

Site Lighting Fixtures

408 E Upland Road Office Building



Gardco PureForm LED area small square precision P15 features a sleek, low profile design. Precision optics are optimized for maximum efficiency and uniformity. Multiple optical distributions and color temperatures are available to allow you to customize your selection.

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

Ordering guide

example: P15-P-A06-740-T5S-AR1-UNV-BL50-L3-BZ

Prefix	Optic Technology	Configuration (nominal lumens)	Color Temperature	Distribution	Mounting	Voltage
P15	P					
P15	PureForm area small, 15" square	P Precision				
		A01 2,000 lumens A02 4,000 lumens A03 6,000 lumens A04 8,000 lumens A05 10,000 lumens A06 12,000 lumens A07 14,000 lumens A08 16,000 lumens	730 70CRI 3000K 740 70CRI 4000K 750 70CRI 5000K 835² 80CRI 3500K 827² 80CRI 2700K	T2M Type 2 Medium T3M Type 3 Medium T4S Type 4 Short T5S Type 5 Short BLC Back Light Control	AR1³ Arm mount (Standard) The following mounting kits must be ordered separately (See accessories) RAM⁹ Retrofit arm mount kit WAL Wall mount	120 120V 208 208V 240 240V 277 277V 347 347V 480 480V UNV 120-277V (50/60Hz) HVU 347-480V (50/60Hz)

Options			
Dimming controls	Motion sensor lens	Electrical/Shielding	Finish
(0-10V dimming driver standard) DLEA⁴ Dimming Leads Externally Accessible (controls by others) FAWS^{4,5} Field Adjustable Wattage Selector BL50^{4,6} Bi-level set at 50% dimming SRDR^{4,7,8,13} SR driver connected to Zhaga socket <u>DynaDimmer: Automatic Profile Dimming</u> CS50^{4,8} Security 50% Dimming, 7 hours CM50^{4,8} Median 50% Dimming, 8 hours CS30^{4,8} Security 30% Dimming, 7 hours CM30^{4,8} Median 30% Dimming, 8 hours	L2^{6,12,13} PIR Sensor #2 lens L3^{6,12,13} PIR Sensor #3 lens	PCB^{8,9} Photocontrol Button TR7^{8,10} 7-pin Twist Lock Receptacle TLP^{9,11} 7-pin Twist Lock Receptacle w/ 3-pin Photocell SP2¹ Increased 20kA FS1⁹ Single Fuse (120, 277, 347VAC) FS2⁹ Double Fuse (208, 240, 480VAC) HIS Internal house side shield	<u>Textured</u> BK Black WH White BZ Bronze DG Dark Gray MG Medium Gray <u>Customer specified</u> RAL Specify optional color or RAL (ex: RAL7024) CC Custom color (Must supply color chip for required factory quote)

- Product ships standard with 10kA.
- Extended lead times apply. Contact factory for details.
- Mounts to a 4-5" OD round pole with adapter included for square poles.
- Not available with other dimming control options (mutually exclusive).
- Not available with motion sensor.
- BL50 must be specified with a motion sensor lens (L2 or L3).
- Not available with photocontrols.
- Not available in 347 or 480V.
- Must specify input voltage.
- All 7 pins in NEMA receptacle are connected to SR driver.
- Not available in 480V. Order photocell separately with TR7.
- Not available with DLEA and FAWS dimming control options.
- When ordering SRDR with L2 or L3, controller to be used on socket must be SR compatible (See specifications for more details).



P15 PureForm LED small square

Area light with precision optics

PureForm P15 Accessories¹ (ordered separately, field installed)

Shielding Accessories¹

House Side Shield

Standard optic orientation:

HIS-32-H	Internal house side shield for A01, A02, A03, and A04
HIS-48-H	Internal house side shield for A05, A06, and A07
HIS-64-H	Internal house side shield for A08

1. Consult Signify to confirm whether specific accessories are BAA-compliant.

Mounting Accessories¹

P15-RAM-G2-(F)	Retrofit Arm mount kit
P15-WS-G2-(F)	Wall mount with surface conduit rear entry permitted
(F) = Specify finish	

LED Wattage and Lumen Values - 3000K

Ordering Code	Color Temp.	Average System Watts	T2M			T3M			T4S			T5S			BLC		
			Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
P15-P-A01-730-x	3000	14	2030	B1-U0-G1	142	2005	B1-U0-G1	140	2046	B1-U0-G1	143	2138	B2-U0-G1	150	1588	B0-U0-G0	111
P15-P-A02-730-x	3000	27	3839	B1-U0-G1	144	3790	B1-U0-G1	142	3868	B1-U0-G1	145	4043	B3-U0-G1	152	3003	B0-U0-G1	113
P15-P-A03-730-x	3000	45	6192	B2-U0-G1	139	6113	B1-U0-G2	137	6240	B1-U0-G2	140	6523	B3-U0-G1	146	4844	B0-U0-G1	109
P15-P-A04-730-x	3000	60	8034	B2-U0-G2	134	7932	B1-U0-G2	132	8096	B2-U0-G2	135	8463	B3-U0-G2	141	6284	B1-U0-G2	105
P15-P-A05-730-x	3000	69	9452	B2-U0-G2	137	9331	B2-U0-G2	135	9525	B2-U0-G2	138	9955	B4-U0-G2	144	7393	B1-U0-G2	107
P15-P-A06-730-x	3000	84	11336	B3-U0-G2	135	11191	B2-U0-G2	133	11423	B2-U0-G2	136	11940	B4-U0-G2	142	8867	B1-U0-G2	106
P15-P-A07-730-x	3000	104	13796	B3-U0-G2	133	13619	B2-U0-G2	131	13901	B2-U0-G3	134	14530	B4-U0-G2	140	10791	B1-U0-G2	104
P15-P-A08-730-x	3000	107	14925	B3-U0-G2	140	14734	B2-U0-G3	138	15039	B2-U0-G3	141	15720	B4-U0-G2	147	11674	B1-U0-G2	109

