LUMEC

Roadway

Capella

CPLM (medium)



Lumec Capella LED roadway luminaires blend seamlessly into soft architectural urban and roadway surroundings, as well as more rectilinear settings. With graceful curves and sweeping lines, it contributes to the beautification of any environment and enhances the visual impact of any project.

Project:

Location:

Cat.No:

Type:

Quantity:

Notes:

Ordering guide

Example: CPLM-45W40LED-730-G4-2S-HSS-UNV-DMG-TLRD7-BK

Series	LED module		CRI/CCT	Generation	Optical System	Voltage	Driver options[7]
CPLM							
CPLM Medium	**45W40LED**[2]	**110W40LED**	*DarkSky Approved*	**G4** Gen. 4	*DarkSky Approved*	**UNV** 120-277	**DMG**[9] 0-10V
	55W40LED[2]	**135W40LED**	**730** 70CRI, 3000K		**2M**[3] Type 2 Medium	**HVU**[6] 347-480	**D4ID**[1] Driver
	70W40LED[2]	**145W40LED**	**740** 70CRI, 4000K		**2S**[4] Type 2 Short	**HVX**[5] 277-480	**zD4I**[1,8] Fixture
	80W40LED	**160W40LED**			**3M** Type 3 Medium		
	90W40LED	**180W40LED**			**3S** Type 3 Short		
		195W80LED			**4** Type 4		
					5 Type 5		

Luminaire options		Finish	
TLRSR[8]	SR receptacle	**BK**	Black
TLRD7[15]	Tool less receptacle for twist-lock photocell or shorting cap, 7-pin (standard)	**BKTX**	Black Textured
SP2	20kV/10kA	**BR**	Bronze
SP1X	Fail-Off 10kV/5kA Surge protector	**BRTX**	Bronze Textured
SP2X	Fail-Off 20kV/10kA Surge protector	**GY3**	Gray
PH8[1,13]	Twist-lock photoelectric cell, UNV (120-277VAC)	**GY3TX**	Gray Textured
PH8/347[13,14]	Twist-lock photoelectric cell (347VAC)	**WH**	White
PH8/480[13,14]	Twist-lock photoelectric cell (480VAC)	**WHTX**	White Textured
PH9[13]	Shorting Cap		
PHXL[1,13]	Twist-lock photoelectric cell, extended life, UNV (120-277VAC)		
API	Factory installed NEMA label, ANSI C136.15-2020 compliant		
API2011	Factory installed NEMA label, ANSI C136.15-2011 compliant		
API2015	Factory installed NEMA label, ANSI C136.15-2015 compliant		
OMS[12]	Outdoor Multi-Sensor		
BAC[16]	Meets the requirements of the Buy American Act of 1933 (BAA)		
BABA[17]	Meets the requirements of the Build America, Buy America Act (BABA)		

Light Trespass Options[10,11]

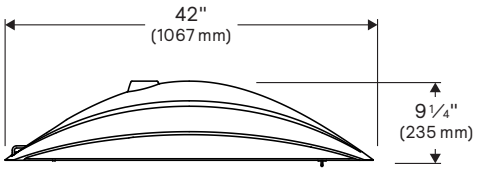
US	Universal Shield
CSS	Cul-de-Sac Shield
HSS	House Side Shield

1. Not available with HVU Voltage option.
2. Not available with the combinations HVU-D4iD, HVX-D4iD, HVU-zD4I or HVX-zD4I.
3. Optimized for Type 2 Medium applications but may shows as Type 3 Medium in photometric tools.
4. Optimized for Type 2 Short applications but may shows as Type 2 Medium in photometric tools.
5. HVX only available as D4id (80W and more) and DMG 0-10V (110W and more).
6. HVU only available as DMG 0-10V (90W and below).
7. Select one option from this section (mandatory).
8. TLRSR must be selected with ZD4I Driver option.
9. Please note this integrated feature come standard with the product.
10. Refer to Accessories section to confirm compatibility of shields with optical distribution.
11. One shield provided per LED light engine.
12. TLRSR Option and ZD4I Driver option must be selected with OMS.
13. TLRD7 is required with this option.
14. Not available with UNV Voltage option.
15. Use of photoelectric cell or shorting cap is required to ensure proper illumination.
16. 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. Genlyte’s products with a BAC option code designation are manufactured in the US and utilize a BAA COTS exemption rule for compliance.
17. 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.

