

GARDCO
by @ignify

Site & Area
PureForm
LED bollard



GARDCO
by @ignify

Wall Mount
PureForm
LED wall sconce



GARDCO
by @ignify

Site & Area
EcoForm
ECF-S small area light



LUMEC
by @ignify

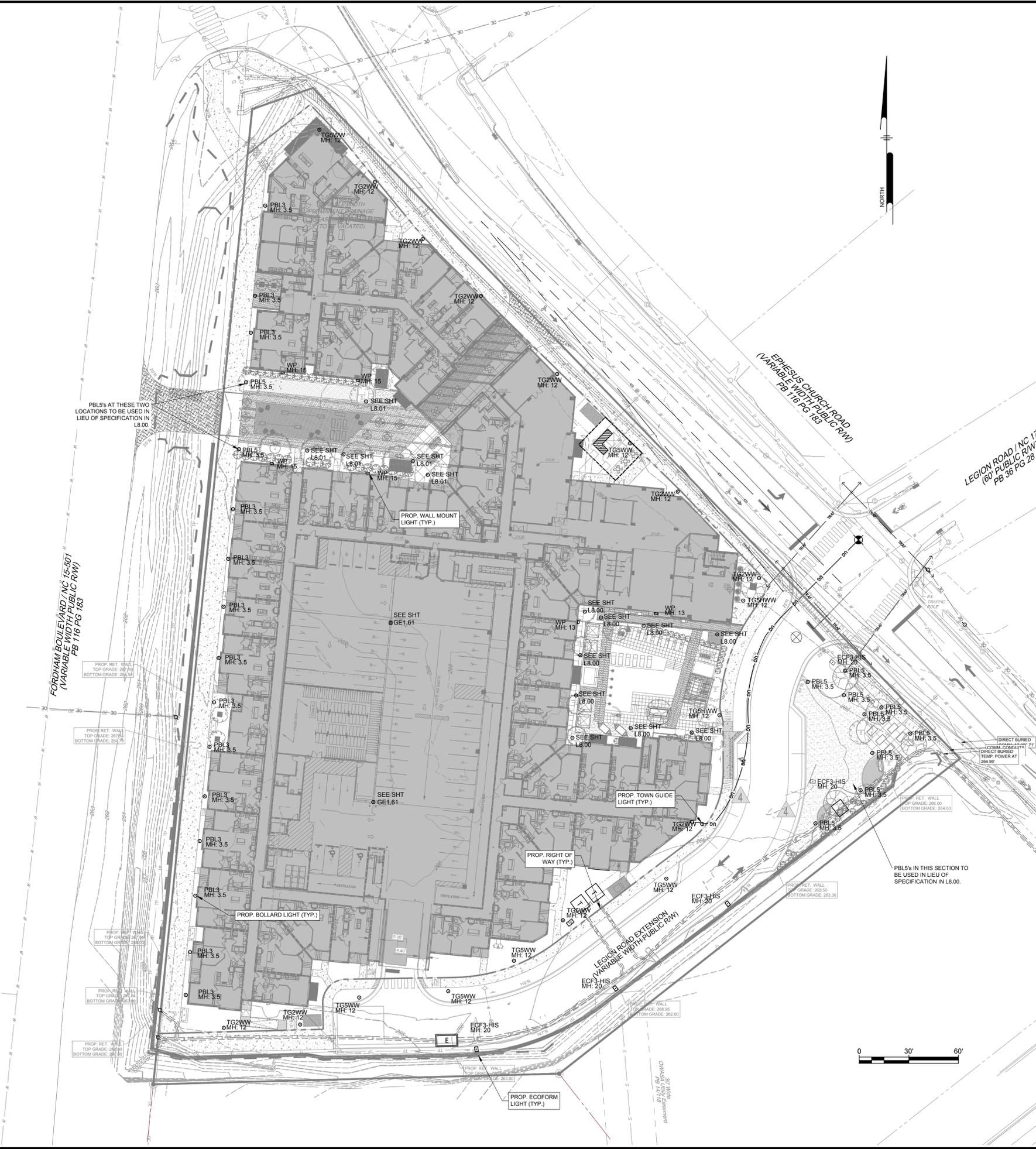
Urban
TownGuide
PBDP103
Classic T Post Top



