

Gardco Form 10 LED round arm mount luminaires are cutoff area luminaires featuring LED arrays. These products provide performance excellence and feature advanced Gardco LED thermal management technology. High performance Class 1 LED systems offer the potential for energy savings up to 50% when compared to HID systems.

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

Ordering guide

example: CA17L-32L-450-NW-G3-AR1-2-120-BK

Prefix	Number of LEDs	Drive Current	LED Color - Generation	Mounting ¹	Distr. ²	Voltage	Controls	Electrical	Luminaire	Finish
CA17L 17" Cylindrical Luminaire LED	32L 32 LEDs	450 450mA	NW-G3 Neutral White 4000K, 70CRI Generation 3	AR1 for 3"-4.5" round pole ¹	2 Type 2	120 120V	DD 0-10V Dimming Driver	Fusing	HIS Internal House Side Shield ⁶	BRA Bronze Anodized
MA17L 17" Semi-Spherical Luminaire LED		900 900mA				208 208V				
	48L 48 LEDs	700 700mA	WW-G3 Warm White 3000K, 70CRI Generation 3	AR2 for 4.5"+ round pole ¹	4 Type 4	240 240V	Photoelectric/ Receptacle Systems (Twist Lock Receptacle)	F2 Double (208, 240, 480VAC) ³	NA Natural Anodized	
			CW-G3 Cool White 5700K, 70CRI Generation 3	AR3 for square pole ¹	5 Type 5	277 277V		F3 Canadian Double Pull (208, 240, 480VAC) ³		BK Black paint
CA22L 22" Cylindrical Luminaire LED	48L 48 LEDs	900 900mA	WM1 with arm ¹	Wall Mount	347 347V	347 347V	TLRD5 Twist Lock Receptacle 5 Pin ^{4,5}	Pole Mount Fusing	BZ Bronze paint	
MA22L 22" Semi-Spherical Luminaire LED	96L 96 LEDs	560 560mA				480 480V				TLRPC Twist Lock Receptacle with Photocell ^{3,4,5}
		650 650mA	WM2 without arm ¹	Mast Arm Fitter	UNV 120-277V 50hz/60hz	UNV 120-277V 50hz/60hz	SP1 Standard 10KVA SP2 Increased 20KVA	FP1 Single (120, 277, 347VAC) ³	MGY Medium Gray paint	
			MA Mounts to a 2-3/8" O.D. mast arm ⁵	HVU 347-480V 50hz/60hz	HVU 347-480V 50hz/60hz	FP2 Double (208, 240, 480VAC) ³		FP3 Canadian Double Pull (208, 240, 480VAC) ³	Customer specified	
								Surge Protection	RAL Specify optional color (ex: RAL7024)	
									CC Custom color (Must supply color chip for required factory quote)	

Retrofit kit ordering guide

Prefix	Number of LEDs	Drive Current	LED Color - Generation	Distr. ²	Voltage	Controls	Electrical
CA/MA17L-RK 17" Cylindrical or Semi-Spherical Retrofit Kit	32L 32 LEDs	450 450mA	NW-G3 Neutral White 4000K, 70CRI Generation 3	2 Type 2	120 120V	DD 0-10V Dimming Driver	Surge Protection SP1 Standard 10KVA SP2 Increased 20KVA
		900 900mA			347 347V		
			WW-G3 Warm White 3000K, 70CRI Generation 3	3 Type 3	208 208V		
			CW-G3 Cool White 5700K, 70CRI Generation 3	4 Type 4	240 240V		
				5 Type 5	277 277V		
CA/MA22L-RK 22" Cylindrical or Semi-Spherical Retrofit Kit	48L 48 LEDs	900 900mA			UNV 120-277V 50hz/60hz		
	96L 96 LEDs	560 560mA			HVU 347-480V 50hz/60hz		

1. Ordered and shipped with the luminaire.
2. Types 2,3, and 4 optics are field rotatable.
3. Must specify input voltage.
4. Works with 3-pin or 5-pin NEMA photocell/dimming device.
5. Not offered with MA17L or MA22L.
6. Not available in Type 5.



CA/MA17L & CA/MA22L Form 10 LED luminaires

Site & Area – Round Arm Mount

Accessories (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)

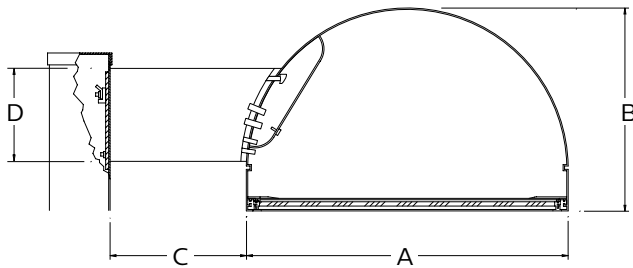
Pole top fitter fits 3-3 1/2" OD x 6" depth tenon with 1, 2, 3 or 4 luminaires at 90°. Requires AR2.

