



Retrofitting **Hadco Refractive Globe** post top luminaires with the LumiLock LED engine GX4 will beautify and add a sense of security to your outdoor space. Hadco's LumiLock LED engine GX4 is an ideal alternative to HID sources and will provide significant energy savings and sustainability rewards. This is a quick and simple retrofit solution that ensures you maintain excellent light levels. Refractive Globe luminaires with LumiLock LED GX4 offer two optical distributions and a flexible range of style choices to suit any application.

Project: \_\_\_\_\_

Location: \_\_\_\_\_

Cat.No: \_\_\_\_\_

Type: \_\_\_\_\_

Lamps: \_\_\_\_\_ Qty: \_\_\_\_\_

Notes: \_\_\_\_\_

### Ordering guide

**Example:** RPTLD 32 S R7 W A 2 N N N N SP2

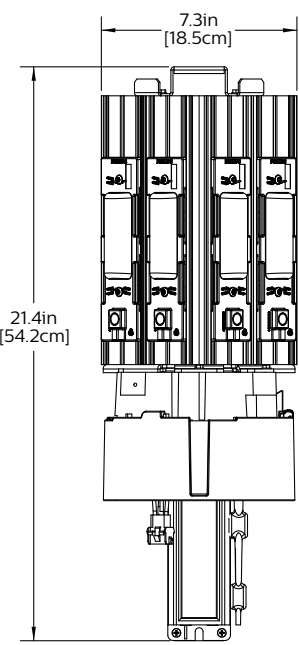
Series	Model	Optic	Future Proof Photo Control		Color Temperature	Voltage	Drive Current
RPTLD <sup>1</sup> Replacement LED Engine	<b>32</b> <sup>2</sup> Narrow Body Type 3 <b>52</b> <sup>2</sup> Narrow Body Type 5 <b>34</b> <sup>3</sup> Wide Body Type 3 <b>54</b> <sup>3</sup> Wide Body Type 5	<b>S</b> Short <b>W</b> Wide	<b>R5</b> <sup>4,5</sup> 5 pin receptacle on the engine <b>R7</b> <sup>4,5</sup> 7 pin receptacle on the engine <b>N</b> None		<b>W</b> 3000K <b>N</b> 4000K	<b>A</b> 120-277 VAC <b>B</b> 347-480 VAC	<b>2</b> <sup>8</sup> 200mA <b>3</b> 350mA <b>4</b> <sup>8</sup> 450mA <b>5</b> 530mA
Integral Control Options	Optional programs					Surge Protection	
	Option 1	Option 2		Option 3			
Dynadimmer <sup>6,9</sup> <b>DA</b> 4 Hrs 25% Reduction <b>DB</b> 4 Hrs 50% Reduction <b>DC</b> 4 Hrs 75% Reduction <b>DD</b> 6 Hrs 25% Reduction <b>DE</b> 6 Hrs 50% Reduction <b>DF</b> 6 Hrs 75% Reduction <b>DG</b> 8 Hrs 25% Reduction <b>DH</b> 8 Hrs 50% Reduction <b>DJ</b> 8 Hrs 75% Reduction <b>DL</b> <sup>6</sup> DALI <b>S</b> <sup>10</sup> FAWS Switch <b>N</b> None	<b>AST</b> <sup>6</sup> Adjustable start up time <b>N</b> None	<b>CLO</b> <sup>6</sup> Constant Light Output <b>N</b> None		<b>OTL</b> <sup>6</sup> Over The Life <b>N</b> None	<b>SP1</b> 10kV/10kA Surge Protector <b>SP2</b> <sup>7</sup> 20kV/20kA Surge Protector		

1. Use RPTLD Engine with R52, R34, R54 and C52 Hadco Products.
2. Not available with F or J pods.
3. Not available with C, D, F,G or J pods.
4. Use of shorting cap is required to ensure proper illumination. When R5 or R7 options are selected, products will ship with shorting cap installed.
5. Only compatible with A & B clear roofs. Not available with driver currents 4 or 5. RPTLD 34 and 54 with S optics only compatible with A Clear roof.