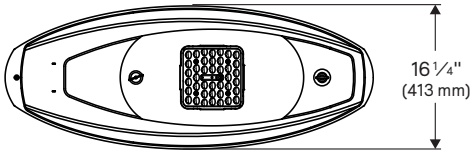
CPLM Capella LED (medium)

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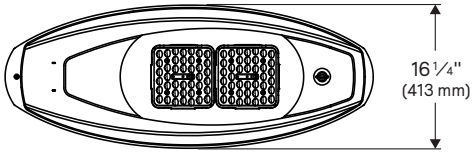
Dimensions



40 LEDs version (shown with optional TLRSR)



80 LEDs version



Wattage Values

Ordering Code	Light Engine Config.	Average System Wattage (W)[1]	Wattage Label [2]
45W40LED-G4-x	1x40	42	40
55W40LED-G4-x	1x40	55	50
70W40LED-G4-x	1x40	66	70
80W40LED-G4-x	1x40	77	80
90W40LED-G4-x	1x40	87	90
110W40LED-G4-x	1x40	108	110
135W40LED-G4-x	1x40	131	130
145W40LED-G4-x	1x40	142	140
160W40LED-G4-x	1x40	154	150
180W40LED-G4-x	1x40	176	180
195W80LED-G4-x	2x40	192	190

1. Typical values, rounded.
2. As per ANSI C136.15-2020. Consult factory for other labelling needs.

EPA

0.83 sq. ft.

Weight

38 lbs (17.2Kg)

70CRI/3000K LED Standard Performance Lumen Values

Ordering Code	Type 2S			Type 2M			Type 3S		
	Lumen Output	Efficacy (LPW)	BUG Rating	Lumen Output	Efficacy (LPW)	BUG Rating	Lumen Output	Efficacy (LPW)	BUG Rating
45W40LED-730-G4-x	7,714	183	B2-U0-G2	7,491	178	B2-U0-G2	7,634	181	B2-U0-G2
55W40LED-730-G4-x	9,478	173	B2-U0-G2	9,203	168	B2-U0-G2	9,379	171	B2-U0-G2
70W40LED-730-G4-x	11,281	170	B3-U0-G3	10,954	166	B2-U0-G2	11,164	169	B2-U0-G2
80W40LED-730-G4-x	12,990	168	B3-U0-G3	12,614	163	B3-U0-G3	12,856	166	B2-U0-G2
90W40LED-730-G4-x	14,419	166	B3-U0-G3	14,001	161	B3-U0-G3	14,269	164	B3-U0-G3
110W40LED-730-G4-x	17,323	161	B3-U0-G3	16,822	156	B3-U0-G3	17,144	159	B3-U0-G3
135W40LED-730-G4-x	20,157	154	B3-U0-G3	19,574	150	B3-U0-G3	19,948	152	B3-U0-G3
145W40LED-730-G4-x	21,402	151	B3-U0-G3	20,782	147	B3-U0-G3	21,180	149	B3-U0-G3
160W40LED-730-G4-x	22,684	148	B3-U0-G3	22,027	143	B3-U0-G3	22,449	146	B3-U0-G3
180W40LED-730-G4-x	24,845	141	B3-U0-G3	24,126	137	B3-U0-G3	24,588	140	B3-U0-G3
195W80LED-730-G4-x	30,620	159	B4-U0-G4	29,733	155	B4-U0-G4	30,303	158	B3-U0-G4