Symbol	Label	QTY	Manufacturer	Catalog	Input Power
	ECF3-HIS	5	GARDCO	ECF-S-32L-700-NW-G2-3-HIS	72.9
	PBL3	14	GARDCO	PBL-14L-450-WW-G2-3-UNV	23.1
	PBL5	12	GARDCO	PBL-14L-450-WW-G2-5-UNV	23.1
	TG2WW	9	LUMEC	PBDP103-50W64LED3K-MP-PC-C-LE2	50.3
	TG5WW	7	LUMEC	PBDP103-50W64LED3K-MP-PC-C-LE5	50.3
	TG5HWW	2	LUMEC	PBDP103-95W128LED3K-MP-PC-C-LE5	95.5
	WP	6	GARDCO	PWS-48L-300-WW-G2-4	46.8

GENERAL NOTES:

- REFER TO LANDSCAPE DRAWINGS FOR ADDITIONAL LANDSCAPE LIGHTING.
- REFER TO ELECTRICAL DRAWINGS FOR CIRCUITING ON FIXTURES A, G, GA, H2, WP.
- THERE ARE ADDITIONAL ARCHITECTURAL FIXTURES FOR EMERGENCY OR ENTRY LIGHTING, AND LOW VOLTAGE AMENITY LIGHTING THAT ARE NOT INCLUDED IN THIS PHOTOMETRIC ANALYSIS.
- SEE SHEET CS2202 FOR OVERALL SITE PHOTOMETRIC PLAN.



Pennoni
Firm License F-1287

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ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

MILLENNIUM CHAPEL HILL
1301 FORDHAM BLVD
CHAPEL HILL, NORTH CAROLINA

LIGHTING PLAN

MILLENNIUM CHAPEL HILL APARTMENTS, LLC
3411 RICHMOND AVENUE, FIFTH FLOOR
HOUSTON, TX 77046

DATE	NO.	REVISIONS	BY
01/16/2024	S	ASI #14 SITE REVISIONS	LEW
08/02/2024	Q	ASI #12	LEW
11/03/2023	13	REVISIONS PER FINALIZED DUKE ENERGY DESIGN	CRP
06/03/2023	12	RFI #88	CRP
02/17/2023	E	ISSUED FOR CONSTRUCTION	CRP

ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON THE EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATES AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

PROJECT: DINC20001
DATE: 06/25/2021
DRAWING SCALE: 1" = 30'
DRAWN BY: KNB
APPROVED BY: PCB

CS2201
SHEET 16 OF 40

PROJECT: DINC20001 - 462014-14-10-PM BY: Lauren Nalle - PLOTTING: Pennoni NC.sds U:\Users\LDINC\DINC20001 - 462014-14-10-PM BY: Lauren Nalle - PLOTTING: Pennoni NC.sds



Gardco PureForm LED bollard PBL integrates a sleek, low profile design, extraordinary light output, and energy savings into an innovative pedestrian scale luminaire. PureForm bollard features a high performance optical system designed to achieve wide spacings and full cutoff performance. Three heights available for a customized look. IP66 optics ensure dust or moisture will never interfere with performance.