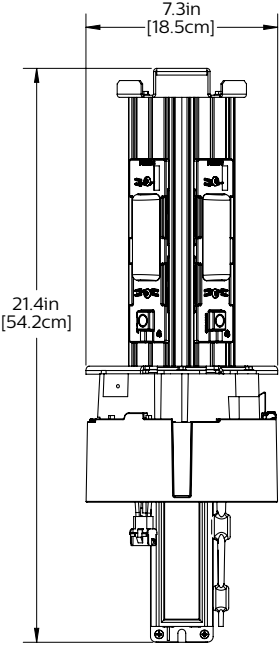
6. Optional Dynadimmer dimming schedules, DALI, AST, CLO and OTL not available with 347-480 VAC.
7. When SP2 option is selected, luminaire will be fitted with SP2 instead of SP1.
8. Not available with B 347-480 voltage.
9. Not available with R5 or R7.
10. FAWS not available with CLO.

# RPTLD LumiLock LED engine GX4

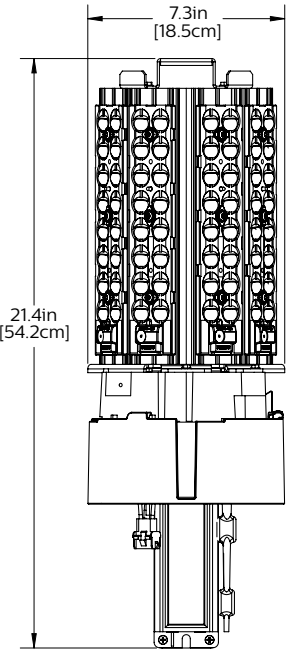
## Dimensions



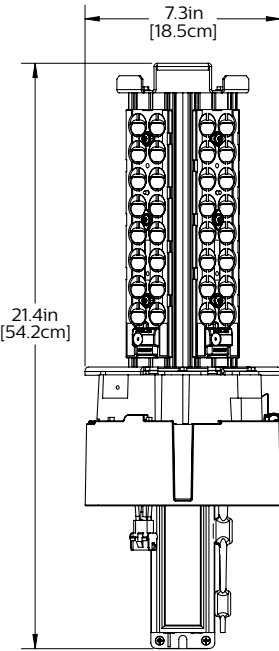
RPTLD RL3x W



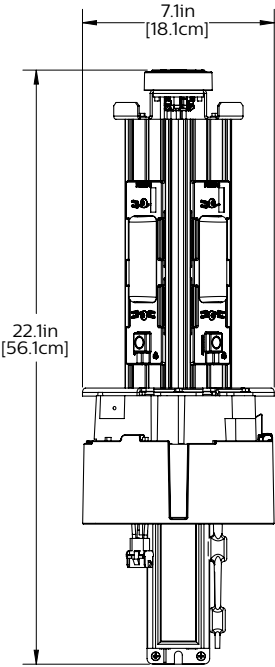
RPTLD RL5x W



RPTLD RL3x S



RPTLD RL5x S



RPTLD RL5x W Rx

# RPTLD LumiLock LED engine GX4

## Predicted Lumen Depreciation Data

RPTLD LumiLock LED engine is for use in Hadco Refractive Globe with LumiLock LED post top luminaires. Therefore, for wattage & lumen photometric performance tables, Predicted Lumen Depreciation Data table, and Field Adjustable Wattage (FAWS) Multiplier Chart table, please see those specification sheets, accordingly:

<https://www.signify.com/en-us/products/outdoor-luminaires/urban/posttop/9408937>

<https://www.signify.com/en-us/products/outdoor-luminaires/urban/posttop/refractive-post-top-with-lumilock-led-rl32-rl52>

<https://www.signify.com/en-us/products/outdoor-luminaires/urban/posttop/refractive-post-top-with-lumilock-led-rl34-rl54>

## Specifications

### Light Engine

GX4 is composed of four main components: Heat Sink, LED, Optical System, and Driver. Electrical components are RoHS compliant.

Entire luminaire is rated for operation in ambient temperature of -40°C / -40°F up to +40°C / +104°F. B Voltage configurations rated for operation in ambient temperature of -40°C / -40°F up to +35°C / +95°F.

