HADCO

Urban

LumiLock LED engine GX5

RPTLD Replacement LED Light Engine



Retrofitting **Hadco Refractive Globe** post top luminaires with the LumiLock LED engine GX5 will beautify and add a sense of security to your outdoor space. Hadco's LumiLock LED engine GX5 is an ideal alternative to HID sources or for easy upgrades to the latest generation LED light engine, 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 GX5 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 G5 32 S R7 740 A 2 S SP2

Series	Generation	Model	Optic	Future Proof Photo Control	Color Temp.	Voltage	Drive Current	Integral Control Options (0–10V dimming driver standard) (only pick one)	Surface Protection
RPTLD	G5								
RPTLD[1] Replacement LED Light Engine	**G5** Gen 5	**32**[2] Narrow Body Type 3 **52**[2] Narrow Body Type 5 **34**[3] Wide Body Type 3 **54**[3] Wide Body Type 5	**S** Short **W** Wide	**R7**[4,5] 7-pin receptacle on the engine **N** None	**730** 70CRI 3000K **740** 70CRI 4000K **827** 80CRI 2700K	**A** 120–277VAC **B** 347–480VAC **C**[8] 277–480VAC	**1** 100 mA **2** 200 mA **3** 350 mA **4** 450 mA **5** 530 mA **6** 610 mA	**D4ID**[6] D4i certified DALI driver **S**[7] FAWS Field Adjustable Wattage Selector **N** None	**SP1** 10kV/10kA Surge Protector **SP2** 20kV/10kA Surge Protector **SP1X**[9] Fail-Off 10kV/10kA Surge Protector **SP2X**[9] Fail-Off 20kV/10kA Surge Protector

1. Use RPTLD LED Light Engine with Hadco Refractive Globes and MainView G2 Gen 2 products.
2. Narrow Body 32 and 52 for use with RL32, RL52, CL32 and CL52 Refractive Globes and with MV MainView (Short optic only).
3. Wide Body 34 and 54 for use with RL34 and RL54 Refractive Globes.
4. Use of photoelectric cell or shorting cap is required to ensure proper illumination. When R7 option is selected, product will ship with shorting cap installed.
5. 7-pin receptacle R7 only available with RLs A, C and G roofs – does not fit with B and D roofs; also available with MainView G2 Gen 2. Not available with CL32 or CL52. Interact City control node Astroclock version (ordered and shipped separately) will fit and communicate properly – other nodes need to be confirmed.
6. D4i driver D4ID not available with B 347–480VAC. D4i driver D4ID replaces DA–DJ Dynadimmer or DL DALI driver with same functionality plus next generation extended DALI 2 functionality – contact factory for details.
7. FAWS S position 10 is open for receptacle control, must use one or the other but not BOTH. Position 10 does NOT reduce lumens or wattage.
8. Voltage C 277–480VAC not available with 100mA or 200mA.
9. Fail–Off SP1X or SP2X not available with 3–pin receptacle R3 in Refractive Globe pods A & G or in MainView – both options together do not fit, choose one or the other.

Connected lighting



Interact City connector node provides the plug and play wireless communications technology to connect your street light to the Interact City lighting management system.

Ordering Code	Accessory Description
LLC	Interact City cellular technology connector node

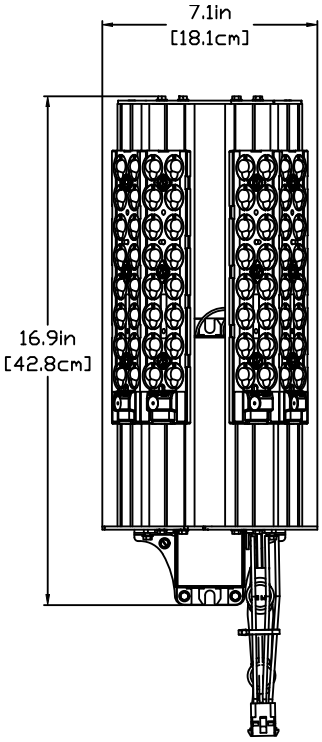
Contact the factory for additional support when connected lighting or additional services are desired.