PTF4-(F)

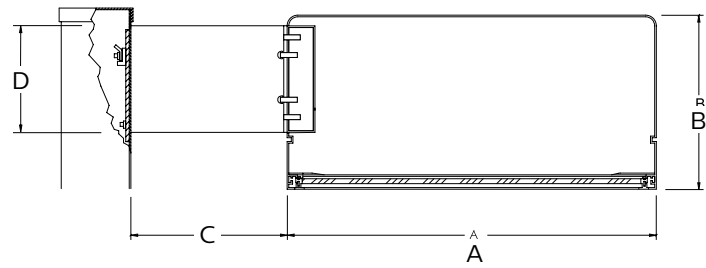
Pole top fitter fits 3 1/2-4" OD x 6" depth tenon with 1, 2, 3 or 4 luminaires at 90°. Requires AR2.

(F) Specify finish

Dimensions and EPA



MA style



CA style

Size	A	B	C	D	EPA's Single	EPA's Twin	EPA's Quad	Weight Single
MA17	17" 43.18cm	11" 27.94cm	5" 12.70cm	5" 12.70cm	.8ft ² .07m ²	1.6ft ² .15m ²	2.3ft ² .21m ²	27 lbs. 12.25kg
MA22	22" 55.88cm	14" 35.56cm	7" 17.78cm	5" 12.70cm	1.3ft ² .12m ²	2.7ft ² .25m ²	3.7ft ² .34m ²	40 lbs. 18.14kg

Size	A	B	C	D	EPA's Single	EPA's Twin	EPA's Quad	Weight Single
CA17	17" 43.18cm	8" 20.32cm	5" 12.70cm	5" 12.70cm	.7ft ² .07m ²	1.5ft ² .14m ²	2.1ft ² .20m ²	27 lbs. 12.25kg
CA22	22" 55.88cm	11" 27.94cm	7" 17.78cm	5" 12.70cm	1.2ft ² .11m ²	2.3ft ² .21m ²	3.3ft ² .31m ²	42 lbs. 19.05kg

LED Wattage and Lumen Values Form 10 CA/MA17L

Order Code	LED Qty	System Current (mA)	Color Temp (K)	Ave System Watts (W)	Type 2			Type 3			Type 4			Type 5		
					Lumen Output	BUG Rating	Efficacy (lm/W)	Lumen Output	BUG Rating	Efficacy (lm/W)	Lumen Output	BUG Rating	Efficacy (lm/W)	Lumen Output	BUG Rating	Efficacy (lm/W)
CA/MA17L-32L-450-NW-G3-x	32	450	4000	44	5887	B1-U0-G1	133	5642	B1-U0-G1	127	5827	B1-U0-G1	131	5758	B3-U0-G1	130
CA/MA17L-32L-900-NW-G3-x	32	900	4000	90	10450	B2-U0-G2	116	10015	B2-U0-G2	112	10344	B2-U0-G2	115	10221	B4-U0-G2	114
CA/MA17L-48L-700-NW-G3-x	48	700	4000	103	12822	B2-U0-G2	124	12288	B2-U0-G2	119	12692	B2-U0-G2	123	12541	B4-U0-G2	122

LED Wattage and Lumen Values Form 10 CA/MA17L with Internal House Side Shield

Order Code	LED Qty	System Current (mA)	Color Temp (K)	Ave System Watts (W)	Type 2-HIS			Type 3-HIS			Type 4-HIS		
					Lumen Output	BUG Rating	Efficacy (lm/W)	Lumen Output	BUG Rating	Efficacy (lm/W)	Lumen Output	BUG Rating	Efficacy (lm/W)
CA/MA17L-32L-450-NW-G3-x-HIS	32	450	4000	44	4910	B1-U0-G1	111	4627	B1-U0-G1	104	4444	B1-U0-G1	100
CA/MA17L-32L-900-NW-G3-x-HIS	32	900	4000	90	8717	B1-U0-G2	97	8214	B1-U0-G2	92	7889	B1-U0-G2	88
CA/MA17L-48L-700-NW-G3-x-HIS	48	700	4000	103	10695	B1-U0-G2	104	10078	B1-U0-G2	98	9679	B1-U0-G2	94

