



Lumece **RoadStar LED** architectural roadway luminaire combines the look of a decorative product with the performance of a roadway or site/area luminaire, resulting in highly effective illumination and a stylish appearance. Featuring two different sizes, RoadStar offers a consistent look across pedestrian, general, and street lighting areas. Includes Service Tag, innovative way to provide assistance throughout the life of the product

Project: _____
 Location: _____
 Cat.No: _____
 Type: _____
 Qty: _____
 Notes: _____

Ordering guide

example: GPLS-32L700NW-G3-R3M-UNV-RCD-HS-GY3

Series	LED Module	LED Module	Board Generation	Optical System	Ballast	Driver & Dimming ³	Luminaire Options	Accessories ⁹	Finish
GPLS									
GPLS RoadStar LED roadway luminaire, small	16L530 ¹ 16L700 ¹ 16L1050 ¹ 32L530 ¹ 32L700 ¹ 32L1050 48L530 48L700 48L1050	NW 4000K WW 3000K WA ¹⁰ 2200K	G3 Gen 3	R2S Type II short (ASYM) R2M Type II Medium (ASYM) R3S Type III short (ASYM) R3M Type III Medium (ASYM) R3W Type III Wide (ASYM) 4 Type IV (ASYM) 5 ² Type V (SYMM)	UNV 120-277VAC HVU 347-480VAC HVX 277-480VAC	Standard DMG Dimmable driver 0-10V Optional ZD4i Zhaga-D4i certified luminaire D4id D4i driver (DALI) Legacy¹⁰ D4I Zhaga-D4i certified luminaire DALI Digitally addressable lighting interface SRD Sensor ready driver, standard configuration	Standard RCD7 ⁴ Receptacle for twist-lock photocell or shorting cap, 7-pin (standard) Optional FAWS ⁵ Field adjustable wattage switch HS House Side Shield, shield, 1 per 16 LED light engine SP2 20kV / 20kA Surge Protector (optional) SP1X Fail-Off 10kV/5kA Surge protector SP2X Fail-Off 20kV/10kA Surge protector TLRSR ^{6,7} SR receptacle BAC* Meets the requirements of the Buy American Act of 1933 (BAA)	OMS ⁸ Outdoor Multi-Sensor PH8 Twist-lock Photoelectric Cell, UNV (120-277VAC) PH8/347 Twist-lock Photoelectric Cell, HVU (347VAC) PH8/480 Twist-lock Photoelectric Cell, HVU (480VAC) PHXL Twist-lock Photoelectric Cell, extended life, UNV (120-277VAC) PH9 Shorting cap	BK Black finish BR Bronze finish GY3 Grey finish WH White finish Textured Finishes BKTX Black BRTX Bronze GY3TX Gray WHTX White

- Not available with HVU-D4id, HVU-ZD4i, HVU-D4i, HVU-DALI, HVU-SRD.
- Not available with HS option.
- Select one option mandatory.
- Use of photoelectric cell or shorting cap is required to ensure proper illumination.
- Only available with DMG driver option.
- Only available with ZD4i or D4i or SRD Driver options.
- TLRSR must be selected with ZD4i or D4I Driver option.
- TLRSR Option and ZD4i or D4I Driver option must be selected with OMS.
- Consult Signify to confirm whether specific accessories are BAA-compliant.
- Legacy codes for backward compatibility on existing QPL.
Please use new coding where possible.

* Failure to properly select the "BAC" suffix could result in you receiving product that is not BAA compliant product with no recourse for an RMA or refund. This BAC 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.

Note: GPLS is compatible to accept the Interact City wireless lighting control device.