Ordering Code	Type 3M			Type 4			Type 5		
	Lumen Output	Efficacy (LPW)	BUG Rating	Lumen Output	Efficacy (LPW)	BUG Rating	Lumen Output	Efficacy (LPW)	BUG Rating
45W40LED-730-G4-x	7,604	180	B2-U0-G2	7,543	179	B1-U0-G2	7,400	175	B3-U0-G3
55W40LED-730-G4-x	9,343	170	B2-U0-G2	9,268	169	B1-U0-G2	9,091	166	B3-U0-G3
70W40LED-730-G4-x	11,120	168	B2-U0-G2	11,031	167	B2-U0-G2	10,821	164	B4-U0-G3
80W40LED-730-G4-x	12,805	165	B3-U0-G2	12,703	164	B2-U0-G2	12,461	161	B4-U0-G3
90W40LED-730-G4-x	14,213	163	B3-U0-G3	14,100	162	B2-U0-G3	13,831	159	B4-U0-G3
110W40LED-730-G4-x	17,077	158	B3-U0-G3	16,940	157	B2-U0-G3	16,618	154	B4-U0-G4
135W40LED-730-G4-x	19,870	152	B3-U0-G3	19,711	151	B3-U0-G3	19,336	148	B5-U0-G4
145W40LED-730-G4-x	21,097	149	B3-U0-G3	20,928	148	B3-U0-G3	20,530	145	B5-U0-G4
160W40LED-730-G4-x	22,361	146	B3-U0-G3	22,182	144	B3-U0-G4	21,760	142	B5-U0-G4
180W40LED-730-G4-x	24,492	139	B3-U0-G3	24,296	138	B3-U0-G4	23,833	135	B5-U0-G4
195W80LED-730-G4-x	30,184	157	B3-U0-G3	29,942	156	B3-U0-G4	29,372	153	B5-U0-G5

Actual performance may vary due to installation variables including optics, mounting/ceiling height, dirt depreciation, light loss factor, etc.; highly recommended to confirm performance with a layout - contact Applications at signify.com/outdoorluminaires. Consult DLC QPL to confirm your specific fixture selection is DLC approved.
Note: Some data may be scaled based on tests of similar but not identical luminaries.

CPLM Capella LED (medium)

Roadway

70CRI/4000K LED Standard Performance Lumen Values

Ordering Code	Type 2S			Type 2M			Type 3S		
	Lumen Output	Efficacy (LPW)	BUG Rating	Lumen Output	Efficacy (LPW)	BUG Rating	Lumen Output	Efficacy (LPW)	BUG Rating
45W40LED-740-G4-x	8,035	190	B2-U0-G2	7,803	185	B2-U0-G2	7,952	188	B2-U0-G2
55W40LED-740-G4-x	9,872	180	B2-U0-G2	9,587	175	B2-U0-G2	9,770	178	B2-U0-G2
70W40LED-740-G4-x	11,751	178	B3-U0-G3	11,410	172	B3-U0-G3	11,629	176	B2-U0-G2
80W40LED-740-G4-x	13,531	175	B3-U0-G3	13,140	170	B3-U0-G3	13,391	173	B2-U0-G2
90W40LED-740-G4-x	15,020	172	B3-U0-G3	14,585	167	B3-U0-G3	14,864	171	B3-U0-G3
110W40LED-740-G4-x	18,045	167	B3-U0-G3	17,523	162	B3-U0-G3	17,858	166	B3-U0-G3
135W40LED-740-G4-x	20,997	160	B3-U0-G3	20,389	156	B3-U0-G3	20,779	159	B3-U0-G3
145W40LED-740-G4-x	22,293	157	B3-U0-G3	21,648	153	B3-U0-G3	22,062	156	B3-U0-G3
160W40LED-740-G4-x	23,629	154	B3-U0-G3	22,945	149	B3-U0-G3	23,384	152	B3-U0-G3
180W40LED-740-G4-x	25,881	147	B3-U0-G3	25,132	143	B3-U0-G3	25,613	146	B3-U0-G3
195W80LED-740-G4-x	31,896	166	B4-U0-G4	30,972	161	B4-U0-G4	31,565	164	B3-U0-G4