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

Ordering guide

example: **PBL-42-14L-450-NW-G2-5-UNV**

Prefix	Shaft Height	Number of LEDs	Drive Current	LED Color - Generation	Distribution	Emergency	Voltage
PBL							
PBL PureForm bollard	36 Standard Shaft 36" 42 Standard Shaft 42" 60 Standard Shaft 60"	14L 14 LEDs (full ring)	100 100mA 200 200mA 350 350mA 450 450mA 600 600mA 800 800mA 1050 1050mA	WW-G2 Warm White 3000K, 70 CRI Generation 2 NW-G2 Neutral White 4000K, 70 CRI Generation 2 CW-G2 Cool White 5000K, 70 CRI Generation 2 ¹	Type 3 3 Type 3 Type 5 5 Type 5	Leave blank for no battery EBP Emergency battery ^{2,8,11}	120 120V 208 208V 240 240V 277 277V 347 347V 480 480V UNV 120-277V (50/60Hz)

Options					Finish
Dimming controls	Motion sensing	Photo-sensing	Electrical		
DD 0-10V External dimming (by others) ^{4,5} FAWS Field Adjustable ^{4,5} SW Interface module for SiteWise ^{3,4,5,6} LLC Wireless controls without PIR sensor ^{4,5,6} BL Bi-level functionality with motion sensor ^{4,12} DynaDimmer: Automatic Profile Dimming ^{4,5} CS50 Security 50% Dimming, 7 hours CM50 Median 50% Dimming, 8 hours CS30 Security 30% Dimming, 7 hours CM30 Median 30% Dimming, 8 hours	IMRI Integral infrared ^{7,12}	PCB Photocontrol Button ^{9,13}	Fusing F1 Single (120, 277, 347VAC) ⁹ F2 Double (208, 240, 480VAC) ⁹ F3 Canadian Double Pull (208, 240, 480VAC) ⁹ Surge Protection (10kA standard) SP2 Increased 20kA GFCI Ground Fault Interrupt Outlet ¹⁰	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. Extended lead times apply. Contact factory for details.
 2. Not available in 100, 200 or 350mA.
 3. Available in 120V or 277V only.
 4. Not available with other control options.
 5. Not available with motion sensor.

6. Not available with photocontrol.
 7. Available only with BL dimming control.
 8. Not available with SW, LLC, and CS/CM.
 9. Must specify input voltage.
 10. Available in 120V only.

11. Not available in 347 or 480V.
 12. Not available in 100, 200, and 1050mA.
 13. Not available with SW or LLC.



Gardco PureForm LED wall sconce PWS with precision optics offers a sleek, low profile design that will complement a range of architectural styles. PureForm wall sconce provides up to 21,800 lumens to accommodate multiple mounting heights, and is available with Type 2, 3, 4, as well as our back light control optics. 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-48L-500-NW-G2-2-UNV-DGY

Prefix	Number of LEDs	Drive Current	LED Color - Generation	Distribution	Emergency	Voltage	Options					Finish	
							Dimming controls	Motion-sensing lens	Photo-sensing	Electrical & Shield			
PWS													
PWS PureForm wall sconce	48L 48 LEDs	300 300mA	WW-G2 Warm White 3000K, 70 CRI Generation 2	2 Type 2	EBPC Emergency Battery Pack Cold Weather 1,3,10	UNV 120-277V	DD 0-10V External dimming (controls by others) ⁴ DCC Dual Circuit Control ^{4,5,6,9} FAWS Field Adjustable Wattage Selector ^{4,5} SW Interface Module for SiteWise ^{3,4,6} LCC Integral wireless module ^{4,6,7,11,14} BL Bi-level functionality ^{4,14} DynaDimmer: Automatic Profile Dimming ^{4,7} CS50 Security 50% Dimming, 7 hours CM50 Median 50% Dimming, 8 hours CS30 Security 30% Dimming, 7 hours CM30 Median 30% Dimming, 8 hours	IMRI2 ¹⁵ Integral with #2 lens IMRI3 ¹⁵ Integral with #3 lens	PCB Photocontrol Button ^{7,8,12}	Fusing F1 Single (120, 277, 347VAC) ⁸ F2 Double (208, 240, 480VAC) ⁸ F3 Canadian Double Pull (208, 240, 480VAC) ⁸ 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)		
	64L 64 LEDs	600 600mA	WY-G2 Warm Yellow 2700K, 80 CRI Generation 2 ²	3 Type 3		HVU 347-480V							
		400 400mA	NW-G2 Neutral White 4000K, 70 CRI Generation 2	4 Type 4	Leave blank to omit an emergency option	120 120V							
		500 500mA	CW-G2 Cool White 5000K, 70 CRI Generation 2	BLC Back light control		208 208V							
		600 600mA	AM-G2 Direct Amber (590nm) Generation 2 ^{2,13}			240 240V							
		700 700mA				277 277V							
		700 700mA				347 347V							
		800 800mA				480 480V							
		900 900mA											

