

PHILIPS



Bollards

830 Series LED

Dome & Bevel Top



Elegance & **efficiency**

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



830 Series LED



The Philips 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 Philips. 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 Philips 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

Philips 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.

Order guide

Example: BRM832-42-DR-360-277-NP

Prefix <input type="text"/>	Height <input type="text"/>	LED Control <input type="text"/>	LED Selection <input type="text"/>	Lighted Coverage <input type="text"/>	Voltage <input type="text"/>	Finish <input type="text"/>
See chart Below	42" 36"	DR CWL	Neutral White CNW LNW Cool White CCW LCW Colors LA LR LG LB	360 180	UNIV Accepts 120V through 240V, 50hz to 60hz input. 347 Requires and includes step-down transformer in Bollard. <i>Note: 347V bollards require and include a step-down transformer in bollard.</i>	BRP BLP WP NP VP LGP DGP LSP DSP RBP OC SC

prefix - vandal-resistant school bollards

dome top	bevel top		height
BRM832	BRM836	School Bollard	42, 36"

prefix - dome & bevel top louver bollards

dome top	bevel top		height
BRM830	BRM834	with Cast Aluminum Base	42, 36"
BRM831'	BRM835'	Head Only	11"
BRM833	BRM837	with Natural Concrete Base	42"
BRM833B	BRM837B	with Beige Concrete Base	42"
BRM833G	BRM837G	with Grey Concrete Base	42"

1. Not Available in 277V.



Dome Top



Bevel Top

LED control

- DR** Demand Response LEDs stay on Low Level (8 watts) when no motion is present. LEDs increase to full light output (41 watts) when motion detected.
- CWL** Constant Wattage with Full Light Output LEDs operate at full wattage (41 watts) and light output. No motion sensor included.

lighted coverage

- 360** 360° Lighted Louvers
- 180** 180° Lighted Louvers
Provide complete backside light cutoff.

LED selection

- Neutral White**
- CNW** Neutral White (3,300°K - 3,700°K, 75 CRI).
- LNW** Neutral White (3,650°K - 4300°K, 75 CRI).
- Cool White**
- CCW** Cool White (5,000°K - 10,000°K, 80 CRI).
- LCW** Cool White (5,300°K - 6000°K, 70 CRI).
- Colors**
- LA** Rebel Amber
- LR** Rebel Red
- LG** Green
- LB** Blue

finish

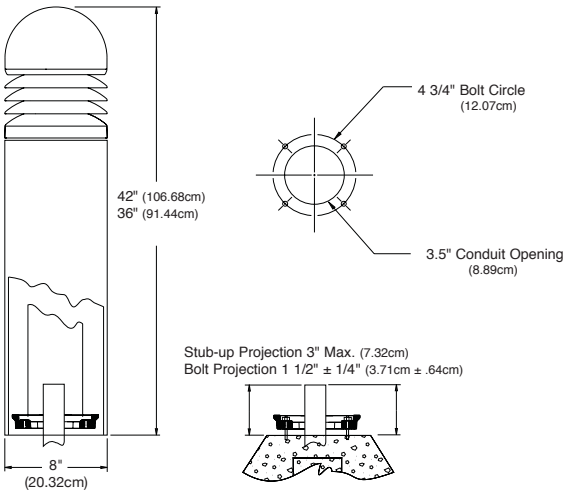
- BRP** Bronze Paint
- BLP** Black Paint
- WP** White Paint
- NP** Natural Aluminum Paint
- VP** Verde Green Paint
- LGP** Light Granite Paint
- DGP** Dark Granite Paint
- LSP** Light Sandstone Paint
- DSP** Dark Sandstone Paint
- RBP** Red Brick Paint
- OC** Optional Color Paint
Specify RAL designation.
Ex. OC-RAL7024
- SC** Special Color Paint
Specify. Must supply color chip.

Prior to ordering, consult Submittal Data Sheet on philips.com/luminaires for the most current information, notes and exclusions.

