leader in conservation efforts to sustain our natural resources and protect our environment.

Part of this vision is to utilize new technology to reduce the materials and energy required to manufacture, pack, ship and maintain newly designed products. The EV is the next step in Dual-Lite's product development to support and promote this vision by including the following sustainable practices:

- Reduced plastic content - plastic content has been reduced by 50% which has resulted in smaller packaging and reduced transportation impact
- Reduced power requirements - The use of cutting edge LED technologies allows for less power requirements for battery charging
- Minimizing maintenance requirements - The LEDs utilized by the EV unit have a Lifetime Warranty, no lamps to be changed meaning less materials sent to our landfills
- The use of "Green" batteries - Using Nickel Metal Hydride (NiMH) batteries over Lead Acid and Nickel Cadmium batteries reduces harmful chemicals and hazardous cadmium waste from landfills and water sources

## Value | A Class of its Own

Now that you have seen what the EV has to offer in terms of product capabilities, we saved the best part for last - VALUE. A product's value is the culmination of benefits it provides when compared to its total cost. The EV emergency light provides:

### For the Owner:

- Energy savings, extended product warranties, reduced maintenance costs, and easy disposal

### For the Installer:

- Simplified installation and great performance from a trusted brand

### For the Designer:

- Low profile, unobtrusive design with optical and electrical performance that surpasses NFPA code requirements

### For the Distributor:

- Pricing on par with traditional emergency lighting products and a reduced shelf-space footprint



## Specifications

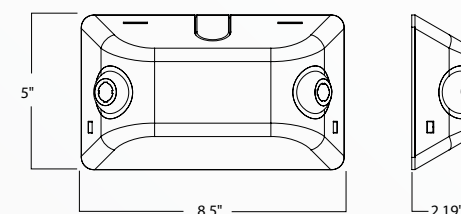
Patents Pending

### ORDERING GUIDE

EV		Self-Diagnostics		Options	
Series	Capacity	Blank	No Self-Diagnostics	B	Black Finish
	2 (2) 1W LED Heads 4 (4) 1W LED Heads <sup>1</sup>	D	Spectron® Self-Diagnostics	-24K	220-240VAC
				-0	60Hz with Spectron® <sup>3</sup>
					No-head option to run external remotes only <sup>4</sup>

- 1 Capacity to run 2 head remote  
 2 EV2 available with or without damp listing, all other models include damp  
 3 -24K option only available with damp plus Spectron®  
 4 -0 No-head option only available with EV4D-02L, with or without Spectron®

### Dimensions



### Maximum Power Consumption

	AC Voltage	Hz.	Amps.	Watts	Power Factor
EV2 EV2D	120	60	0.015	1.10	0.61
	240	60	0.009	1.43	0.62
	277	60	0.008	1.45	0.62
EV4D	120	60	0.022	2.00	0.73
	240	60	0.015	2.51	0.65
	277	60	0.014	2.75	0.63

The EV Series meets proposed California Energy Commission(CEC) requirements for limits on power consumption in maintenance mode with less than 0.5 watts.

### Accessories

- VRS3** Vandal Resistant Shield - 11 1/2"H x 15 1/2"L x 4 1/2"D  
**WGLZ** Wire Guard - 6 1/4"H x 14"L x 4"D

### Matching Remote Head

- EVR2** 2 LED Remote White Finish  
**EVR2B** 2 LED Remote Black Finish



### Electronics

Upon failure of normal utility power, a solid-state transfer switch automatically activates the emergency LED lamp-heads. Upon resumption of normal utility power, the battery is disconnected from the load and recharged through a microprocessor controlled pulse charger. The battery is a maintenance-free Nickel Metal Hydride(NiMH) type. The EV series accepts dual-voltage input of 120 or 277VAC at 60 Hz, or an optional 220-240VAC input at 60 Hz. A low voltage battery disconnect (LVD) feature protects the battery from severe damage during prolonged power failures. Manual testing is initiated at any time using the push-to-test button.

Number of Lamps- 2 High Power LEDs at 1 watt each configured so that if 1 lamp malfunctions, the remaining lamp will continue to provide illumination.

**Lamp Color:** Cool White

**Total Lamp Output:** 88 Lumens per LED

**System efficacy:** 80lm/W

**Rated LED lifecycle:** greater than 100,000 hrs. at 70% of initial

**Standard Features Include:**

- Intelligent 2-wire input connection
- External push-to-test switch and AC-on indicator
- Battery re-charge within 24 hours
- AC Lock-out circuit
- Low voltage disconnect
- Conduit entry knock-out located at the top center
- Microprocessor controlled pulse charger

**Optional Spectron Feature:**

- Self-diagnostics monitors LED status, LED load transfer circuit, battery capacity and charger function and displays any fault detection by means of a flashing code
- Self-Test feature automatically runs a 1 minute test once a month and an alternating 30 or 60 minute test once every 6 months. Multi-color LED indicator provides visible fault detection and charging status.
- User initiated 1 or 90-minute system test feature
- 15 minute re-transfer delay
- Automatic unit transfer in brown-out conditions (below 80% of nominal AC input voltage)

**Operating Temperature Range:**

Standard: 68° to 86°F (20° to 30°C)  
 Damp Listed: 50° to 104°F (10° to 40°C)

**Weight:** 2.0 lbs

**Warranty:**

LED Lifetime Warranty  
 EV Full 3 year warranty  
 EV with Spectron Full 5 year warranty

**Compliances:**

Listed to UL924 Standard, NFPA 101, NFPA 70  
 Damp Location Listed Optional  
 RoHS



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 Value



For more information scan the QR using your smart phone or visit [www.Dual-Lite.com/ev/](http://www.Dual-Lite.com/ev/)



**Aesthetics**  
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**Value**

Dual-Lite first incorporated high brightness white LEDs in the PG Series followed by its UL924 MR16 LED lamp and now in the most technologically advanced emergency light on the market the EV Series. "The Evolution of Emergency Lighting" has begun and Dual-Lite, the first name in emergency lighting, is leading the way.



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