

Job:
Type:
Notes:



Energy Saving LED Retrofit Kits

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Form 10 Square / Form 10 Round / Circa 20" / Gullwing 13"

Philips Gardco LED retrofit kits provide performance excellence and advanced Philips Gardco LED thermal management technology. These features combine with the distinct styles of Philips Gardco legacy luminaire families to provide outdoor area lighting and pedestrian scale lighting that is both energy efficient and aesthetically pleasing. High quality Philips Gardco luminaires can easily and quickly be modernized to LED sources. High performance Class 1 LED systems offer the potential for energy savings up to 50 % when compared to HID systems. When utilized in a Philips Gardco luminaire featuring a flat glass lens, the luminaires provide full cutoff performance.

PREFIX	EXISTING LUMINAIRE	DISTRIBUTION	LED WATTAGE	LED SELECTION	VOLTAGE	OPTIONS

Enter the order code into the appropriate box above. Note: Philips Gardco reserves the right to refuse a configuration. Not all combinations and configurations are valid. Refer to notes below for exclusions and limitations. For questions or concerns, please consult the factory.

PREFIX

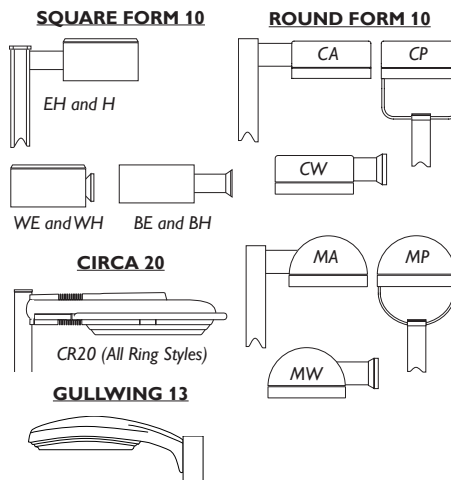
RKL Retrofit Kit - LED - Constant Wattage
RKL-DIM Retrofit Kit - LED - 0-10V Dimming

CONSTANT WATTAGE CONFIGURATIONS: Standard LED retrofit kits provide constant wattage and constant light output when power to the luminaire is energized.

DIMMING "-DIM" CONFIGURATIONS: Dimmable LED retrofit kits are provided with 0 -10V dimming for connection to a control system provided by others.

EXISTING LUMINAIRE

ORDER CODE	FOR USE WITH EXISTING PHILIPS GARDCO LUMINAIRES SHOWN ONLY				AVAILABLE LED WATTAGES
	ARM MT	POST TOP	WALL MOUNT		
EH/H14	EH14 H14		BE14 BH14	WE14 WH14	70LA 85LA
EH/H19	EH19 H19		BE19 BH19	WE19 WH19	110LA 160LA
C/M17	CA17 MA17	CP17 MP17	CW17 MW17		70LA 85LA
C/M22	CA22 MA22	CP22 MP22	CW22 MW22		110LA 160LA
CR20	CR20 (All Ring Styles)		CR20 (W or WS)		70LA 85LA
G13	G13		G13 (W or WS)		70LA 85LA



DISTRIBUTION

SQUARE FORM 10 14" and 19"
ROUND FORM 10 17" and 22"
CIRCA 20"
GULLWING 13"

- 2 Type II
- 3 Type III
- 4 Type IV
- 5 Type V

Note: LED Array assemblies provided with LED retrofit kits permit optical rotation in 90° increments.

Caution: If existing luminaire has an internal house side shield installed to the luminaire lens, it must be removed from the lens assembly. Failure to do so may cause the luminaire to operate above thermal design limits causing LED array or driver failure, and voiding all warranties.