LED Wattage and Lumen Values Form 10 CA/MA22L

Order Code	LED Qty	System Current (mA)	Color Temp (K)	Ave System Watts (W)	Type 2			Type 3			Type 4			Type 5		
					Lumen Output	BUG Rating	Efficacy (lm/W)	Lumen Output	BUG Rating	Efficacy (lm/W)	Lumen Output	BUG Rating	Efficacy (lm/W)	Lumen Output	BUG Rating	Efficacy (lm/W)
CA/MA22L-48L-900-NW-G3-x	48	900	4000	135	16054	B3-U0-G2	119	15501	B2-U0-G2	115	15689	B2-U0-G2	116	15981	B4-U0-G2	118
CA/MA22L-96L-560-NW-G3-x	96	560	4000	160	21587	B3-U0-G2	135	20843	B3-U0-G3	130	21096	B3-U0-G3	132	21489	B5-U0-G3	134
CA/MA22L-96L-650-NW-G3-x	96	650	4000	186	24474	B3-U0-G3	131	23631	B3-U0-G3	127	23918	B3-U0-G3	128	24363	B5-U0-G3	131

CA/MA17L & CA/MA22L Form 10 LED luminaires

Site & Area – Round Arm Mount

LED Wattage and Lumen Values Form 10 CA/MA22L with Internal House Side Shield

Order Code	LED Qty	System Current (mA)	Color Temp (K)	Ave System Watts (W)	Type 2-HIS			Type 3-HIS			Type 4-HIS		
					Lumen Output	BUG Rating	Efficacy (lm/W)	Lumen Output	BUG Rating	Efficacy (lm/W)	Lumen Output	BUG Rating	Efficacy (lm/W)
CA/MA22L-48L-900-NW-G3-x-HIS	48	900	4000	135	12772	B1-U0-G2	89	12041	B1-U0-G2	84	11590	B1-U0-G2	80
CA/MA22L-96L-560-NW-G3-x-HIS	96	560	4000	160	17174	B2-U0-G2	100	16190	B1-U0-G3	95	15584	B1-U0-G2	91
CA/MA22L-96L-650-NW-G3-x-HIS	96	650	4000	186	19471	B2-U0-G2	98	18356	B2-U0-G3	92	17668	B1-U0-G3	89

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.

Specifications

General Description

The Gardco Form 10 LED round products are cutoff luminaires featuring LED arrays. Form 10 LED round luminaires provide performance excellence and advanced Gardco LED thermal management technology. High performance Class 1 LED systems offer the potential for energy savings up to 50 % when compared to HID systems. Housings are one-piece seamless spun aluminum and finished with either Architectural Class 1 anodizing, electrostatically applied TGIC polyester powdercoat or polyurethane. Luminaires provide full cutoff performance.

Housing

Housing is one piece, .100" (.25cm) seamless aluminum with integral rolled circumferential reveal and lower section aperture incorporating a returned flange stiffener to protect against housing edge deformation.

Arm

Extruded aluminum arm is secured to prewired fixture by contractor. Assembly is suitable for mounting to pole without requiring access to luminaire. Internal extruded channels capture tie rods for proper luminaire to pole alignment.

Lens

One piece, diecast aluminum door frame retains the optically clear, heat and impact resistant tempered flat glass, in a sealed manner using hollow section, high compliance, memory retentive extruded silicone rubber. Concealed stainless steel hinge and two (2) fasteners secure lens assembly to luminaire.

Thermal Management

Form 10 LED round luminaires utilize extruded aluminum integral thermal radiation fins to provide the excellent thermal management so critical to long LED system life.

LED Optical System

LED arrays are set to achieve IES Type II, Type III, Type IV and Type V distributions. Individual LED arrays are replaceable. Optical systems are field rotatable. Luminaires feature high performance Class 1 LED systems.

Electrical

Luminaires include a complete prewired LED driver assembly, provided as part of the optical assembly. Luminaires include an LED driver that accepts 120V through 277V, or 347V through 480V, 50hz to 60hz, input. Driver output is based on the LED wattage selected. Component-to-component wiring within the luminaire will carry no more than 80% of rated current and is listed by UL for use at 600 VAC at 302°F / 150°C or higher. Plug disconnects are listed by UL for use at 600 VAC, 15A or higher. Power factor is not less than 90%. Luminaires consume 0.0 watts in the off state. Surge protector 10KA standard per ANSI/IEEE C62.41.2 or 20KA optional.

Finish

Anodized housings are created with an Aluminum Association Architectural Class I anodizing process to achieve a bronze, black or natural aluminum finish. Painted units are finished with hardcoat, fade resistant, electrostatically applied TGIC polyester powdercoat or polyurethane.

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. Most Form 10 configurations are DesignLights Consortium® qualified. Consult DLC Qualified Products list for more details.

Limited Warranty

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

Predicted Lumen Depreciation Data

Ambient Temperature °C	System Current	LED Current	Calculated L70hrs ^{1,2}	L70 per TM21 ^{2,3}	Lumen Maintenance @ 60,000hrs
25 °C	900 mA	900 mA	>100,000	>60,000	98%

1. 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.
2. L70 is the predicted time when LED performance depreciates to 70% of initial lumen output.
3. Calculated per IESNA TM 21-11. Published L70 hours limited to 6 times actual LED test hours.