LED Wattage and Lumen Values - 4000K

Ordering Code	Color Temp.	Average System Watts	T2M			T3M			T4S			T5S			BLC		
			Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
P15-P-A01-740-x	4000	14	2137	B1-U0-G1	149	2110	B1-U0-G1	148	2154	B1-U0-G1	151	2251	B2-U0-G1	157	1672	B0-U0-G0	117
P15-P-A02-740-x	4000	27	4041	B1-U0-G1	152	3989	B1-U0-G1	150	4072	B1-U0-G1	153	4256	B3-U0-G1	160	3161	B0-U0-G1	119
P15-P-A03-740-x	4000	45	6518	B2-U0-G1	146	6435	B1-U0-G2	144	6568	B1-U0-G2	147	6866	B3-U0-G1	154	5099	B0-U0-G2	114
P15-P-A04-740-x	4000	60	8457	B2-U0-G2	141	8349	B1-U0-G2	139	8522	B2-U0-G2	142	8908	B3-U0-G2	148	6615	B1-U0-G2	110
P15-P-A05-740-x	4000	69	9949	B2-U0-G2	144	9822	B2-U0-G2	142	10026	B2-U0-G2	145	10479	B4-U0-G2	152	7782	B1-U0-G2	113
P15-P-A06-740-x	4000	84	11933	B3-U0-G2	142	11780	B2-U0-G2	140	12024	B2-U0-G2	143	12568	B4-U0-G2	150	9334	B1-U0-G2	111
P15-P-A07-740-x	4000	104	14522	B3-U0-G2	140	14336	B2-U0-G3	138	14633	B2-U0-G3	141	15295	B4-U0-G2	147	11359	B1-U0-G2	109
P15-P-A08-740-x	4000	107	15710	B3-U0-G3	147	15509	B2-U0-G3	145	15830	B3-U0-G3	148	16547	B4-U0-G2	155	12288	B1-U0-G2	115

Values from photometric tests performed in accordance with IESNA LM-79 and are representative of the configurations shown. Actual performance may vary due to installation and environmental variables, LED and driver tolerances, and field measurement considerations. It is highly recommended to confirm performance with a photometric layout.

NOTE: Some data may be scaled based on tests of similar (but not identical) luminaires. Contact factory for configurations not shown.

P15 PureForm LED small square

Area light with precision optics

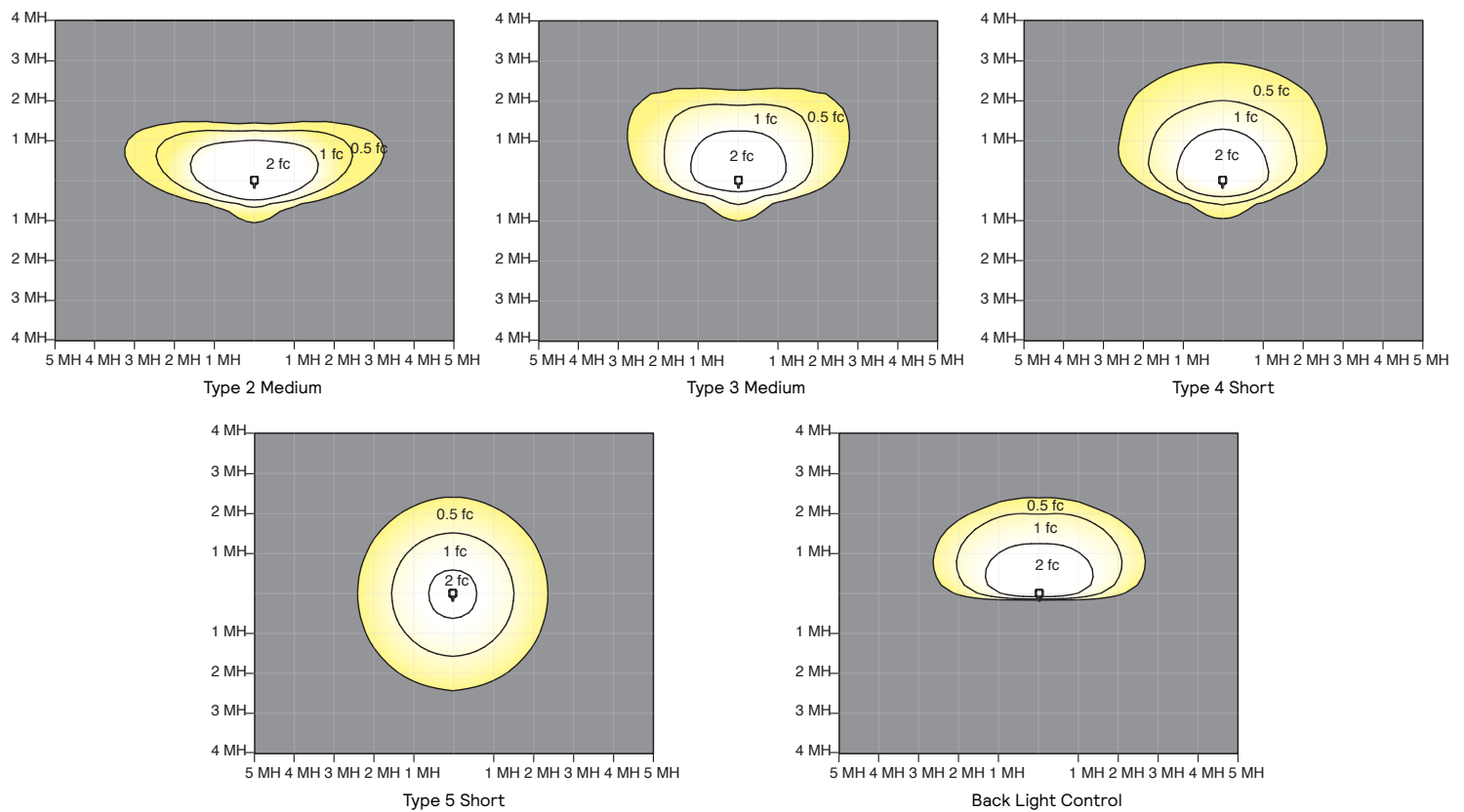
Predicted Lumen Depreciation Data

Predicted performance 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 TM21-11. Published L₇₀ hours limited to 6 times actual LED test hours

