



by Signify

Site & Area

Form 10 LED

Square arm mount with comfort optics



Gardco Form 10 LED square arm mount luminaires are cutoff area luminaires featuring comfort optics are designed to enhance visual comfort by reducing glare. Type 2, 3, and 5 optical distributions are available. The EH units are manufactured from mitered extruded aluminum and finished in an Architectural Class 1 anodizing.

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

Ordering guide

example: EH14L-196L-450-NW-G3-AR1-2-120-BL-MMRI-BZ

Prefix	Number of LEDs	Drive Current	LED Color - Generation	Mounting	Distr.	Voltage	Controls	Motion sensing	Twist Lock Receptacle	Electrical	Finish
EH14L 14" Square Extruded Luminaire LED	196L 196 LEDs	450 450mA 650 650mA 1150 1150mA 1675 1675mA 2100 2100mA	NW-G3 Neutral White 4000K, 80CRI Generation 3 WW-G3 Warm White 3000K, 80CRI Generation 3 CW-G3 Cool White 5000K, 70CRI Generation 3	Arm mounts AR1 for 3"-4.5" round pole ¹ AR2 for 4.5"+ round pole ¹ AR3 for square pole ¹ Wall mount WM1 with arm ¹ WM2 without arm ¹ Mast Arm Fitter MA Mounts to a 2-3/8" O.D. mast arm ¹	2 Type 2 3 Type 3 5 Type 5	120 120V 208 208V 240 240V 277 277V 347 347V 480 480V UNV 120-277V 50hz/60hz HVV 347-480V 50hz/60hz	DD 0-10V Dimming Driver ² BL Bi-level functionality ²	MMRI High-Frequency motion sensor integral ³	TLRD5 Twist Lock Receptacle 5 Pin ⁴ TLRPC Twist Lock Receptacle with Photocell ^{4,5}	Fusing F1 Single (120, 277, 347VAC) ⁴ F2 Double (208, 240, 480VAC) ⁴ F3 Canadian Double Pull (208, 240, 480VAC) ⁴ Pole Mount Fusing FP1 Single (120, 277, 347VAC) ⁴ FP2 Double (208, 240, 480VAC) ⁴ FP3 Canadian Double Pull (208, 240, 480VAC) ⁴ Surge Protection SP1 Standard 10KVA SP2 Increased 20KVA	BRA Bronze Anodized BLA Black Anodized NA Natural Anodized BK Black paint BZ Bronze paint WH White paint MGY Medium Gray paint RAL Specify optional color (ex: RAL7024) CC Custom color (Must supply color chip for required factory quote)

1. Ordered and shipped with the luminaire.
2. Not available with other control options.
3. Available only with BL option. Not available in 347V or 480V.
4. Must specify input voltage.
5. Works with 3-pin or 5-pin NEMA photocell/dimming device



EH14L Form Ten LED luminaires

Site & Area – Square Arm Mount with comfort optics

Accessories¹ (order separately)

Pole top fitters (one per pole):

PTF2-(F)

Pole top fitter fits 2 3/8-2 1/2" OD x 4" depth tenon with 1, 2, 3 or 4 luminaires at 90°. Requires AR1.

PTF3-(F)

Pole top fitter fits 3-3 1/2" OD x 6" depth tenon with 1, 2, 3 or 4 luminaires at 90°. Requires AR2.

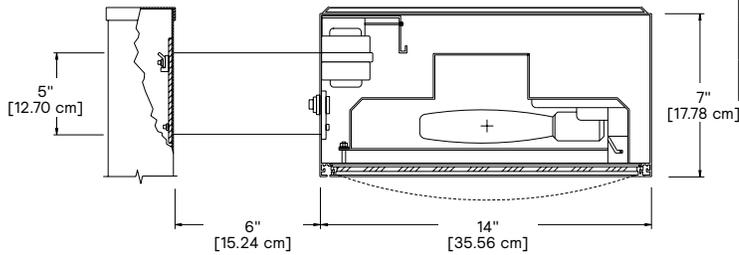
PTF4-(F)

Pole top fitter fits 3 1/2-4" OD x 6" depth tenon with 1, 2, 3 or 4 luminaires at 90°. Requires AR2.