GPLS RoadStar LED luminaire (small)

Roadway

3000K LED Lumen Values

Ordering Code	LED QTY	System Current (mA)	Avg System Wattage (W)	R2M			R2S			R3M			R3S		
				Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
GPLS-16L530WW-G3-x	16	530	27	3872	B1-U0-G1	143	3929	B1-U0-G1	146	3845	B1-U0-G1	142	3892	B1-U0-G1	144
GPLS-16L700WW-G3-x	16	700	38	4871	B1-U0-G1	128	4943	B1-U0-G1	130	4837	B1-U0-G1	127	4896	B1-U0-G1	129
GPLS-16L1050WW-G3-x	16	1050	55	6672	B2-U0-G1	121	6771	B2-U0-G1	123	6626	B2-U0-G1	120	6707	B1-U0-G2	122
GPLS-32L530WW-G3-x	32	530	53	7718	B2-U0-G2	146	7831	B2-U0-G1	148	7664	B2-U0-G2	145	7758	B1-U0-G2	146
GPLS-32L700WW-G3-x	32	700	71	9694	B2-U0-G2	137	9837	B2-U0-G1	139	9627	B2-U0-G2	136	9744	B2-U0-G2	137
GPLS-32L1050WW-G3-x	32	1050	110	13199	B3-U0-G2	120	13394	B3-U0-G2	122	13108	B3-U0-G2	119	13268	B2-U0-G2	121
GPLS-48L530WW-G3-x	48	530	78	11536	B3-U0-G2	148	11706	B3-U0-G2	150	11456	B3-U0-G2	147	11596	B2-U0-G2	149
GPLS-48L700WW-G3-x	48	700	107	14459	B3-U0-G2	135	14672	B3-U0-G2	137	14359	B3-U0-G2	134	14534	B2-U0-G2	136
GPLS-48L1050WW-G3-x	48	1050	161	19545	B3-U0-G3	121	19833	B3-U0-G2	123	19409	B3-U0-G3	121	19646	B3-U0-G3	122

Ordering Code	LED QTY	System Current (mA)	Avg System Wattage (W)	R3W			4			5		
				Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
GPLS-16L530WW-G3-x	16	530	27	3802	B1-U0-G1	141	3857	B1-U0-G2	143	3888	B2-U0-G1	144
GPLS-16L700WW-G3-x	16	700	38	4784	B1-U0-G1	126	4853	B1-U0-G2	128	4892	B3-U0-G1	129
GPLS-16L1050WW-G3-x	16	1050	55	6553	B1-U0-G2	119	6647	B1-U0-G3	121	6701	B3-U0-G1	122
GPLS-32L530WW-G3-x	32	530	53	7580	B1-U0-G2	143	7689	B1-U0-G3	145	7751	B3-U0-G2	146
GPLS-32L700WW-G3-x	32	700	71	9520	B1-U0-G2	134	9658	B2-U0-G3	136	9735	B3-U0-G2	137
GPLS-32L1050WW-G3-x	32	1050	110	12963	B2-U0-G2	118	13150	B2-U0-G3	120	13256	B4-U0-G2	121
GPLS-48L530WW-G3-x	48	530	78	11329	B2-U0-G2	145	11493	B2-U0-G3	147	11585	B4-U0-G2	149
GPLS-48L700WW-G3-x	48	700	107	14200	B2-U0-G3	133	14405	B2-U0-G4	135	14521	B4-U0-G2	136
GPLS-48L1050WW-G3-x	48	1050	161	19195	B3-U0-G3	119	19472	B3-U0-G4	121	19628	B4-U0-G3	122

4000K LED Lumen Values (multiply 4000K values by 0.769 for 2200K)

