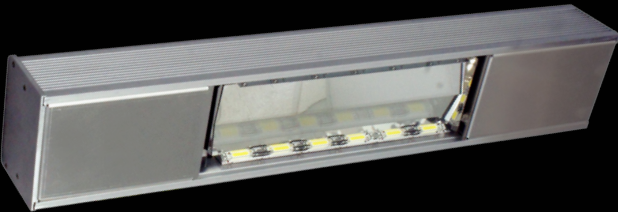


# Substation

LED LIGHTING



**ActiveLED**<sup>®</sup>  
Energy Efficient Lighting and Controls





Electrical substations are an integral part of the any electrical generation, transmission, and distribution system. Due to the urban and/or remote location of many of these facilities, substation owners face a number of unique security and safety concerns. They are also tasked with complying with increasingly stringent regulations from the National Electrical Reliability Commission's (NERC) Critical Infrastructure Protection (CIP) program.

**INEFFICIENT LIGHTING** has been found to be one of the contributing factors to these challenges, but additional lighting comes with its own set of issues ranging from increased maintenance and energy costs to an increase in the safety liability of maintenance personnel.

High performance ActiveLED® Lighting Luminaires play an active role in mitigating all of these substation challenges and concerns. ActiveLED® offers a different approach to the design of LED fixtures, proving that it is not the LED technology itself, but rather the design and manufacturing process that determines quality and durability. The results are such that ActiveLED® Lighting Luminaires are able to provide better security lighting, with less maintenance and more energy savings.

## Security

Copper theft, vandalism and the system destabilization and safety concerns that result from such actions, were some of the motivations behind the Federal Energy Regulation Commission (FERC) and NERC working together to strengthen the NERC's CIP standards. ActiveLED® Lighting contributes to the adherence of this standard in the follow areas:

### SECURITY SURVEILLANCE LIGHTING

CIP standards require protection on all six sides of facility (including above and below). The use of video surveillance cameras is one method used to meet this requirement. LED lighting has been found to provide the best quality of light for these cameras. ActiveLED® fixtures provide an even spread of light, eliminating the dark or bright spots that make for poor visibility across the scope of the image. ActiveLED® fixtures can also be adjusted to give both the correct range and coverage angle needed for proper facility surveillance.

### REAL-TIME DETERRENCE

Security surveillance provides passive recording of events for future use, but ActiveLED® can also contribute to real-time deterrence. Unlike many types of lighting, LEDs are capable of starting up instantly with no warm-up period. ActiveLED® fixtures have an optional built-in motion sensor that will instantly bring lights from an off or dimmed mode to full when motion is detected, thereby helping to deter any intruder in real-time.

### BEFORE AND AFTER

These before and after photos submitted by the U.S. Coast Guard show the better light rendering and enhanced surveillance capabilities they reported after installing ActiveLED® Lighting Luminaires. They also reported a 70% energy cost savings, and a large maintenance cost reduction.



## Less Maintenance

In many cases, more lighting means more maintenance. Not only would substation owners have to deal with the increased equipment and labor costs associated with changing out multiple lamps on a regular basis, but also with the potential liability associated with personnel being exposed at more frequent intervals to a high risk environment.

ActiveLED® Lighting Luminaries are designed to perform for more than a decade without the need to frequently change out lamps, or even lighting fixtures every few years.



### DESIGNED TO PERFORM. DESIGNED TO LAST.

ActiveLED® offers a 10 year, performance warranty on all LED elements and fixture housings. ActiveLED® drivers are also warranted for 10 years when used with an ActiveLED® Surge Protector.

ActiveLED® Lighting Luminaires are designed from the “ground up” to ensure the highest performance and quality available. Only the best LED’s that are manufactured to our specification are used during construction. Patented Thermal-DRAW™ Cooling Technology ensures that LED components will equal or exceed their warranty. Designed for all types of weather, ActiveLED® outdoor fixtures are IP66 or IP64 rated, and designed to perform in temperature extremes from -58°F to 140°F (-50°C to 60°C).

## Cost Savings

On average, ActiveLED® Lighting can save a user as much as 85% on their energy usage over traditional lighting. For example, a 1,150 watt metal halide pole fixture can be replaced by a 75 watt ActiveLED® lighting fixture with savings of 1,075 watts per fixture. That’s an energy savings of 93%!

### OPTIONAL AUTOMATED FEATURES

By adding automatic controls to ActiveLED® Lighting Luminaires, an additional energy savings of up to 33% can be achieved.

- ActiveREST™ Dimming Technology - Fixture may be automatically dimmed when full light levels are not required. EXAMPLE - Dimming level 40 equates to less than 9% of actual watts being consumed.
- Dusk/Dawn Sensor - Optional photocell allows fixture to automatically turn on or off based on daylight detection.
- IR Receiver Plus Motion - Optional integral passive infrared (PIR) motion sensor with IR receiver allows for programmable Vacant-to-OFF and Vacant-to-Dim level programming.
- IR Receiver - Optional integral IR sensor only for ON-to-Dim programming.



**ActiveLED® Wide Angle Substation Light**  
SL1BD-RM-XF5072SL-M

75W Wide Angle Substation Light, Replaces a 400W Metal Halide.  
Dimensions: 6”(W) x 4”(H) x 34”(L) (15.2 x 10.2 x 86.4 cm)  
Weight: 22.4 lbs (10.2 Kg), CCT Color Temperature: 5,000K



**ActiveLED® Substation Wall Pack**  
PS-VW06B-1-D4006SL-D

6W Wall Pack, Replaces a 42W CFL Lamp,  
Dimensions: 12”(L)x4.9”(D)x6.2”(H) (30.5x12.6x15.8 cm)  
Weight: 4.8 lbs (2.2 Kg), CCT Color Temperature: 4,000K

Both fixtures being viewed from below.

### Other Models and Options Available.

Contact an ActiveLED® Representative for additional information, recommendations, and a detailed quote on your specific requirements.



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Energy Efficient Lighting and Controls



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