BABA BAA

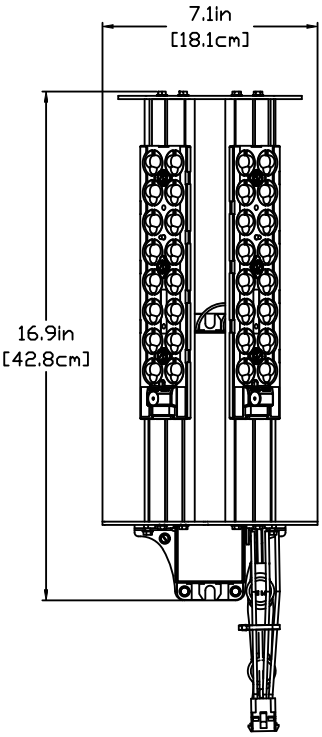
RPTLD LumiLock LED engine GX5

Dimensions

RPTLD G5 Type 3 Short



RPTLD G5 Type 5 Short



Predicted Lumen Depreciation Data

RPTLD LumiLock LED engine is for use in the following Hadco 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:

Refractive Post Top with LumiLock LED (CL32/CL52)>

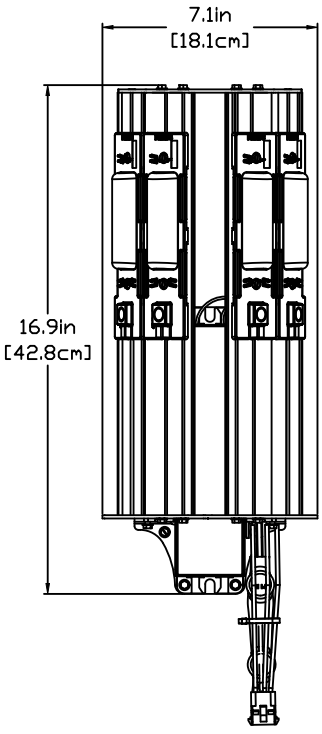
Refractive Post Top with LumiLock LED (RL32/RL52)>

Refractive Post Top with LumiLock LED (RL34/RL54)>

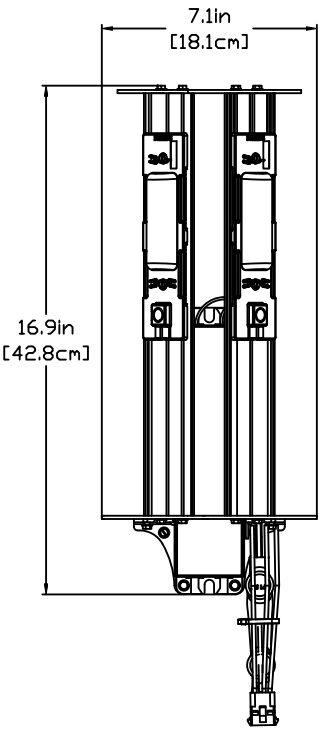
MainView LED Post Top (MV)>

Weight = 9.25 lbs (4.19 kg) maximum

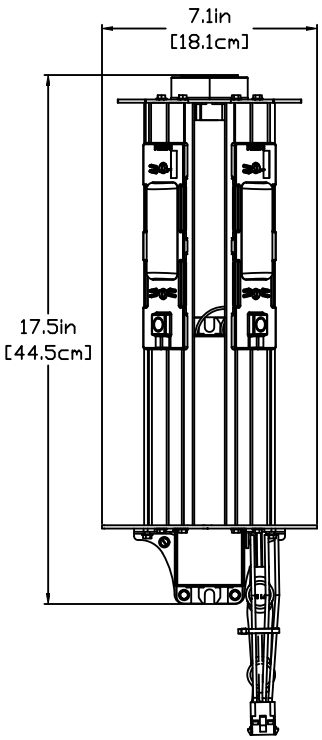
RPTLD G5 Type 3 Wide



RPTLD G5 Type 5 Wide



RPTLD G5 Type 5 Wide
with R7 7-pin receptacle



RPTLD LumiLock LED engine GX5

Specifications

Light Engine

Composed of 4 main components: LED Module / Optical System / Heat Sink / Driver. Electrical components are RoHS compliant, IP66 sealed light engine. LEDs tested by ISO 17025-2005 accredited lab in accordance with IESNA LM-80 guidelines, extrapolations in accordance with IESNA TM-21. Metal core board ensures greater heat transfer and longer lifespan.

Entire light engine is an all inclusive assembly that is quickly and easily removable (including quick disconnect) while wearing protective gloves per ANSI C136.37 for retrofitting / upgrading in the field - see instructions for details.

LED Module

Composed of high-performance white LEDs.
Color temperature as per ANSI/NEMA bin 3000K nominal (3045K +/- 175K) or 4000K nominal (3985K +/- 275K)
CRI 70 min, or 2700K nominal (2725 ±145K) CRI 80 min.