Ambient Temperature °C	Calculated L ₇₀ Hours	L ₇₀ per TM-21	Lumen Maintenance % at 60,000 hrs
25°C	>100,000 hours	>120,000 hours	>99%

Optical Distributions

Based on configuration P15-P-A03-740 mounted at 15ft

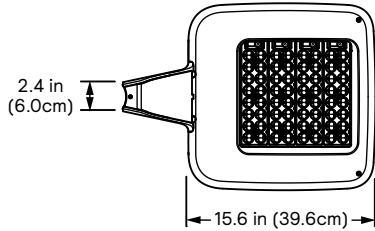
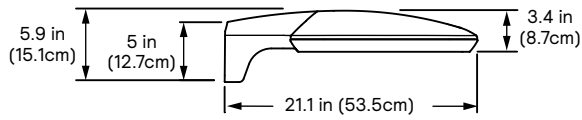


P15 PureForm LED small square

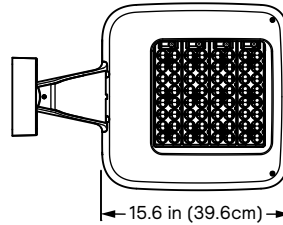
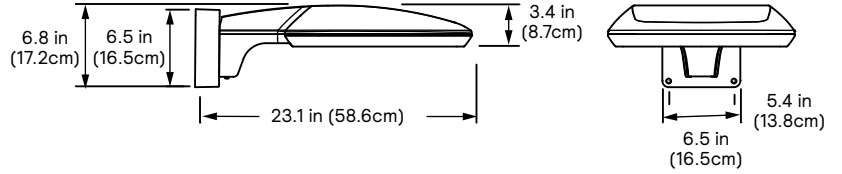
Area light with precision optics

Dimensions

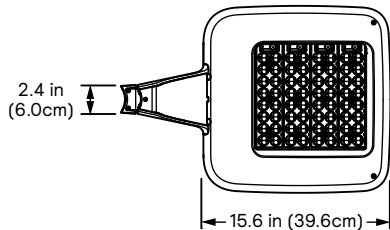
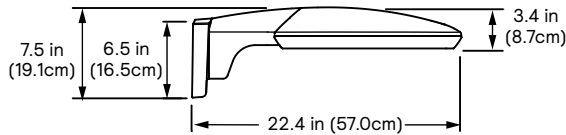
Standard Arm (AR1)



Wall Mount (WAL)

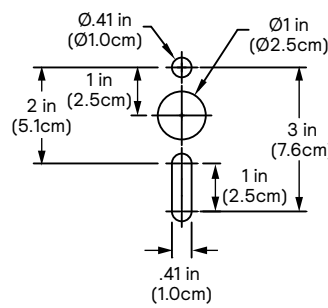


Retrofit Arm (RAM)

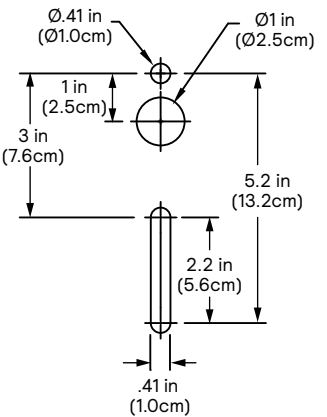


Drill Patterns

Standard Arm (AR1)



Retrofit Arm (RAM)



Weight: 22 Lbs (10 kg)
EPA: 0.24ft² (.02 m²)

P15 PureForm LED small square

Area light with precision optics

Specifications

Housing

One-piece cast aluminum housing with integral arm and die cast light engine frame. Luminaire housing rated to IP65, tested in accordance to Section 9 of IEC 60598-1.

Vibration resistance

Luminaire is tested and rated to Level 2 (3.8G) over 100,000 cycles conforming to standards set forth by ANSI C136.31-2018. Testing includes vibration in three axes, all performed on the same luminaire.

Light engine

Light engine comprises of a module of 16-LED aluminum metal clad board fully sealed with optics offered in multiples of 2, 3 and 4 modules. Module is RoHS compliant. Color temperatures: 3000K +/- 125K, 4000K, 5000K +/- 200K. Minimum CRI of 70. Also available in 2700K, 3500K, with extended lead times. LED light engine is rated IP66 in accordance to Section 9 of IEC 60598-1.

Energy saving benefits

System efficacy up to 160 lms/W with significant energy savings over Pulse Start Metal Halide luminaires. Optional control options provide added energy savings during unoccupied periods.

Optical systems

Type 2 Medium, Type 3 Medium, Type 4 Short, and Type 5 Short distributions available. Internal Shield option mounts to LED optics and is available with Type 2, 3, and 4 distributions including a dedicated BLC optic to provide the best backlight control possible for those stringent requirements around property lines. Performance tested per LM-79 and TM-15 (IESNA) certifying its photometric performance. Luminaire designed with 0% uplight (U0 per IESNA TM-15).