(F) Specify finish

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

Dimensions and EPA



Size	Effective Projected Area (EPA)			Approx. Weight
	Single	Twain	3/4	Single
14"	1.1 ft ² / .10 m ²	2.3 ft ² / .21 m ²	2.9 ft ² / .27 m ²	30 lbs / 13.61 kg

LED Wattage and Lumen Values – 4000K

Order Code	LED Qty	System Current (mA)	Color Temp (K)	Ave System Watts (W)	Type 2			Type 3			Type 5		
					Lumen Output	BUG Rating	Efficacy (lm/W)	Lumen Output	BUG Rating	Efficacy (lm/W)	Lumen Output	BUG Rating	Efficacy (lm/W)
EH14L-196L-450-NW-G3-x-UNV	196	450	4000	21	2122	B1-U0-G1	102	2373	B1-U0-G1	114	2377	B2-U0-G1	114
EH14L-196L-650-NW-G3-x-UNV	196	650	4000	30	3024	B1-U0-G1	101	3383	B2-U0-G2	113	3389	B2-U0-G1	113
EH14L-196L-1150-NW-G3-x-UNV	196	1150	4000	51	5310	B2-U0-G2	104	5940	B2-U0-G2	116	5951	B3-U0-G2	117
EH14L-196L-1675-NW-G3-x-UNV	196	1675	4000	75	7512	B3-U0-G3	100	8403	B3-U0-G3	112	8418	B3-U0-G2	112
EH14L-196L-2100-NW-G3-x-UNV	196	2100	4000	95	9208	B3-U0-G3	97	10301	B3-U0-G3	109	10319	B3-U0-G2	109

LED Wattage and Lumen Values – 3000K

Order Code	LED Qty	System Current (mA)	Color Temp (K)	Ave System Watts (W)	Type 2			Type 3			Type 5		
					Lumen Output	BUG Rating	Efficacy (lm/W)	Lumen Output	BUG Rating	Efficacy (lm/W)	Lumen Output	BUG Rating	Efficacy (lm/W)
EH14L-196L-450-WW-G3-x-UNV	196	450	3000	21	2040	B1-U0-G1	98	2282	B1-U0-G1	109	2286	B2-U0-G1	109
EH14L-196L-650-WW-G3-x-UNV	196	650	3000	30	2908	B1-U0-G1	97	3253	B1-U0-G1	108	3259	B2-U0-G1	109
EH14L-196L-1150-WW-G3-x-UNV	196	1150	3000	51	5106	B2-U0-G2	100	5712	B2-U0-G2	112	5722	B3-U0-G2	112
EH14L-196L-1675-WW-G3-x-UNV	196	1675	3000	75	7223	B3-U0-G3	96	8080	B3-U0-G3	108	8094	B3-U0-G2	108
EH14L-196L-2100-WW-G3-x-UNV	196	2100	3000	95	8854	B3-U0-G3	93	9905	B3-U0-G3	105	9922	B3-U0-G2	105

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.

EH14L Form Ten LED luminaires

Site & Area – Square Arm Mount with comfort optics

LED Wattage and Lumen Values - 5000K

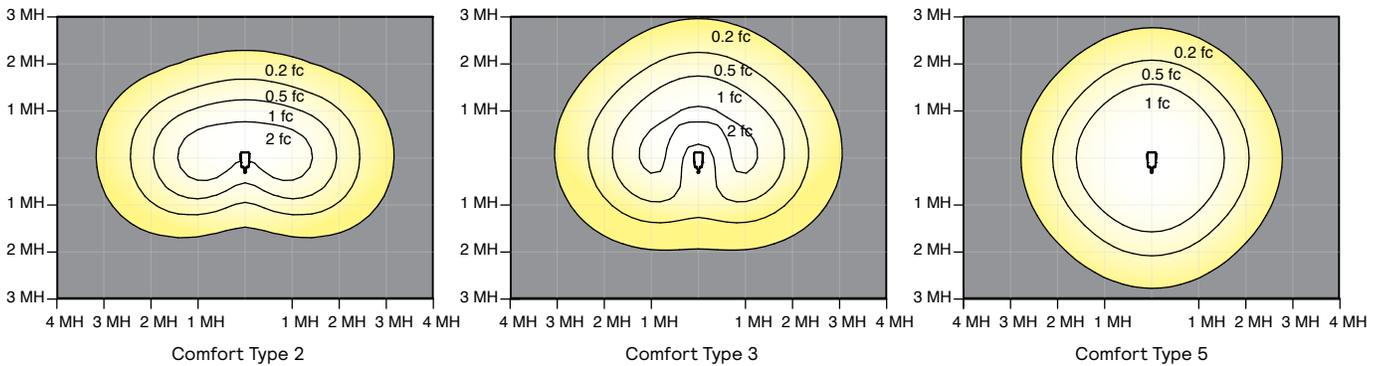
Order Code	LED Qty	System Current (mA)	Color Temp (K)	Ave System Watts (W)	Type 2			Type 3			Type 5		
					Lumen Output	BUG Rating	Efficacy (lm/W)	Lumen Output	BUG Rating	Efficacy (lm/W)	Lumen Output	BUG Rating	Efficacy (lm/W)
EH14L-196L-450-CW-G3-x-UNV	196	450	5000	21	2228	B1-U0-G1	107	2492	B1-U0-G1	119	2496	B2-U0-G1	119
EH14L-196L-650-CW-G3-x-UNV	196	650	5000	30	3175	B1-U0-G1	106	3552	B2-U0-G2	118	3558	B2-U0-G1	119
EH14L-196L-1150-CW-G3-x-UNV	196	1150	5000	51	5576	B2-U0-G2	109	6237	B2-U0-G2	122	6249	B3-U0-G2	123
EH14L-196L-1675-CW-G3-x-UNV	196	1675	5000	75	7888	B3-U0-G3	105	8823	B3-U0-G3	118	8839	B3-U0-G2	118
EH14L-196L-2100-CW-G3-x-UNV	196	2100	5000	95	9668	B3-U0-G3	102	10816	B3-U0-G3	114	10835	B3-U0-G3	114

