

GARDCO

by **Signify**

Bollards

830 series



Elegance & efficiency

The 830 Series LED Bollards with Demand Response combine refined aesthetics, exceptional performance and maximum energy savings.



830 Series LED



Gardco 830 Series LED Bollards with Demand Response maximize your energy savings while offering you a beautiful, high performance and versatile walkway luminaire. A simple, seamless design that suits any location, yet retains the rugged strength, all-weather sealing and vandal resistance necessary for the punishing environments where bollards are used. What truly sets the 830 Series apart, however, is its incredible energy-efficient LED Bollard technology exclusively from Signify. The patented

system uses stacked, modular louvers to control glare and uniformly distribute LED light in patterns of 180 or 360 degrees. Most impressively, the Demand Response component uses motion-sensing technology to switch between low light and high light modes. This revolutionary feature ensures that low light levels are used when maximum light is unnecessary, resulting in energy savings of up to 90 percent.

Specialized school bollards for maximum vandal resistance

Gardco's BRM832 dome top and BRM836 bevel top louvered LED School Bollards provide uniform illumination and superior spacings. A high-strength galvanized steel tenon throughout the length of the luminaire provides solid vandal resistance. Rugged extruded and cast construction with silicone seals and gasketing assure years of trouble-free service. See construction details on the following page.

Uniform Light Distribution

Modular louvers conceal glare and present a uniform distribution of light in either a 360- or 180-degree pattern. Light levels can vary based on the quantity of louvers used.

LED Driver for Bi-Level Lighting

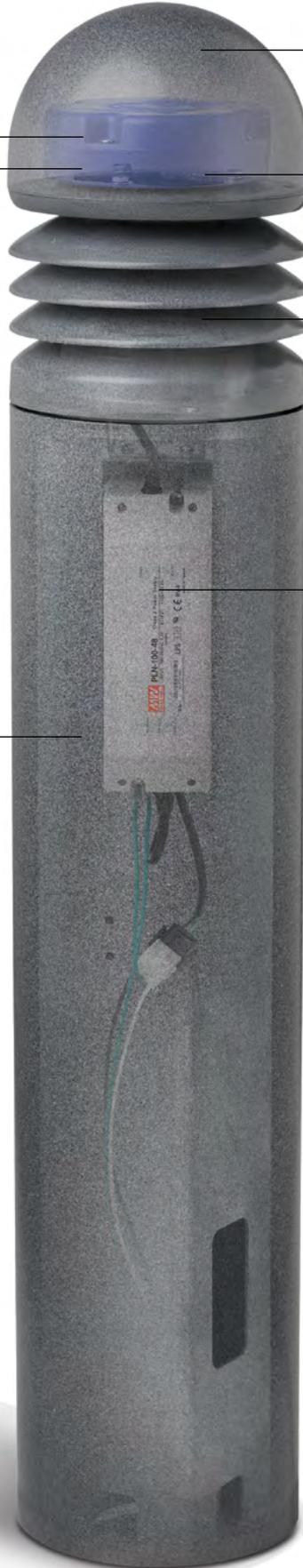
The LED driver manages the brightness of the LEDs, switching between two light levels. On low level – the default used when no motion is present – the bollard power consumption is 8 watts at 120VAC. When triggered by the motion sensor, high level increases to 41 watts at 120V, still well below the wattage of fluorescent and incandescent bulbs.

Concealed Demand Response Motion Sensor

Securely concealed in the bollard head, the motion sensor uses microwave technology to detect motion within 20 feet of the bollard, at which time the LED lights switch from low level to high level. Lights return to low level to save considerable energy when high light is no longer needed. The system includes adjustments for duration on high level and motion sensitivity.

Durable, Vandal-Resistant Construction

The 832 and 836 models feature a high-strength galvanized steel tenon that runs the length of the luminaire, providing a solid anchorage. Concealed screws provide significant vandal resistance.



Die Cast Head

The die cast aluminum head is available with a domed or beveled top to meet a variety of aesthetic needs. It secures to the one-piece louver assembly with three (3) concealed tamper-resistant screws.

Long-Lasting LEDs

The LEDs used in the Gardco 830 Series provide a typical lifespan of 50,000 to 60,000 hours, ensuring a long life of trouble-free maintenance.

Stacked Louver LED Technology

Patent-pending stacked modular louvers can be easily replaced to allow access for maintenance or upgrades as technology changes. The louvers contain a ring of ten (10) 1-watt LEDs for 360-degree coverage or ring of five (5) 1-watt LEDs for 180-degree coverage.

Variety of Power Options

The LED power supply in the 830 Series is an efficient rectifier that converts 120-227VAC with an input of 50 to 60 hz to 48VDC. 347V bollards require and include a step-down transformer to provide proper input voltage.

Built by design



Energy-Efficient LED

Our LED technology produces more light per watt, resulting in significant energy savings even before the bi-level Demand Response system is taken into account. Placement of the LEDs near the edge of the stacked louvers increases luminaire efficiency by up to 100% over previous light sources. LEDs are available in several colors, and have a typical lifespan of 50,000 to 60,000 hours. One benefit of bi-leveling LEDs is that the longevity increases due to the reduced temperature. Since the LEDs are not driven by high current, the expected life will increase.

Demand response

The 830 Series LED Bollard offers a blend of sophisticated styling and energy efficiency in a bi-level design. The Demand Response system reduces energy costs and aids in sustainable development by allowing for different levels of light at different times, ensuring that the system operates at an acceptably low level when maximum light is unnecessary.

The 830 Series has a concealed motion sensor that detects when a person approaches within 20 feet of the bollard. When this occurs, Demand Response system switches the luminaire to high mode, increasing the light output. The system returns to low mode when the pedestrian leaves the area.

The lighting system can also be configured for 180-degree coverage, ensuring complete backside cutoff. The system includes the ability to make adjustments for the duration of high mode and motion sensitivity.





Save energy

LED savings

The 830 Series uses durable and efficient LED technology, which provides many advantages over the light sources typically used in bollards.

- Lower Power Consumption – LEDs use a mere fraction of the electrical power required for other sources, resulting in significant cost savings.
- Improved Light Output – The LEDs in the 830 Series output an impressive 80 lumens per watt, much more than the 15 to 30 lm/w of typical sources.
- Longer Lifespan – Each LED in the 830 Series is rated to last 50,000 to 60,000 hours, multiple times that of other sources.
- Easily Updatable – Because the LEDs on the 830 Series are housed on patented modular louvers, the luminaire can be easily updated to more advanced LED technology as it becomes available via a simple louver replacement.

Demand response savings

The Demand Response system allows the 830 Series to operate on two distinct settings based on the specific needs of the environment, resulting in huge energy savings.

- Low Mode – As a default, the system operates in low mode, which consumes only 8 watts of energy.
- High Mode – When pedestrians are present, the Demand Response system initiates the high mode, which consumes 41 watts of energy.

Compared to the most common walkway bollard using a 100-watt metal halide source, the 830 Series produces energy savings of more than 60 percent even when operating in high mode. Yet because typical usage indicates that the 830 Series will operate in low mode for the vast majority of time, the result is energy savings of up to 90 percent or even higher. Truly, the 830 Series LED Bollard with Demand Response is energy-efficient lighting at its best.

The 830 Series LED Bollard with Demand Response was conceived, designed and constructed with energy savings in mind. Through the use of highly efficient LEDs as well as the bi-level Demand Response system, the 830 Series provides the required light at all times and significantly reduces the costs of operation.