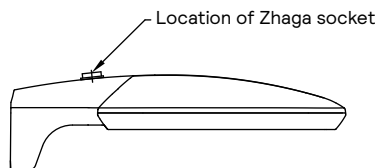
Mounting

Standard luminaire arm mounts to 4" O.D. round poles. Can also be used with 5" O.D. poles. Square pole adapter included with every luminaire. PureForm features a retrofit arm kit. When specified with the retrofit arm (RAM) option, PureForm seamlessly simplifies site conversions to LED by eliminating the need for additional pole drilling on most existing poles. RAM will be boxed separately. Also optional are wall mounting accessories.

Control options

0-10V dimming (DLEA): Order this option if you want access to 0-10V dimming leads supplied through the arm of luminaire (for secondary dimming controls by others). Cannot be used with other control options.

Sensor Ready Zhaga Socket Connector (SRDR): Product equipped with Sensor Ready drivers connected to 4-pin Zhaga Book 18 compliant receptacle designed for sensor and other control system applications. Receptacle is rated IP66 assembly in a compact design that provides a sealed electrical interface and rated UV resistance mounted on top of the luminaire arm. When a controller not provided by Signify is used with Sensor Ready Zhaga socket connector, the controller must be certified to work with the Xitanium SR LED drivers as part of the SR certified program.



Field Adjustable Wattage Selector (FAWS): Luminaire equipped with the ability to manually adjust the wattage in the field to reduce total luminaire lumen output and light levels. Comes pre-set to the highest position at the lumen output selected. Use chart below to estimate reduction in lumen output desired. Cannot be used with other control options or motion response.

FAWS Position	Percent of Typical Lumen Output
1	25%
2	50%
3	55%
4	65%
5	75%
6	80%
7	85%
8	90%
9	95%
10	100%

Note: Typical value accuracy +/- 5%

Automatic Profile Dimming (CS/CM/CE/CA): Standard dimming profiles provide flexibility towards energy savings goals while optimizing light levels during specific dark hours. Dimming profiles include two dimming settings including dim to 30% or 50% of the total lumen output. When used in combination with not programmed motion response it overrides the controller's schedule when motion is detected. After 5 minutes with no motion, it will return to the automatic dimming profile schedule. Automatic dimming profile scheduled with the following settings:

- **CS50/CS30:** Security for 7 hours night duration (Ex., 11 PM – 6 AM)
 - **CM50/CM30:** Median for 8 hours night duration (Ex., 10 PM – 6 AM)
- All above profiles are calculated from mid point of the night. Dimming is set for 6 hours after the mid point and 1 or 2 hours before depending of the duration of dimming. Cannot be used with other dimming control options.

Motion response options

Bi-Level Infrared Motion Response (BL50): Motion Response module is mounted integral to luminaire factory pre-programmed to 50% dimming when not ordered with other control options. BL50 is set/operates in the following fashion: The motion sensor is set to a constant 50%. When motion is detected by the PIR sensor, the luminaire returns to full power/light output. Dimming on low is factory set to 50% with 5 minutes default in "full power" prior to dimming back to low. When no motion is detected for 5 minutes, the motion response system reduces the wattage by 50%, to 50% of the normal constant wattage reducing the light level. Other dimming settings can be provided if different dimming levels are required. This can also be done with FSIR-100 Wireless Remote Programming Tool (contact Technical Support for details).

Infrared Motion Response with Other Controls: When used in combination with other controls (Automatic Dimming Profile and SiteWise), motion response device will simply override controller's schedule with the added benefits of a combined dimming profile and sensor detection. In this configuration, the motion response device cannot be re-programmed with FSIR-100 Wireless Remote Programming Tool. The profile can only be re-programmed via the controller.

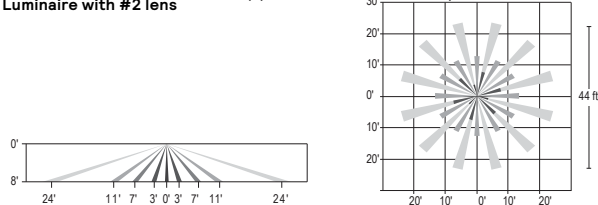
P15 PureForm LED small square

Area light with precision optics

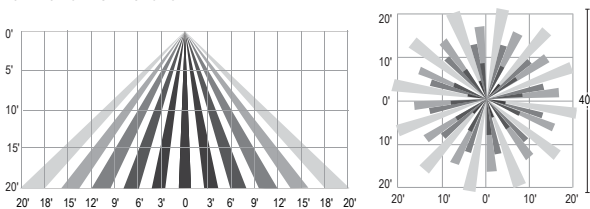
Specifications (cont'd)

Infrared Motion Response Lenses (L2/L3): Infrared Motion Response Integral module is available with two different sensor lens types to accommodate various mounting heights and occupancy detection ranges. Lens #2 lens (L2) is designed for mounting heights from 8' to 15' with a 44' coverage area. Lens #3 (L3) is designed for mounting heights up to 25' with a more precise coverage area of 40'. See charts for approximate detection patterns:

Luminaire with #2 lens



Luminaire with #3 lens



Electrical

Twist-Lock Receptacle (TR7/TLP): Twist-Lock Receptacle with 7 pins enabling dimming with additional functionality (by others) can be used with a twist-lock photoelectric cell or a shorting cap. Dimming Receptacle Type D-24 (7-pin) in accordance to ANSI C136.41. Can be used with third-party control system. Receptacle located on top of luminaire arm. When specifying receptacle with twist-lock photoelectric cell, voltage must be specified. When ordering 7-pin Twist-lock receptacle (TR7), all 7 pins are wired to respective pins with the Sensor Ready (SR) driver, and photocell or shorting cap is not included. When ordering a twist-lock receptacle with a photocell (TLP), the receptacle used is a 7-pin receptacle, but pins 6 and 7 are not connected (no SR driver). 0-10V dimming leads (pins 4 and 5) are connected if not ordered with any other dimming option.