Ordering Code	LED QTY	System Current (mA)	Avg System Wattage (W)	R2M			R2S			R3M			R3S		
				Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
GPLS-16L530NW-G3-x	16	530	27	4042	B1-U0-G1	150	4102	B1-U0-G1	152	4014	B1-U0-G1	149	4063	B1-U0-G1	150
GPLS-16L700NW-G3-x	16	700	38	5085	B1-U0-G1	134	5160	B1-U0-G1	136	5050	B1-U0-G1	133	5112	B1-U0-G1	135
GPLS-16L1050NW-G3-x	16	1050	55	6966	B2-U0-G1	127	7069	B2-U0-G1	129	6918	B2-U0-G2	126	7002	B1-U0-G2	127
GPLS-32L530NW-G3-x	32	530	53	8057	B2-U0-G2	152	8176	B2-U0-G1	154	8002	B2-U0-G2	151	8099	B1-U0-G2	153
GPLS-32L700NW-G3-x	32	700	71	10120	B2-U0-G2	143	10269	B2-U0-G2	145	10050	B2-U0-G2	142	10173	B2-U0-G2	143
GPLS-32L1050NW-G3-x	32	1050	110	13780	B3-U0-G2	125	13983	B3-U0-G2	127	13685	B3-U0-G2	124	13851	B2-U0-G2	126
GPLS-48L530NW-G3-x	48	530	78	12043	B3-U0-G2	154	12221	B3-U0-G2	157	11960	B3-U0-G2	153	12106	B2-U0-G2	155
GPLS-48L700NW-G3-x	48	700	107	15095	B3-U0-G3	141	15318	B3-U0-G2	143	14991	B3-U0-G2	140	15173	B2-U0-G2	142
GPLS-48L1050NW-G3-x	48	1050	161	20405	B3-U0-G3	127	20705	B3-U0-G2	129	20263	B3-U0-G3	126	20510	B3-U0-G3	127

Ordering Code	LED QTY	System Current (mA)	Avg System Wattage (W)	R3W			4			5		
				Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
GPLS-16L530NW-G3-x	16	530	27	3970	B1-U0-G1	147	4027	B1-U0-G2	149	4059	B2-U0-G1	150
GPLS-16L700NW-G3-x	16	700	38	4994	B1-U0-G1	131	5066	B1-U0-G2	133	5107	B3-U0-G1	134
GPLS-16L1050NW-G3-x	16	1050	55	6841	B1-U0-G2	124	6940	B1-U0-G3	126	6996	B3-U0-G2	127
GPLS-32L530NW-G3-x	32	530	53	7913	B1-U0-G1	149	8027	B2-U0-G3	151	8092	B3-U0-G2	153
GPLS-32L700NW-G3-x	32	700	71	9939	B2-U0-G2	140	10083	B2-U0-G3	142	10164	B3-U0-G2	143
GPLS-32L1050NW-G3-x	32	1050	110	13533	B2-U0-G3	123	13728	B2-U0-G3	125	13839	B4-U0-G2	126
GPLS-48L530NW-G3-x	48	530	78	11828	B2-U0-G2	152	11998	B2-U0-G3	154	12095	B4-U0-G2	155
GPLS-48L700NW-G3-x	48	700	107	14825	B2-U0-G3	139	15039	B2-U0-G4	141	15160	B4-U0-G2	142
GPLS-48L1050NW-G3-x	48	1050	161	20039	B3-U0-G3	124	20328	B3-U0-G4	126	20492	B4-U0-G3	127

1. L₇₀ = 100,000 hrs (at ambient temperature = 25°C).

2. System wattage or total luminaire wattage includes the LED module and the LED driver.

Notes: Due to rapid and continuous advances in LED technology, LED luminaire data is subject to change without notice and at the discretion of Signify.

IES files with HS house side shield and/or Warm White options are also available - contact the factory.

GPLS RoadStar LED luminaire (small)

Roadway

Field Adjustable Wattage (FAWS) Multiplier Chart

For all configurations EXCEPT the ones on the right

FAWS Position	Typical Delivered Lumens Multiplier	Typical System wattage
1	0.31	0.28
2	0.53	0.50
3	0.62	0.58
4	0.70	0.67
5	0.78	0.75
6	0.83	0.81
7	0.89	0.87
8	0.92	0.91
9	0.96	0.95
10	1.00	1.00