LED WATTAGE AND LUMEN VALUES - SQUARE FORM 10 / ROUND FORM 10 (Data continued on page 2)

Ordering Code	Average System Watts ¹	LED Current (mA)	LED Selection	Luminaire Initial Absolute Lumens ^{2,3}				Basis of Lumen Data : Photometric tests performed in compliance with IESNA LM-79, except where otherwise indicated. Notes: 1. Wattage may vary by +/- 8% due to LED manufacturer forward volt specification and ambient temperature. Wattage shown is average for 120V through 277V input. Actual wattage may vary by an additional +/- 10% due to actual input voltage. 2. Values shown are for luminaires without the HS external shield option. Tests are in process for luminaires with the HS option and WW luminaires. Contact Gardco.applications@philips.com if approximate estimates are required for design purposes. 3. LED arrays feature LEDs that provide from 100 to 130 lumens per watt when operated at 350 mA. Lumen values based on tests performed in compliance with IESNA LM-79. (s) Marked values are scaled from NW tests on the same
				TYPE 2	TYPE 3	TYPE 4	TYPE 5	
70LA	70	350	CW	6,517	6,735	6,568	6,438	
			NW	5,938	6,124	5,989	5,874	
85LA	85	350	CW	7,860	8,114	8,342	8,245	
			NW	7,468	7,697	7,491	7,323	
110LA	110	350	CW	9,535(s)	9,908(s)	9,641(s)	9,526(s)	
			NW	8,911	9,260	9,010	8,903	
160LA	160	530	CW	13,170(s)	13,698(s)	13,244(s)	13,180(s)	
			NW	12,308	12,802	12,378	12,311	

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Form 10 Square / Form 10 Round / Circa 20" / Gullwing 13"

LED WATTAGE AND LUMEN VALUES - CIRCA 20" LED (Data continued from page 1)

Ordering Code	Average System Watts ⁴	LED Current (mA)	LED Selection	Luminaire Initial Absolute Lumens ^{4,6}				Basis of Lumen Data Photometric tests performed in compliance with IESNA LM-79.
				TYPE 2	TYPE 3	TYPE 4	TYPE 5	
70LA	70.2	350	CW	6,105	6,422	6,141	6,200(s)	
			NW	5,638	5,850	5,373	5,643(s)	
85LA	85.9	350	CW	7,509(s)	7,900(s)	7,554(s)	7,605(s)	
			NW	6,935(s)	7,196(s)	6,855(s)	7,042(s)	

4. Wattage may vary by +/- 8% due to LED manufacturer forward volt specification and ambient temperature. Wattage shown is average for 120V through 277V input. Actual wattage may vary by an additional +/- 10% due to actual input voltage.

5. Values shown are for luminaires without the HS external shield option. Tests are in process for luminaires with the HS option and WW luminaires. Contact Gardco.applications@philips.com if approximate estimates are required for design purposes.

6. LED arrays feature LEDs that provide from 100 to 130 lumens per watt when operated at 350 mA. Lumen values based on tests performed in compliance with IESNA LM-79.

(s) Lumen values for this particular configuration are scaled based on tests of a similar, but not identical configuration.

LED WATTAGE AND LUMEN VALUES - GULLWING 13"

Ordering Code	Average System Watts ⁷	LED Current (mA)	LED Selection	Luminaire Initial Absolute Lumens ^{8,9}				Basis of Lumen Data Photometric tests performed in compliance with IESNA LM-79.
				TYPE 2	TYPE 3	TYPE 4	TYPE 5	
70LA	71.2	350	CW	5,858	6,177	6,008	5,853	
			NW	5,636	5,854	5,696	5,479	
85LA	85.9	350	CW	7,531	7,714	7,495	7,384	
			NW	6,973	7,143	6,940	6,837	

7. Wattage may vary by +/- 8% due to LED manufacturer forward volt specification and ambient temperature. Wattage shown is average for 120V through 277V input. Actual wattage may vary by an additional +/- 10% due to actual input voltage.

8. Values shown are for luminaires without the HS external shield option. Tests are in process for luminaires with the HS option and WW luminaires. Contact Gardco.applications@philips.com if approximate estimates are required for design purposes.