Ordering Code	Type 3M			Type 4			Type 5		
	Lumen Output	Efficacy (LPW)	BUG Rating	Lumen Output	Efficacy (LPW)	BUG Rating	Lumen Output	Efficacy (LPW)	BUG Rating
45W40LED-740-G4-x	7,921	188	B2-U0-G2	7,858	186	B1-U0-G2	7,708	183	B3-U0-G3
55W40LED-740-G4-x	9,732	177	B2-U0-G2	9,654	176	B2-U0-G2	9,470	173	B4-U0-G3
70W40LED-740-G4-x	11,583	175	B2-U0-G2	11,491	174	B2-U0-G2	11,272	170	B4-U0-G3
80W40LED-740-G4-x	13,339	172	B3-U0-G3	13,232	171	B2-U0-G3	12,980	168	B4-U0-G3
90W40LED-740-G4-x	14,806	170	B3-U0-G3	14,687	169	B2-U0-G3	14,408	165	B4-U0-G3
110W40LED-740-G4-x	17,788	165	B3-U0-G3	17,646	164	B2-U0-G3	17,310	160	B4-U0-G4
135W40LED-740-G4-x	20,698	158	B3-U0-G3	20,532	157	B3-U0-G3	20,141	154	B5-U0-G4
145W40LED-740-G4-x	21,976	155	B3-U0-G3	21,800	154	B3-U0-G3	21,385	151	B5-U0-G4
160W40LED-740-G4-x	23,292	152	B3-U0-G3	23,106	150	B3-U0-G4	22,666	148	B5-U0-G4
180W40LED-740-G4-x	25,512	145	B3-U0-G3	25,308	144	B3-U0-G4	24,826	141	B5-U0-G5
195W80LED-740-G4-x	31,441	164	B4-U0-G3	31,190	162	B3-U0-G4	30,596	159	B5-U0-G5

Actual performance may vary due to installation variables including optics, mounting/ceiling height, dirt depreciation, light loss factor, etc.; highly recommended to confirm performance with a layout – contact Applications at signify.com/outdoorluminaires. Consult DLC QPL to confirm your specific fixture selection is DLC approved.
Note: Some data may be scaled based on tests of similar but not identical luminaries.

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	L70 per TM-21	Lumen Maintenance at			
		25K hrs	50K hrs	75K hrs	102K hrs
25°C	>102,000 hrs	98.2%	96.3%	94.6%	92.7%

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Specifications

Housing

The upper and lower part of the housing are made of die cast A360 Aluminum alloy 0.180 (4.6mm) minimum thickness. The mounting means includes two brackets made of stamped galvanized-steel (12ga.). Fits on a 1.9" (49mm) to 2 3/8" (60mm) OD by 10 1/2" (267mm) minimum long tenon, fixed by 3/8-16 UNC steel zinc plated bolts. An integral part of the housing permits an adjustment of +/- 5°.

Access-Mechanism: Quarter-turn pressure locking system made of die cast aluminum. Offers tool-free access to the inside of the luminaire. An embedded memory-retentive gasket ensure weatherproofing.

Light Engine

Composed of 5 main components: Heat Sink, Lens, LED Module, Optical System, Driver. Electrical components are RoHS compliant. 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: Made of sheet metal aluminum optimising the LEDs efficiency and life. Product does not use any cooling device with moving parts (only passive cooling device). Entire luminaire is rated for operation in ambient temperature of -40°C / -40°F up to +40°C.

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

Optical System: Composed of high performance optical 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 is used.

Driver: Power factor 90% or better. 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 480 VAC rated for both application line to line or line to neutral, Class I or II, THD of 20% max. DMG drivers 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: Comes standard with SP1 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.

Driver and Luminaire Options

UNV: Universal voltage range (120-277VAC)

HVU: High voltage range (347-480VAC)

HVX: Extended voltage range (277-480VAC). Provides additional protection for abnormal power conditions like neutral drop on 277V installations or others.

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

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.

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.

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/5kA 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/5kA.

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

TLRD7: Tool less orientable 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. Use of photoelectric cell or shorting cap is required to ensure proper illumination. **Note:** Additional hardware will be required to utilize the additional 2 pins on this receptacle.

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.

PH8: Twist-lock photoelectric cell, UNV (120 277VAC).

PHXL: Twist-lock photoelectric cell, extended life, UNV (120-277VAC).

PH9: Shorting cap (use of photoelectric cell or shorting cap is required to ensure proper illumination).

API: Factory Installed NEMA label, ANSI C136.15-2020 compliant. Consult factory for other labeling needs.

* 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.

Factory Installed Shield Options

CSS: Cul-de-Sac Shield. Shields light output on the left and right side of fixture.

HSS: House Side Shield. Shields light output to the back side of fixture.

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

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 LED manufacturer LM-80/TM-21 data, expected to reach 100,000 + hours with >L70 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.

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Specifications (continued)

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 CPLM meets the ANSI C136.31-2023, American National Standard for Roadway Luminaire Vibration specifications for Bridge/Normal applications. (Tested for 1.9G over 100,000 cycles by 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.

Limited Warranty

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

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