Note: Typical value accuracy +/- 5%

Predicted Lumen Depreciation Data

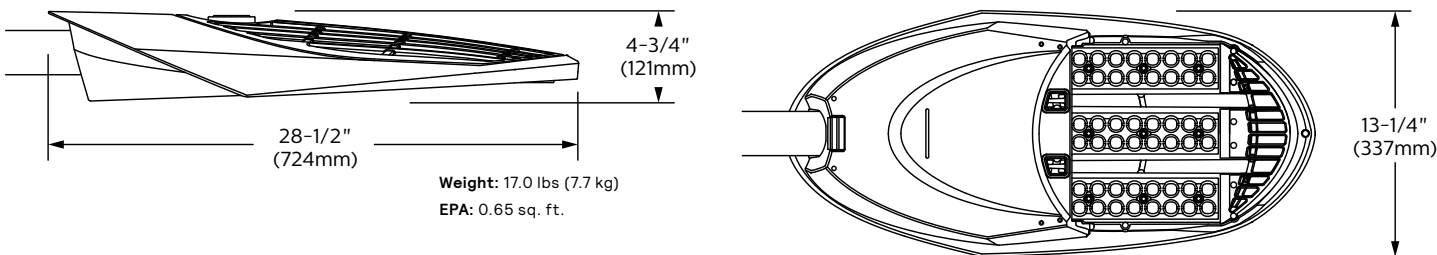
Derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions. L70 is the predicted time when LED performance depreciates to 70% of initial lumen output. Calculated per IESNA TM21-21.

Ambient Temperature	Driver mA	Calculated L70 hours	L70 per TM-21	Lumen Maintenance % at 60,000 hrs
25°C	up to 1050mA	>100,000 hrs	>60,000 hrs	>84%

Dimensions

Side View

Bottom View



Specifications

Housing

The upper grid and lower part of the housing are made of a low copper die cast Aluminum alloy (A360), 0.100" (2.5mm) minimum thickness. Fits on a 1.66" (42mm) O.D. (1.25" NPS), 1.9" (48mm) O.D. (1.5" NPS) or 2 3/8" (60mm) O.D. (2" NPS) by 7 3/4" (197mm) minimum long tenon. Comes with two zinc plated clamps fixed by 4 zinc plated hexagonal bolts 3/8 16 UNC for ease of installation. Provides an easy step adjustment of +/- 5° tilt in 2.5° increments. Includes integral bubble level standard (always included). A quick release, tool less entry, single latch, hinged, removable door opens downward to provide access to electronic components and to a terminal block. Door is secured to prevent accidental dropping or disengagement.

Complete with a bird guard protecting against birds and similar intruders. ANSI label as per C136.15-2020 to identify wattage and source included in box.

Light Engine

Composed of 4 main components: Heat Sink / LED Module / Optical System / 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 in compliance with EPA ENERGY STAR, extrapolations in accordance with IESNA TM 21. Metal core board ensures greater heat transfer and longer lifespan.

Heat Sink: Built in the housing, designed to ensure high efficacy and superior cooling by natural convection air flow pattern always close to LEDs and driver optimising their efficiency and life. Product does not use any cooling device with moving parts (only passive cooling). Entire luminaire is rated for operation in ambient temperature of 40°C / 40°F up to +40°C / +104°F.

LED Module: Composed of high performance white LEDs. Color temperature as per ANSI/NEMA bin Neutral White, 4000 Kelvin nominal (3985K +/- 275K or 3710K to 4260K), CRI 70 Min. 75 Typical. 3000 Kelvin also available.

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Roadway

Specifications (continued)

Light Engine (continued)

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. 0% uplight and U0 per IESNA TM-15. Dark Sky compliant when 3000K option selected.

Driver: 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 rated for both application line to line or line to neutral, Class I or II, THD of 20% max. **Driver comes with dimming compatible 0 10 volts.**

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).

Surge Protector: 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.

Luminaire Options

HS: House side shield, 1 per 16 LED light engine.

SP2: 20kV / 20kA surge protection device 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/5kA waveforms for Line-Ground, Line-Neutral and Neutral-Ground.

SP2X: Fail-Off 20kV /10kA surge protection device that provides extra protection beyond the SP1X 10kV/5kA level.

TLRSR: 4-pin Zhaga Book 18 compliant receptacle designed for sensor and other control system applications. Mounted on underside of the luminaire, shipped with protective cover.

RCD7*: (standard): Receptacle with 7 pins enabling dimming and additional functionality (to be determined), can be used with a twist lock Starsense node or photoelectric cell or a shorting cap.