- Only 300mA can be used with battery backup (EBPC) configuration.
- Extended lead times apply. Contact factory for details.
- Available only in 120 or 277V.
- Not available with other dimming control options.
- Not available with motion sensor.
- Not available with photocontrol.
- Not available in 347 or 480V.
- Must specify input voltage.
- Available with two modules per circuit (64L) at 600mA.
- Not available with DCC, SW, and CS/CM.
- Not available in 800 or 900mA.
- Not available with 64L.
- Must specify a motion sensor lens.
- Limited to max. 600mA configurations
- Not available with DD, DCC, and FAWS dimming control options.





Gardco EcoForm Gen-2 combines economy with performance in an LED area luminaire. Capable of delivering up to 27,800 lumens or more in a compact, low profile LED luminaire, EcoForm offers a new level of customer value. EcoForm features an innovative retrofit arm kit, simplifying site conversions to LED by eliminating the need to drill additional holes in most existing poles. Integral control systems available for further energy savings. Includes Service Tag, our innovative way to provide assistance throughout the life of the product.

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

Ordering guide

example: ECF-S-64L-900-NW-G2-AR-5-120-HIS-MGY

Prefix	Number of LEDs	Drive Current	LED Color - Generation	Mounting	Distribution	Voltage	Options					Finish	
							Dimming controls	Motion sensing lens	Photo-sensing	Electrical	Luminaire		
ECF-S													
ECF-S EcoForm site and area, small	32L 32 LEDs (2 modules)	365 365mA 530 530mA 700 700mA 1A 1050mA 1.2A 1200mA	WW-G2 Warm White 3000K, 70 CRI Generation 2 NW-G2 Neutral White 4000K, 70 CRI Generation 2 CW-G2 Cool White 5000K, 70 CRI Generation 2	AR Arm Mount (standard) ² <i>The following mounting kits must be ordered separately (See accessories)</i> SF Slip Fitter Mount ³ (fits to 2 ^{3/8} " O.D. tenon) WS Wall mount with surface conduit rear entry permitted RAM Retrofit arm mount kit ²	Type 2 2 Type 2 2-90 Rotated left 90° 2-270 Rotated right 270° Type 3 3 Type 3 3-90 Rotated left 90° 3-270 Rotated right 270° Type 4 4 Type 4 4-90 Rotated left 90° 4-270 Rotated right 270° Type 5 5 Type 5 5W Type 5W AFR Auto Front Row AFR-90 Auto Front Row, Rotated left 90° AFR-270 Auto Front Row, Rotated right 270°	120 120V 208 208V 240 240V 277 277V 347 347V 480 480V UNV 120-277V (50/60Hz) HVU 347-480V (50/60Hz)	DD 0-10V External dimming (by others) ⁴ DCC Dual Circuit Control ^{4,5,6} FAWS Field Adjustable Wattage Selector ^{4,5} SW Interface module for SiteWise ^{4,6,7} LLC Integral wireless module ^{4,6,8,17} BL Bi-level functionality ^{4,17} DynaDimmer: Automatic Profile Dimming CS50 Safety 50% Dimming, 7 hours ^{4,8} CM50 Median 50% Dimming, 8 hours ^{4,8} CS30 Safety 30% Dimming, 7 hours ^{4,8} CM30 Median 30% Dimming, 8 hours ^{4,8}	IMR13 Integral with #3 lens ¹⁵ IMR17 Integral with #7 lens ¹⁶	PCB Photocontrol Button ^{8,9} TLRD5 Twist Lock Receptacle 5 Pin ¹⁰ TLRD7 Twist Lock Receptacle 7 Pin ¹⁰ TLRPC Twist Lock Receptacle w/ Photocell ^{9,11}	Fusing F1 Single (120, 277, 347VAC) ⁹ F2 Double (208, 240, 480VAC) ⁹ Pole Mount Fusing FP1 Single (120, 277, 347VAC) ⁹ FP2 Double (208, 240, 480VAC) ⁹ FP3 Canadian Double Pull (208, 240, 480VAC) ⁹ Surge Protection (10kA standard) SP2 Increased 20kA	Square Pole Adapter included in standard product TB Terminal Block ¹² RPA Round Pole Adapter (fits to 3"-3.9" O.D. pole) ¹³ HIS Internal Housing Side Shield ¹⁴	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)	