Optical System

Composed of high performance UV stabilized optical grade polymer refractor lenses to achieve desired distribution optimized to get maximum spacing, target lumens and a superior lighting uniformity. System is rated IP66. Performance shall be tested per LM-63, LM-79 and TM-15 (IESNA) certifying its photometric performance.

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, and outer light engines can be easily adjusted (either individually or both) in the field to optimize lighting performance and/or address light trespass - see instructions for details.

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

Consists of four extruded aluminum heat sinks optimizing the LEDs efficiency and life, clear anodized to Architectural Class II specifications for excellent corrosion resistance and surface finish. 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. Heat sinks optimized for maximum natural convection heat transfer, 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 or 347 to 480 VAC or 277 to 480VAC rated for both application line to line or line to neutral, Class I, THD of 20% max. Driver operating ambient temperature range is -40F (-40C) to +130F (+55C). Certified in compliance to UL1310 or UL8750 cULus requirement (dry and damp location). 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 or 6kV (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 enables setting LED drive current to meet your specific total wattage consumption, lumen output and/or efficacy needs - ETO, contact factory.

Integral Control Options

D4ID*: D4i certified DALI driver. Replaces DA-DJ Dynadimmer or DL DALI driver with same functionality plus next generation extended DALI-2 functionality with power and data, especially for intra-luminaire DALI systems (driver-nodes-sensors). Backwards compatible with older DALI standards - contact factory for details.

* This driver option ships with DALI bus power turned on and luminaire information loaded in Memory bank 1 as per ANSI C137.4 (2021). Consult factory for any other driver programming requirement.

Integral Control Options

S: 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 on applicable luminaire specification sheets that use the RPTLD 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 Controls

R7: Receptacle with 7 pins enabling dimming and additional functionality (to be determined), can be used with a twist lock Interact City node or photoelectric cell or a shorting cap. Will ship with a shorting cap installed - remove shorting cap when you are ready to install your node.

Connected Lighting

Interact City connector node provides the plug and play wireless communications technology to connect your street light to the Interact City lighting management system. With Interact you can remotely manage, monitor and control all city lighting, from roads and streets, to parks and plazas, and bridges from one single system. Connected lighting enables capabilities including, accurate on/ off switching, dimming control, fault reporting and integration with other systems to enable condition based lighting. Interact provides you with a robust and scalable infrastructure to further reduce energy consumption, improve operations, and turn lighting into a connected network for your smart city journey. For more details visit: interact-lighting.com/en-us/what-is-possible/interact-city

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Specifications (continued)

Surge Protection Options

SP1: Fail-On surge protection device 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.

SP2: Fail-On 20kV/10kA surge protection device that provides extra protection beyond the SP1 10kV/10kA level.

SP1X: Fail-Off Surge protection device 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 DOE MSSLC Model Specification for LED Roadway Luminaires Appendix D Electrical Immunity High test level 10kV/10kA.

SP2X: Fail-Off 20kV/10kA surge protection device that provides extra protection beyond the SP1X 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 - see applicable luminaire specification sheets for hours and lumen maintenance specifics. 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.

Vibration Resistance

Meets the ANSI C136.31-2010 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: https://www.genlyte.com/en-us/solutions/technologies-and-innovation/service-tag.

Certifications and Compliance

cETLus Listed for Canada and U.S. to the UL 1598 and UL8750 standards. 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. RPTLD complies with or exceeds the following ANSI C136 standards: .2, .3, .4, .10, .22, .31, .37.

IP Ratings

IP66 rated LED light engine.

Warranty

5-year limited warranty. Options available for extended warranties – contact factory. See https://www.genlyte.com/en-us/support/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 https://www.genlyte.com/en-us/resources/programs/domestic-preference to view a current list of BAA-compliant products to confirm this product's current compliance.

Build America, Buy America Act (BABA)

BABA establishes the minimum domestic content requirements that federal agencies must apply. This product is manufactured in the US and has a domestic content of 55% or more. This BABA designation does not address the "Buy America" domestic content requirements, which may be stricter, imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by federal agencies. Please visit https://www.genlyte.com/en-us/resources/programs/domestic-preference.

Prior to ordering, please contact factory to confirm BABA or BABAF compliant configurations (BABAF for projects funded through FHWA must be funded by October 1, 2026), and please submit completed BABA checklist SGn-2452BN-Compliance-Certification-checklist.pdf.

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