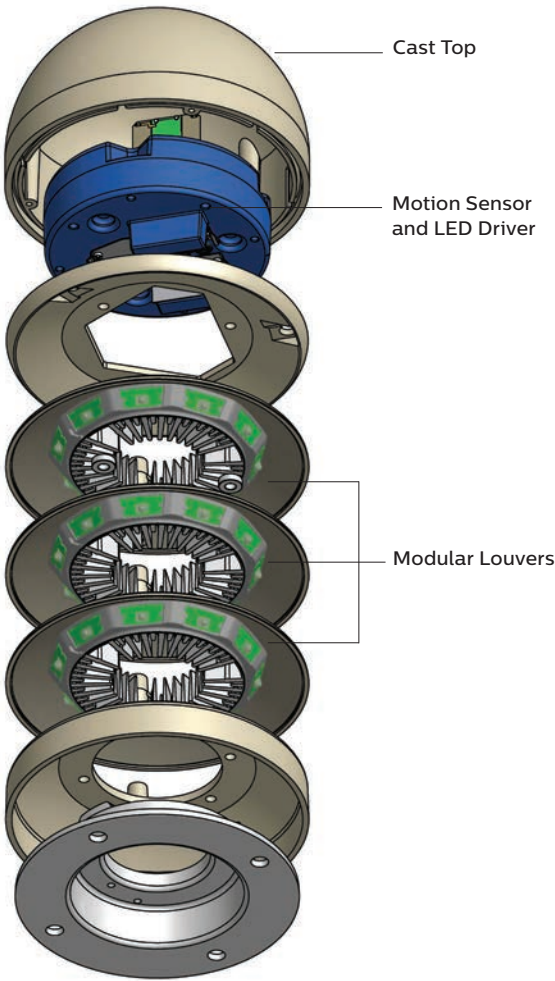
Dimensions

Vandal-resistant School Bollard Galvanized Steel Mounting System

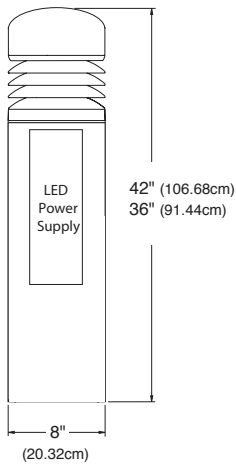
BRM832/
BRM836



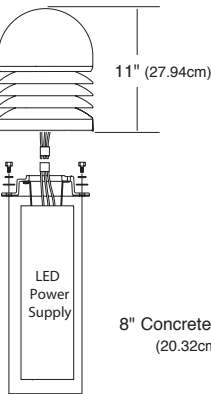
LED Bollard



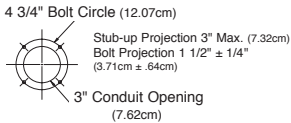
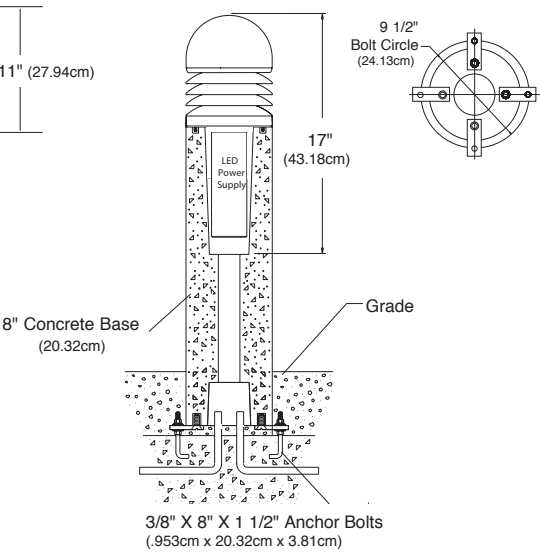
BRM830/
BRM834



BRM831/
BRM835



BRM833/
BRM837



Specifications

The Philips Gardco dome top and bevel top LED Louver Bollards provide uniform illumination, superior spacings and solid vandal resistance. Rugged extruded and cast construction with silicone seals and gasketing assure years of trouble free service. The BRM830 and BRM834 are complete assemblies with an aluminum base. BRM831 and BRM835 head only units affix to custom architectural elements. BRM833 and BRM837 luminaires include a concrete base assembly. The Philips Gardco stack-louver LED technology and Demand Response provide maximized light output and maximum energy savings.

upper housing

- **BRM832/BRM836:** A die cast aluminum dome top secures to a one-piece diecast zinc louver assembly with three (3) concealed tamper resistant screws.
- **BRM830/831/833/834/835/837:** Die cast aluminum dome top secures to one-piece louvered casting with three (3) concealed tamper resistant screws.

lower housing:

- **BRM832/BRM836:** .125" (.318cm) wall 6063-T5 extruded aluminum which connects to the top flange of the mounting tenon with four (4) internal hex bolts, inaccessible after installation.
- **BRM830 / BRM834:** Luminaire features a cylindrical .125 (.318cm) wall 6063-T5 extruded aluminum base housing. Bottom section has a welded-in cast ring for attachment to base assembly with four (4) hex head set screws.
- **BRM831 / BRM835:** Louver head assembly is affixed to ballast mounting bracket which is suitable for insertion into architectural elements (by others).
- **BRM833 / BRM837:** Luminaire includes a pre-cast concrete base constructed with steel molds and wire reinforcing. Base is acid-etched to provide a smooth textured aggregate finish.

lens & optical system: Gardco LED Bollards feature the exclusive Gardco stacked louver LED technology, assuring maximized light output. Each individual louver is replaceable if needed or desired.

anchorage:

- **BRM832/BRM836:** A high strength steel mounting tenon, hot-dip galvanized after fabrication, is secured and double-nut leveled to the concrete footing with (4) 3/8" x 8" x 1 1/2" (.953cm x 20.32cm x 3.81cm) anchor bolts on a 4 3/4" - 5" (12.07cm - 12.70cm) bolt circle.
- **BRM830 / BRM834:** Base assembly consists of a cast aluminum platform and ballast mounting bracket. Assembly is secured and leveled to the mounting foundation with four (4) 3/8" x 8" x 1 1/2" (.953cm x 20.32cm x 3.81cm) anchor bolts on a 4 3/4" (12.07cm) bolt circle. Ballast is prewired with quick electrical disconnects and mounting bracket is secured with two (2) Phillips head screws for ease of installation and servicing.
- **BRM 831 / BRM835:** Mounting plate is cast aluminum with slots to accept anchor bolts (by others) at 90° on a 6 1/4" (15.88cm) diameter bolt circle. A 4 1/2" (11.43cm) diameter opening is required to house ballast assembly.
- **BRM833 / BRM837:** Base assembly consists of four (4) galvanized steel base tabs fastened to pre-cast concrete base. Assembly is secured and leveled to the mounting foundation with four (4) 3/8" x 8" x 1 1/2" (.953cm x 20.32cm x 3.81cm) anchor bolts on a 9 1/2" (24.13cm) bolt circle. Base is designed for 5" (12.7cm) direct burial.

electrical: The LED power supply accepts from 120 Volts through 277 Volts, 50hz to 60hz, input. 347V bollards require and include a stepdown transformer to provide proper input voltage to the LED power supply. The LED driver is located in the upper dome. LED power supplies and LED drivers are replaceable. LEDs provided as specified. Surge protector standard. 10KA per ANSI/IEEE C62.41.2.

Luminaires ordered with Demand Response include a microwave motion sensor. The motion sensor is completely and safely concealed within the LED Bollard head to avoid potential vandalism to the sensor. With Demand Response, LEDs operate on low level (8 watts) when no motion is present. LEDs increase to full light output (41 watts) when motion is detected. Demand Response system includes adjustments for time on high level and motion sensitivity.

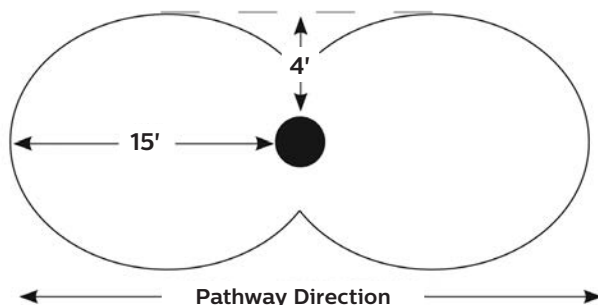
Consult supplemental submittal data sheet (available @ philips.com/luminaires) concerning placement of bollards with Demand Response.

luminaire finish: Each luminaire receives a fade- and abrasion-resistant, electro-statically applied, thermally cured textured powdercoat finish.

labels: All fixtures bear UL or CUL (where applicable) Wet Location labels.

NOTE: Factory supplied template must be used when setting anchor bolts. Philips Gardco will not honor any claim for incorrect anchorage placement from failure to use factory supplied templates.

Approximate Motion Sensor Detection Pattern:



Bollard orientation is adjustable in 120° increments. Consult LED Bollard installation instruction sheets for more detailed information concerning bollard placement and sensor performance.





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PGc-1406BR 10/14 philips.com/luminaires

Philips Lighting
North America Corporation
200 Franklin Square Drive
Somerset, NJ 08873
Tel. 855-486-2216

Imported by: Philips Lighting,
A division of Philips Electronics Ltd.
281 Hillmount Rd,
Markham, ON, Canada L6C 2S3
Tel. 800-668-9008