Driver: Driver efficiency (>90% standard). 120-480V available (restrictions apply). Open/short circuit protection. All drivers are 0-10V dimming to 10% power standard, except when using Sensor Ready (SR) drivers, which uses DALI protocol (options CS50/CM50/CS30/CM30, SRDR, and TR7). Drivers are

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 to view a current list of BAA-compliant products to confirm this product's current compliance.

RoHS and FCC Title 47 CFR Part 15 compliant.

Button Photocontrol (PCB): Button style design for internal luminaires mounting applications. The photocontrol is constructed of a high impact UV stabilized polycarbonate housing. Rated voltage of 120V or 208-277V with a load rating of 1000 VA. The photocell will turn on with 1-4Fc of ambient light.

Surge protection (SP1/SP2): 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. 20kV / 10kA surge protection device that provides extra protection beyond the SP1 10kV/10kA level.

Listings

UL/cUL wet location listed to the UL 1598 standard, suitable for use in ambient temperatures from -40°C to 40°C (-40°F to 104°F). Most PureForm P15 configurations are qualified under Premium DesignLights Consortium® category. Consult DLC Qualified Products list to confirm your specific luminaire selection is approved. CCTs 3000K and warmer are Dark Sky Approved.

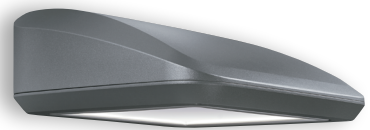
Finish

Each standard color luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidyl isocyanurate (TGIC) textured polyester powdercoat finish. The surface treatment achieves a minimum of 1000 hours for salt spray resistant finish in accordance with testing performed and per ASTM B117 standard. Standard colors include bronze (BZ), black (BK), white (WH), dark gray (DG), and medium gray (MG). Consult factory for specs on optional or custom colors.

Warranty

PureForm luminaires feature a 5-year limited warranty. See signify.com/warranties for complete details and exclusions.





Gardco PureForm LED wall sconce comfort PWS offers a sleek, low profile design that will complement a range of architectural styles. Comfort optics are designed to enhance visual comfort by reducing glare. PureForm wall sconce provides up to 10,700 lumens to accommodate multiple mounting heights up to 20', and is available with Type 2, 3, 4, optical distributions. A full range of control options is available for additional energy savings. Optional emergency battery backup option is available for path-of-egress and is integral to the luminaire.

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

Ordering guide

example: PWS-140L-650-NW-G2-2-UNV-DGY

Prefix	Number of LEDs	Drive Current	LED Color - Generation	Distribution	Emergency	Voltage	Options					Finish		
							Dimming controls	Motion sensing	Photo-sensing	Electrical				
PWS														
PWS PureForm wall sconce	140L 140 LEDs ¹⁴ 196L 196 LEDs ¹⁵	450 450mA 650 650mA 1150 1150mA ¹ 1675 1675mA ¹ 2100 2100mA ^{1,2}	WW-G2 Warm White 3000K, 80 CRI Generation 2 NW-G2 Neutral White 4000K, 80 CRI Generation 2 CW-G2 Cool White 5000K, 70 CRI Generation 2 WY-G2 Warm Yellow 2700K, 80 CRI Generation 2 ³ BW-G2 Balanced White 3500K, 80 CRI Generation 2 ³ AM-G2 Direct Amber (>590nm) Generation 2 ^{3,13}	2 Comfort Type 2 3 Comfort Type 3 4 Comfort Type 4	EBP Emergency Battery Pack ^{1,7,11} EBPC Emergency Battery Pack Cold Weather ^{2,7,12} Leave blank to omit an emergency option	UNV 120-277V HVV 347-480V 120 120V 208 208V 240 240V 277 277V 347 347V 480 480V	DD 0-10V External dimming (controls by others) ⁴ FAWS Field Adjustable Wattage Selector ^{4,5} LLC Integral wireless module ^{4,5,6,7} BL BL Bi-level functionary with motion sensor ⁴ DynaDimmer: Automatic Profile Dimming ^{4,5,7} CS50 Security 50% Dimming, 7 hours CM50 Median 50% Dimming, 8 hours CS30 Security 30% Dimming, 7 hours CM30 Median 30% Dimming, 8 hours	MMRI High-Frequency motion sensor integral ^{7,8}	PCB Photocontrol Button ^{7,9,10}	Fusing F1 Single (120, 277, 347VAC) ⁹ F2 Double (208, 240, 480VAC) ⁹ F3 Canadian Double Pull (208, 240, 480VAC) ⁹ Surge Protection (10kA is standard) SP2 Increased 20kA	Textured BK Black WH White BZ Bronze DGY Dark Gray MGY Medium Gray Customer specified RAL Specify optional color or RAL (ex: RAL7024) CC Custom color (Must supply color chip for required factory quote)			

1. 1150, 1675, and 2100mA not available with emergency battery backup (EBP).
 2. 2100mA not available with emergency battery backup cold weather (EBPC).
 3. Extended lead times apply. Contact factory for details.
 4. Not available with other control options.
 5. Not available with motion sensor.

6. Not available with photocontrol.
 7. Not available in 347 or 480V.
 8. MMRI not available with emergency battery backup cold weather (EBPC).
 9. Must specify input voltage. UNV and HVV not valid options.
 10. Not available with wireless control (LLC).