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.

Optical Distributions



Specifications

General Description

The Gardco Form 10 LED square arm mounted products are cutoff luminaires featuring comfort optics. Form 10 LED square luminaires provide performance excellence and advanced Gardco LED thermal management technology. High performance Class 2 LED systems offer the potential for energy savings up to 50 % when compared to HID systems. The EH units are manufactured from mitered extruded aluminum and finished in an Architectural anodizing.

Housing

Extruded housings (EH style) are composed of precisely mitered anodized aluminum extrusions. Pressure injected silicone provides a continuous weather tight seal at all miters and points of material transition.

Arm

Extruded aluminum arm is secured to wired fixture by contractor. Assembly is suitable for mounting to pole without requiring access to luminaire.

Light Engine

Light guide technology provides low-glare, uniform illumination. Composed 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.

Energy Saving Benefits

System efficacy up to 117 lms/W with significant energy savings over Pulse Start Metal Halide luminaires. Optional control options provide added energy savings during unoccupied periods.

LED Optical System

The advanced LED comfort optical system provides Types 2, 3, and 5. Composed of high performance UV-stabilized optical grade lens with molded micro-optics to achieve desired distribution optimized to get an 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).

EH14L Form Ten LED luminaires

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Specifications (cont.)

Electrical

Twist-Lock Receptacle (TLRD5/TLRPC): Twist Lock Receptacle with 5 pins enabling dimming can be used with a twistlock photoelectric cell or a shorting cap. Dimming Receptacle

Type B (5-pin) in accordance with ANSI C136.41. Can be used with third-party control system. Receptacle located on top of luminaire housing. When specifying receptacle with twistlock photoelectric cell, voltage must be specified. When ordering Twist-lock receptacle (TLRD5), photocell or shorting cap is not included.

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

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 NeutralGround, 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.

Finish

Extruded housings (EH style) are standard with natural, bronze, or black Aluminum Association Architectural Class I anodized finish. Special color polyester finishes are available in EH housings.

Labels

UL/cUL listed to the UL 1598 standard, suitable for Wet Locations. Suitable for use in ambients from -40° to 40°C (-40° to 104°F). The quality systems of this facility have been registered by UL to the ISO 9001 series standards. Some Form 10 configurations are DesignLights Consortium® qualified. Consult DLC Qualified Products list for more details.

Limited Warranty

5 year limited warranty. See signify.com/luminaires for complete details and exclusions.

Predicted Lumen Depreciation Data

Ambient Temperature °C	System Current	Calculated L70hrs ^{1,2}	L70 per TM21 ^{2,3}	Lumen Maintenance @ 60,000hrs
25 °C	up to 2100mA	>100,000	>60,000	89%

1. Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology.
2. Actual experience may vary due to field application conditions. L70 is the predicted time when LED performance depreciates to 70% of initial lumen output.
3. Calculated per IESNA TM21-11. Published L70 hours limited to 6 times actual LED test hours.

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.