9. LED arrays feature LEDs that provide from 100 to 130 lumens per watt when operated at 350 mA. Lumen values based on tests performed in compliance with IESNA LM-79.

LED SELECTION

CW	Cool White - 5700°K - 75 CRI
NW	Neutral White - 4000°K - 70 CRI
WW	Warm White - 3000°K - 80 CRI

VOLTAGE

UNIV	120V through 277V, 50hz or 60hz
HVU	347V through 480V, 50hz or 60hz (High Voltage Universal)

OPTIONS

SPR	Surge Protection for 120V through 277V Input meeting ANSI C62.41.2
SPRH	Surge Protection for 347V through 480V Input meeting ANSI C62.41.2

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SPECIFICATIONS

GENERAL: Philips Gardco LED retrofit kits provide performance excellence and advanced Philips Gardco LED thermal management technology. These features combine with the distinct styles of Philips Gardco legacy luminaire families to provide outdoor area lighting and pedestrian scale lighting that is both energy efficient and aesthetically pleasing. High quality Philips Gardco luminaires can easily and quickly be modernized to LED sources. High performance Class 1 LED systems offer the potential for energy savings up to 50 % when compared to HID systems. When utilized in a Philips Gardco luminaire featuring a flat glass lens, the luminaires provide full cutoff performance.

THERMAL MANAGEMENT: The Philips Gardco LED retrofit kits provide extruded aluminum integral thermal radiation fins to provide the excellent thermal management so critical to long LED system life.

LED RELIABILITY:

PREDICTED LUMEN DEPRECIATION DATA		
Ambient Temperature °C	Driver mA	L ₇₀ Hours ⁴
25 °C	350 mA	150,000
	530 mA	100,000
40 °C	350 mA	100,000
	530 mA	70,000

4. 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.

LED DRIVER ASSEMBLY: All retrofit kits 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. All retrofit kits require removal of both the existing HID ballast assembly and the existing HID optical assembly. Circa 20" and Gullwing 13" retrofit kits include a complete prewired LED driver assembly to replace the existing HID ballast assembly. With Form 10 Square and Form 10 Round retrofit kits, the LED Driver is included in the optical system assembly. 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.

OPTICAL SYSTEMS: LED retrofit kits include lensed LED arrays 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. Arrays are provided attached to the appropriate optic assembly based on the existing luminaire specified.


LABELS: When the LED retrofit is completed using the appropriate components supplied by Philips Gardco, then Philips Gardco luminaires retain UL or CUL (where applicable) Wet Location labels.

WARRANTY: Philips Gardco LED retrofit kits feature a 5 year limited warranty, including a 5 year limited warranty covering the LED arrays and LED drivers. See Warranty Information on www.sitelighting.com for complete details and exclusions.

DETERMINING YOUR EXISTING DISTRIBUTION

Philips Gardco luminaires feature a product identification label showing the catalog number of the luminaire, usually found on the HID socket. The catalog number indicates the distribution with the characters following the product prefix and configuration. For example: "EH-141FM ..." indicates an FM (Type 4) distribution, and "CA-1713 ..." indicates a Type 3 (III) distribution. The example to the right shows a "MP-1713" product identification label. For Circa and Gullwing luminaires, the type designation is followed by "XL". For example a "2XL" is a Type 2 (II) distribution.

Contact Philips Gardco or your Philips Gardco representative for more information if required. If desired, the lighting distribution may be changed by utilizing a retrofit distribution different than the existing, provided the new retrofit optic selected is available for the existing luminaire.


GARDCO LIGHTING
 SQ.41425 01/22/99
 MODEL: MP-1713
 LAMP: 175W MH M57 CLEAR
 VOLTS: 120
 AMPS: 1.8
 HZ: 60 **USE MINIMUM SUPPLY WIRE** 90 °C

Date luminaire was manufactured

"3" indicated within the circle shows a Type 3 (III) distribution. "FM" indicates a Type 4. "Q" indicates a Type 5.

Product identification label usually found on the HID lamp socket.

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