11. Not available with Dynadimmer (CS/CM).
 12. Not available with Wireless control (LLC), or Dynadimmer (CS/CM).
 13. Not available in 2100mA
 14. Available in Amber only
 15. Not available in Amber



PWS PureForm LED wall sconce

wall mount - with Comfort Optics

Luminaire Accessories¹ (order separately)

Mounting Accessories

Wall Mount

PWS-WS-G2 Wall Mounted Box for Surface Conduit

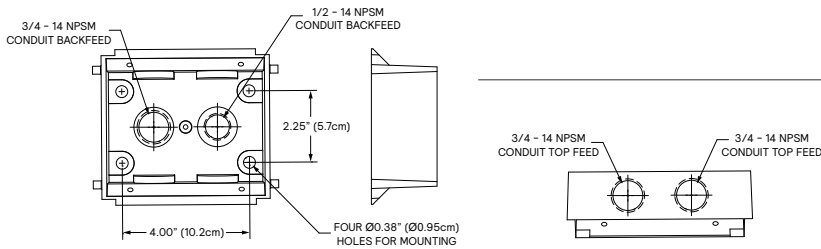
System accessories

Wireless system remote mount module

LLCR2-(F) #2 lens - specify finish in place of (F)
LLCR3-(F) #3 lens - specify finish in place of (F)

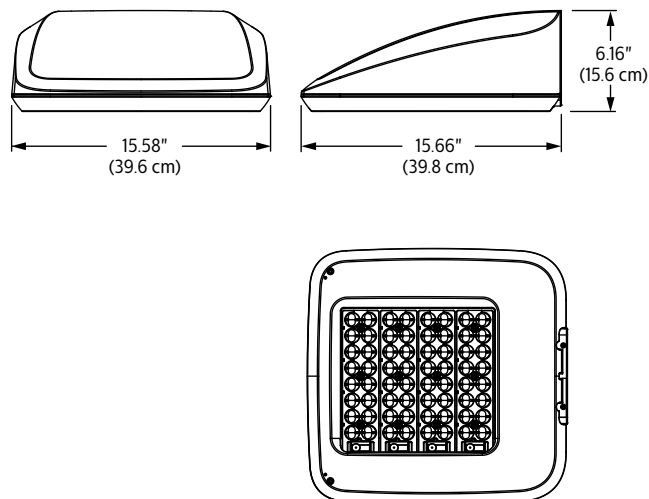
Wireless system remote controller accessory

Wireless system offers a remote radio/sensor module that allows connection to a Limelight system (sold by others). Remote module can be mounted to wall or pole with j-box supplied. May be specified by choosing one of two different lenses to accommodate a variety of mounting heights/sensor detection ranges. Must specify option DD on luminaires that are planned to be used with remote mount controllers.



1. Consult Signify to confirm whether specific accessories are BAA-compliant.

Dimensions



Luminaire weights

PureForm LED wall sconce PWS	Weight
Luminaire	20 lbs
Luminaire - EBP (EM battery pack)	22 lbs
Luminaire - EBPC (EM battery pack cold weather)	25 lbs

PWS PureForm LED wall sconce

wall mount – with Comfort Optics

LED Wattage and Lumen Values – 3000K

Ordering Code	LED Qty	LED Current (mA)	Color Temp.	Average System Watts	Type 2			Type 3			Type 4		
					Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
PWS-140L-450-WW-G2-x	140	450	3000	22	2364	B1-U0-G1	106	2429	B1-U0-G1	109	2579	B1-U0-G1	116
PWS-140L-650-WW-G2-x	140	650	3000	30	3295	B2-U0-G2	108	3387	B2-U0-G2	111	3596	B1-U0-G1	118
PWS-140L-1150-WW-G2-x	140	1150	3000	52	5696	B2-U0-G2	109	5855	B2-U0-G2	112	6215	B2-U0-G2	119
PWS-140L-1675-WW-G2-x	140	1675	3000	76	7907	B3-U0-G3	104	8129	B3-U0-G3	107	8628	B3-U0-G3	114
PWS-140L-2100-WW-G2-x	140	2100	3000	96	9467	B3-U0-G3	99	9732	B3-U0-G3	102	10330	B3-U0-G3	108

Values from photometric tests performed in accordance with IESNA LM-79 and are representative of the configurations shown. Actual performance may vary due to installation and environmental variables, LED and driver tolerances, and field measurement considerations. It is highly recommended to confirm performance with a photometric layout.

NOTE: Some data may be scaled based on tests of similar (but not identical) luminaires. Contact factory for configurations not shown.

LED Wattage and Lumen Values – 4000K

Ordering Code	LED Qty	LED Current (mA)	Color Temp.	Average System Watts	Type 2			Type 3			Type 4		
					Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
PWS-140L-450-NW-G2-x	140	450	4000	22	2448	B1-U0-G1	110	2516	B1-U0-G1	113	2671	B1-U0-G1	120
PWS-140L-650-NW-G2-x	140	650	4000	30	3412	B2-U0-G2	112	3508	B2-U0-G2	115	3724	B1-U0-G1	123
PWS-140L-1150-NW-G2-x	140	1150	4000	52	5899	B2-U0-G2	113	6064	B2-U0-G2	116	6436	B2-U0-G2	123
PWS-140L-1675-NW-G2-x	140	1675	4000	76	8189	B3-U0-G3	108	8419	B3-U0-G3	111	8935	B3-U0-G3	118
PWS-140L-2100-NW-G2-x	140	2100	4000	96	9804	B3-U0-G3	102	10079	B3-U0-G3	105	10698	B3-U0-G3	112

Values from photometric tests performed in accordance with IESNA LM-79 and are representative of the configurations shown. Actual performance may vary due to installation and environmental variables, LED and driver tolerances, and field measurement considerations. It is highly recommended to confirm performance with a photometric layout.

NOTE: Some data may be scaled based on tests of similar (but not identical) luminaires. Contact factory for configurations not shown.