### LED & Optics

Composed of 64 high power LEDs. LED board substrate is MCPCB (Metal Core Printed Circuit Board), designed to minimize thermal resistance from LED junction to heat sinks, ensures greater heat transfer and longer lifespan. Color temperature as per ANSI/NEMA bin Neutral White, 4000 Kelvin nominal (3985K+/- 275K or 3710K to 4260K) or Warm White, 3000 Kelvin nominal (3045K +/- 175K or 2870K to 3220K). CRI 70 Min. 75 Typical. (W) Wide and (S) Short Optic choices are available. Both optics are made of optical grade PC and have been optimized to achieve maximum spacing, target lumens, and a superior lighting uniformity.

**Wide Optics** – Superior performance and light level uniformity for applications where typical pole spacing is approximately six times mounting height of luminaire.

**Short Optics** – Superior performance and light level uniformity for applications where typical pole spacing is approximately five times mounting height of luminaire. Provides higher illumination levels under pole area, ideal for increased security and applications requiring superior facial recognition.

Type 3 and Type 5 distribution choices available.

NOTE: Distribution can easily be changed in the field simply by loosening two screws (and removing top bracket with twistlock receptacle, if applicable), then moving two of the light bars – see instructions for details.

LEDs and optics (S) Short or (W) Wide form an IP66 light engine to ensure complete environmental protection against water and dust ingress and corrosion, critical to long term LED reliability. All wiring is full copper, with 105C rated insulation. LED modules are secured to heatsinks using #8 stainless steel hardware, guaranteeing construction rigidity and vibration resistance.

### Heat sink

LED Engine construction consists of four 6063-T5 aluminum heat sinks, clear anodized to MIL-A-8625 specifications for excellent corrosion resistance and surface finish. Fin spacing has been optimized for maximum convective heat transfer under natural convection conditions, maximizing LED life and efficiency. Heat sinks provide greater than 700 sq. in. of convective surface area total, ensuring proper junction temperature control, lumen maintenance, and system reliability. Extruded heatsinks meet or exceed tolerances as specified by AEC (Aluminum Extruders Council) standards and have been designed to provide superior surface flatness, ensuring excellent contact between heatsinks and LEDs. Product does not use any cooling device with moving parts (passive cooling only).

Heat sinks are secured using galvanized steel brackets and stainless steel hardware to provide additional corrosion resistance.

### Driver

Driver comes standard with 0-10V dimming capability. High power factor of 95%. Electronic driver, operating range 50/60 Hz. Auto adjusting universal voltage input from 120 to 277 VAC rated for both application line to line or line to neutral, Class I, THD of 20% max. Driver operating ambient temperature range is -40°F (-40°C) to +130°F (+55°C). Certified in compliance to UL1310 cULus requirement (dry and damp location). Assembled on a LumiLock twistlock removable cover with quick disconnect plug resisting to 221°F (105°C). The current supplying the LEDs will be reduced by the driver if the driver experiences internal overheating as a protection to the LEDs and the electrical components. Output is protected from short circuits, voltage overload and current overload. Automatic recovery after correction. Standard built in driver surge protection of 2.5kV (min). Due to the inrush current that occurs with electronic drivers, recommend using a time-delay or slow blow fuse to avoid unwanted fuse blowing (false tripping) that can occur with normal or fast acting fuses.

### Driver Options

**AST:** Pre-set driver for progressive start-up of the LED module(s) to optimize energy management and enhance visual comfort at start-up.

**CLO:** Pre-set driver to manage the lumen depreciation by adjusting the power given to the LEDs offering the same lighting intensity during the entire lifespan of the LED module.

**OTL:** Pre-set driver to signal end of life of the LED module(s) for better fixture management.

### Dimming Options

<b>DA:</b> 4 Hrs 25% Reduction	<b>DF:</b> 6 Hrs 75% Reduction
<b>DB:</b> 4 Hrs 50% Reduction	<b>DG:</b> 8 Hrs 25% Reduction
<b>DC:</b> 4 Hrs 75% Reduction	<b>DH:</b> 8 Hrs 50% Reduction
<b>DD:</b> 6 Hrs 25% Reduction	<b>DJ:</b> 8 Hrs 75% Reduction
<b>DE:</b> 6 Hrs 50% Reduction	

**DALI:** Pre-set driver compatible with DALI logarithmic control system.

# RPTLD LumiLock LED engine GX4

## Specification (continued)

### FAWS

Field Adjustable Wattage Selector, pre set to the highest position, can be easily switched in the field to the required position. This reduces total luminaire wattage consumption and reduces the light level – see the FAWS multiplier chart for more details.