Please note: Additional hardware will be required to utilize the additional 2 pins on this receptacle.

* Use of photoelectric cell or shorting cap is required to ensure proper illumination.

Driver Options

ZD4i*: Zhaga-D4i certified fixture. Provides easy integration with zD4i smart sensors and communication nodes, enabling plug-and-play IoT upgrades (replaces legacy D4i code).

D4id*: DALI D4i certified driver. Provides extended DALI-2 functionality with power and data, especially for intra-luminaire DALI systems (Driver-Nodes-Sensors). Backward compatible with older DALI standards (replaces legacy DALI code).

D4I: Zhaga-D4i compliant fixture

DALI: Pre-set driver compatible with the DALI control system.

SRD: Sensor Ready Driver including SR communication (used for dimming and other functionalities), 24V auxiliary supply and a logical signal input (LSI) connected to the top NEMA twist lock receptacle and bottom TLRSR receptacle, if this option included/ chosen. This configuration is compatible with Interact City controllers.

* These driver options ship with DALI bus power turned on and luminaire information loaded in Memory banks 1 as per ANSI C137.4 (2021). Consult factory for any other driver programming requirement.

Accessories

OMS: ZD4i certified Outdoor Multi Sensor. Contains multiple sensors to support different smart city applications. Offers standalone and connected functions, see sensor spec sheet for details. Shipped in luminaire box.

PH8: Twist-lock Photoelectric Cell, UNV (120-277VAC).

PH8/347: Twist-lock Photoelectric Cell, HVU (347VAC).

PH8/480: Twist-lock Photoelectric Cell, HVU (480VAC).

PHXL: Twist-lock Photoelectric Cell, extended life, UNV (120-277VAC).

PH9: Shorting cap.

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, System Reliability Tool, Advance data and Lumileds LM-80/TM-21 data, expected to reach 100,000 + hours with $>L_{70}$ lumen maintenance @ 25°C. Luminaire Useful Life accounts for LED lumen maintenance AND all of these additional factors including: LED life, driver life, PCB substrate, solder joints, on/off cycles, burning hours and corrosion.

Wiring

The connection of the luminaire is done using a terminal block connector 600V, 85A for use with #2-14 AWG. wires from the primary circuit, located inside the housing. Due to the inrush current that occurs with electronic drivers, recommend using a 10Amp time delay fuse to avoid unwanted fuse blowing (false tripping) that can occur with normal or fast acting fuses.

Hardware

All exposed screws shall be complete with Ceramic primer-seal basecoat to reduce seizing of the parts and offers a high resistance to corrosion. All seals and sealing devices are made and/or lined with EPDM and/ or silicone and/or rubber.

Finish

In accordance with the AAMA 2603 standard. Application of polyester powder coat paint (4 mils/100 microns) with ± 1 mils/24 microns of tolerance. The Thermosetting resins provides a discoloration resistant finish in accordance with the ASTM D2244 standard, as well as luster retention in keeping with the ASTM D523 standard and humidity proof in accordance with the ASTM D2247 standard.

The surface treatment achieves a minimum of 3000 hours for salt spray resistant finish in accordance with testing performed and per ASTM B117 standard.

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

The GPLS meets the ANSI C136.31, American National Standard for Roadway Luminaire Vibration specifications for Bridge/overpass applications (Tested for 3G over 100 000 cycles by an independent lab).

Certifications and Compliance

cULus Listed for Canada and USA. Luminaire meets DOE and MSSLC Model Specification for LED Roadway Luminaires. RoadStar LED roadway luminaires are DesignLights Consortium qualified. Luminaire complies with or exceeds the following ANSI C136 standards:

.2, .3, .10, .14, .15, .22, .25, .31, .37, .41.

Service Tag

Each individual luminaire is uniquely identifiable, thanks to the Service tag application. With a simple scan of a QR code, placed on the inside of the mast door, 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/servicetag

Limited Warranty

10-year limited warranty. See signify.com/warranties for details and restrictions.