LED Wattage and Lumen Values – 5000K

Ordering Code	LED Qty	LED Current (mA)	Color Temp.	Average System Watts	Type 2			Type 3			Type 4		
					Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
PWS-140L-450-CW-G2-x	140	450	5000	22	2560	B1-U0-G1	115	2631	B1-U0-G1	118	2793	B1-U0-G1	125
PWS-140L-650-CW-G2-x	140	650	5000	30	3568	B2-U0-G2	117	3669	B2-U0-G2	121	3895	B1-U0-G1	128
PWS-140L-1150-CW-G2-x	140	1150	5000	52	6169	B2-U0-G2	118	6342	B2-U0-G2	121	6731	B2-U0-G2	129
PWS-140L-1675-CW-G2-x	140	1675	5000	76	8564	B3-U0-G3	113	8805	B3-U0-G3	116	9344	B3-U0-G3	123
PWS-140L-2100-CW-G2-x	140	2100	5000	96	10253	B3-U0-G3	107	10541	B3-U0-G3	110	11188	B3-U0-G3	117

Values from photometric tests performed in accordance with IESNA LM-79 and are representative of the configurations shown. Actual performance may vary due to installation and environmental variables, LED and driver tolerances, and field measurement considerations. It is highly recommended to confirm performance with a photometric layout.

NOTE: Some data may be scaled based on tests of similar (but not identical) luminaires. Contact factory for configurations not shown.

PWS PureForm LED wall sconce

wall mount - with Comfort Optics

LED Wattage and Lumen Values (Emergency Mode)

Ordering Code	LED Qty	LED Current (mA)	Color Temp.	Temp Range (°C)	Avg. System Watts		Lumen Outputs					
					Normal Mode	Emergency Mode	Type 2		Type 3		Type 4	
							Normal Mode	Emergency Mode	Normal Mode	Emergency Mode	Normal Mode	Emergency Mode
PWS-140L-450-NW-G2-x-EBP-UNV	140	450	4000	0 to 40	22	10	2448	1376	2516	1415	2671	1502
PWS-140L-650-NW-G2-x-EBP-UNV	140	650	4000	0 to 40	30	10	3412	1376	3508	1415	3724	1502
PWS-140L-450-NW-G2-x-EBPC-UNV	140	450	4000	-20 to 40	22	18	2448	1964	2516	2019	2671	2143
PWS-140L-650-NW-G2-x-EBPC-UNV	140	650	4000	-20 to 40	30	18	3412	1964	3508	2019	3724	2143
PWS-140L-1150-NW-G2-x-EBPC-UNV	140	1150	4000	-20 to 40	52	18	5899	1964	6064	2019	6436	2143
PWS-140L-1675-NW-G2-x-EBPC-UNV	140	1675	4000	-20 to 40	75	18	8189	1964	8419	2019	8935	2143

For emergency EBPC option, publish values are based on initial lumens.

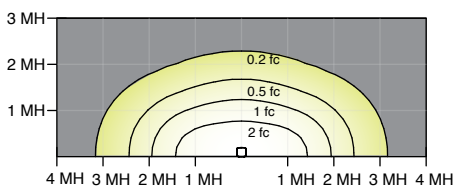
Predicted Lumen Depreciation Data

Predicted performance 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 TM21-11. Published L₇₀ hours limited to 6 times actual LED test hours

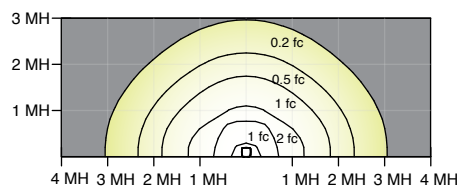
Ambient Temperature °C	Drive current	Calculated L ₇₀ Hours	L ₇₀ per TM-21	Lumen Maintenance % at 60,000 hrs
25°C	up to 2100 mA	>100,000 hours	>42,000 hours	>88%

Optical Distributions

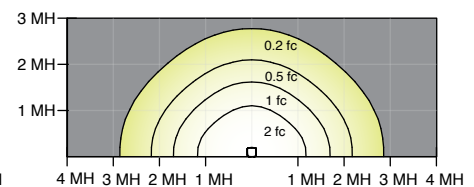
Based on 20' mounting height



Comfort Type 2



Comfort Type 3



Comfort Type 4

PWS PureForm LED wall sconce

wall mount - with Comfort Optics

Specifications

Housing

Main body housing and door frame made of low copper die cast aluminum alloy for a high resistance to corrosion. Door hinges secured by aircraft cable to allow access to driver or other electronic components for servicing. The door frame acts as the main heat transfer component and it is optimized to allowing the main housing to have no fins, giving the freedom to have a clean minimalist aesthetic design while allowing it to house emergency battery backup equipment and various other options. Luminaire housing rated to IP65, tested in accordance to Section 9 of IEC 60598-1.

Light engine

Light guide technology provides low-glare, uniform illumination. Composed of 140 LEDs strategically positioned on the edge of the optical plate. Light engine luminous opening size optimized to best achieve a balance between lumen output and optical performance with the need to provide visual comfort. Light engine frame ensures contact with housing to provide heat conduction and sealing against the elements. Light engine is RoHS compliant. Standard color temperatures: 3000K +/- 130K, 4000K +/- 130K, 5000K +/- 225K. Minimum CRI of 70. Also available in 2700K and Amber (>590nm) with extended lead times. Contact factory for details. LED light engine is rated IP65 in accordance to Section 9 of IEC 60598-1.

Energy saving benefits

System efficacy up to 122 lms/W with significant energy savings over Pulse Start Metal Halide luminaires. Optional control options provide added energy savings during unoccupied periods.

Optical systems

The advanced LED comfort optical system provides Types 2, 3, and 4. Composed of high performance UV-stabilized optical grade lens with molded micro-optics to achieve desired distribution optimized to get a exceptional lighting uniformity. Performance tested per LM-79 and TM-15 (IESNA) certifying its photometric performance. Luminaire designed with 0% uplight (U0 per IESNA TM-15).

Mounting

Mounting is completed through integral back plate that features a separate recessed feature for hook and lock quick mount plate that secures with two set screws from bottom of luminaire. Luminaire ships fully assembled, ready to install.