Note: It is not recommended to use FAWS with other dimming or controls; if you do, set the switch to position 10 (maximum output) to enable the other dimming or controls. Switching FAWS to any position other than 10 will disable the other dimming or controls.

### Future Proof Photo Control Options

**R5** – Receptacle with 5 pins enabling dimming. Can be used with a twist lock node, photoelectric cell or a shorting cap. Will ship with a shorting cap installed for this product. Remove shorting cap when you are ready to install your node.

**R7** – Receptacle with 7 pins enabling dimming and additional functionality (to be determined), can be used with a twist lock node, photoelectric cell or a shorting cap. Will ship with a shorting cap installed for this product. Remove shorting cap when you are ready to install your node.

### Surge Protection

Surge protector tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line Ground, Line Neutral and Neutral Ground, and in accordance with U.S. DOE (Department of Energy) MSSLC (Municipal Solid State Street Lighting Consortium) model specification for LED roadway luminaires electrical immunity requirements for High Test Level 10kV / 10kA. Optional SP2: 20kV / 10kA surge protection device that provides extra protection beyond the SP1 10kV/10kA level.

### Luminaire Useful Life

Refer to IES files for energy consumption and delivered lumens for each option. Based on ISTMT in situ thermal testing in accordance with UL1598 and UL8750, exclusive Signify System Reliability Tool, Advance driver data and LED manufacturer LM-80/TM-21 data, expected to reach 100,000+ hours with >L70 lumen maintenance @ 25°C. 530mA configurations with short optics expected to reach 95,000+ hours with >L70 lumen maintenance @ 25°C. 530mA configurations with wide optics expected to reach >75,000 hours with >L70 lumen maintenance @ 25°C. Luminaire useful life accounts for LED lumen maintenance AND all of these additional factors including: LED color shift, LED life, driver life, PCB substrate, solder joints, on/off cycles, burning hours and corrosion. Lifetime statements do not include the use of controls, including networked controllers.

### LED products manufacturing standard

The electronic components sensitive to electrostatic discharge (ESD) such as light emitting diodes (LEDs) are assembled in compliance with IEC61340-5-1 and ANSI/ ESD S20.20 standards so as to eliminate ESD events that could decrease the useful life of the product.

### Quality Control

The manufacturer must provide a written confirmation of its ISO 9001 2008 and ISO 14001 2004 International Quality Standards Certification.

### Vibration Resistance

Meets the ANSI C136.31 2001, American National Standard for Roadway Luminaire Vibration specifications for Normal applications, tested by a certified lab over 100,000 cycles in all three axes.

### Service Tag

Each individual luminaire is uniquely identifiable, thanks to the Service tag application. With a simple scan of a QR code, placed inside the luminaire, you gain instant access to the luminaire configuration, making installation and maintenance operations faster and easier, no matter what stage of the luminaire's lifetime. Just download the app and register your product right away.

For more details visit: [signify.com/global/service-tag](https://signify.com/global/service-tag)

### Certifications and Compliance

cETLus Listed for Canada and U.S. to the UL 1598 and UL8750 standards, suitable for Wet Locations. The quality systems of the facility where manufactured have been registered by UL to the ISO 9001 series standards. LM80 & LM79 tested. Configurations are DesignLights Consortium qualified, consult DLC QPL Qualified Products List for more details.

### IP Ratings

IP66 rated LED light engine.

### Warranty

5-year limited warranty. Options available for extended warranties – contact factory. See [signify.com/warranties](https://signify.com/warranties) for details and restrictions.

### Buy American Act of 1933 (BAA)

This product is manufactured in one of our US factories and, as of the date of this document, this product was considered a commercially available off-the-shelf (COTS) item meeting the requirements of the BAA.

This BAA designation hereunder does not address (i) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (ii) the "Buy America" domestic content requirements imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by the Department of Transportation or other federal agencies. Prior to ordering, please visit [www.signify.com/baa](https://www.signify.com/baa) to view a current list of BAA-compliant products to confirm this product's current compliance.