Control options

0-10V dimming (DD): Access to 0-10V dimming leads supplied through back of luminaire (for secondary dimming controls by others). Cannot be used with other control options.

Field Adjustable Wattage Selector (FAWS): Luminaire equipped with the ability to manually adjust the wattage in the field to reduce total luminaire lumen output and light levels. Comes pre-set to the highest position at the lumen output selected. Use chart below to estimate reduction in lumen output desired. Cannot be used with other control options or motion response.

FAWS Position	Percent of Typical Lumen Output
1	25%
2	50%
3	55%
4	65%
5	75%
6	80%
7	85%
8	90%
9	95%
10	100%

Note: Typical value accuracy +/- 5%

Automatic Profile Dimming (CS/CM): Standard dimming profile provides flexibility towards energy savings goals while optimizing light levels during specific dark hours. Dimming profiles include two dimming settings including dim to 30% or 50% of the total lumen output Automatic dimming profile scheduled with the following settings:

- **CS50/CS30:** Security for 7 hours night duration (Ex., 11 PM - 6 AM)
- **CM50/CM30:** Median for 8 hours night duration (Ex., 10 PM - 6 AM)

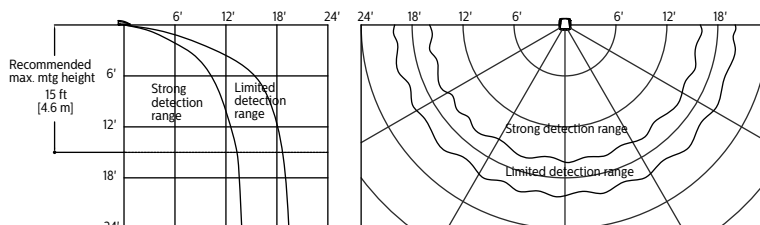
All above profiles are calculated from mid point of the night. Dimming is set for 6 hours after the mid point and 2, or 3 hours before depending of the duration of dimming. Cannot be used with other dimming control options.

Emergency Battery Backup Cold Pack (EBP/EBPC): Emergency battery packs included integral to the luminaire, allowing for a consistent look between emergency and non-emergency luminaires. A separate surface mount accessory box is not required. EBP is suitable for use in ambient temperature conditions from 0°C (32°F) to 40°C (100°F) available on 450mA and 650mA only. EBPC cold weather rated down to -20°C (-4°F) available on all wattage except the 2100mA configuration. Both systems are designed to have a secondary driver with relay to immediately detect AC power loss to power luminaire for a minimum of 90 minutes from the time power is lost. Available with 120-277V, or 'UNV' only.

Wireless system (LLC): Optional wireless controller integral to luminaire ready to be connected to a Lighthouse system (sold by others). The system allows you to wirelessly manage the entire site, independent lighting groups or individual luminaires while on-site or remotely. Based on a high-density mesh network with an easy to use web-based portal, you can conveniently access, monitor and manage your lighting network remotely. Wireless controls can be combined with site and area, pedestrian, and parking garage luminaires as well, for a completely connected outdoor solution. Motion response capability can be installed in other luminaires in the mesh or on a remote pod accessory where pod is mounted to pole or wall.

Motion response options

Bi-Level Infrared Motion Response (BL-MMRI): High frequency (5.8GHz +/- 75MHz microwave ISM wave band with <0.5 mW transmitting power) motion sensor is mounted integral to the luminaire. This bi-level motion sensor is designed to detect motion through the light engine so it can be used inside the luminaire without any protruded components. Sensor allows energy savings and meeting code requirements without compromising comfort and aesthetics. The product comes with factory pre-programmed standard settings including a dimming level of 30%, hold time of 3 minutes with no stand-by period. This means that in operations, the sensor will keep the luminaire at 30% of total lumen output and when motion is detected, the luminaire returns to 100% output. It will remain on full power for 3 minutes default prior to dimming back to low when no motion is observed. Other dimming levels, holding times, and stand-by periods are possible. Please contact factory technical support for details.



PWS PureForm LED wall sconce

wall mount – with Comfort Optics

Specifications (cont'd)

Electrical

Driver: Driver efficiency (>90% standard). 120–480V available (restrictions apply). Open/short circuit protection. Optional 0–10V dimming to 10% power. RoHS compliant.

Button Photocontrol (PCB): Button style design for internal luminaire mounting applications. The photocontrol is constructed of a high impact UV stabilized polycarbonate housing. Rated voltage of 120V or 208–277V with a load rating of 1000 VA. The photocell will turn on with 1–4Fc of ambient light.

Surge protection (SP1/SP2): Each luminaire is provided as standard with surge protector 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 U.S. DOE (Department of Energy) MSSLC (Municipal Solid-State Street Lighting Consortium) Model Specification for LED Roadway Luminaires Appendix D Electrical Immunity High Test Level 10kV / 5kA. Optional 20kV is available for additional protection.

Listings

UL/cUL listed to the UL 1598 standard, suitable for wet locations when mounted downward facing. Also listed for damp locations when inverted upward facing when mounted in covered ceiling application. Suitable for use in ambient temperatures from –40° to 40°C (–40° to 104°F). Most PureForm PWS configurations are qualified under Standard DesignLights Consortium® category. Consult DLC Qualified Products list for more details. CCTs 3000K and warmer are IDA Dark Dky Approved.

Finish

Each standard color luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) textured polyester powdercoat finish. The surface treatment achieves a minimum of 1000 hours for salt spray resistant finish in accordance with testing performed and per ASTM B117 standard. Standard colors include bronze (BZ), black (BK), white (WH), dark gray (DGY), and medium gray (MGY). Consult factory for specs on optional or custom colors.

Warranty

PureForm luminaires feature a 5-year limited warranty. See signify.com/warranties for complete details and exclusions.

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 to view a current list of BAA-compliant products to confirm this product’s current compliance.