- BL-IMR13/7 equipped with out-boarded sensor housing when voltage is HVU (347-480V)
- Mounts to a 4" round pole with adapter included for square poles.
- Limited to a maximum of 45 degrees aiming above horizontal.
- Not available with other dimming control options.
- Not available with motion sensor.
- Not available with photocontrol.
- Available only in 120 or 277V.
- Not available in 347 or 480V
- Must specify input voltage.
- Dimming will not be connected to NEMA receptacle if ordering with other control options.
- Not available in 480V. Order photocell separately with TLRD5/7.
- Not available with DCC.
- Not available with SF and WS. RPAs provided with black finish standard.
- HIS not available with Type 5 and 5W optics.
- Not available with DD, DCC, and FAWS dimming control options.
- Not available with DD, DCC, FAWS and LLC dimming control options.
- Must specify a motion sensor lens.





Lumec **TownGuide** family is a functional outdoor LED lighting range for the lower post-top applications. **TownGuide** is most suitable for parks and recreation, city centers, pedestrian areas and bike paths, campuses, public areas and green projects.

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

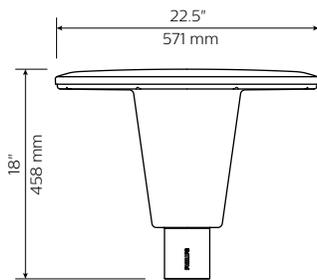
Ordering guide

Example: PBDP103-101W128LED4K-MP-PC-C-LE5-UNV-CDMGM25-RCD-PH8-P120-12-GR

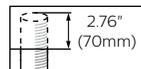
Series	Lamp	Lamp type	Globe material	Globe finish	Optical system	Voltage	Driver options	House Side Shield	Luminaire options	Luminaire accessory	Pole type & height	Finish
PBDP103		MP	<input type="checkbox"/>			<input type="checkbox"/>	DMG	<input type="checkbox"/>				
PBDP103 Classic T	3000K 50W64LED3K 61W64LED3K 75W96LED3K 95W128LED3K 101W128LED3K 4000K 50W64LED4K 61W64LED4K 75W96LED4K 95W128LED4K 101W128LED4K	MP	PC FO	C	LE2 LE3 LE5	UNV HVU		HS	N RCD7 ¹	PH8 PH9	P120-8 P120-10 P120-12 P120-14 P150-8 P150-10	BKST BRST GR MGY WHST

1. Use of Luminaire accessory **PH8** or **PH9** is required to ensure proper illumination.

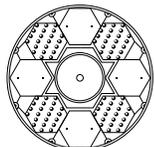
Luminaire



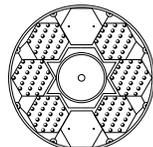
EPA: 1.001sq. ft.
Weight: 15.98 lbs



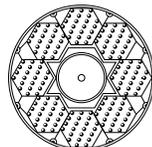
Arrangement of the LED modules in the luminaire, viewed from the road axis.



4 modules (64LED)



6 modules (96LED)



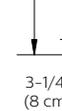
8 modules (128LED)

Poles

P120



P150





Lumec **TownGuide** family is a functional outdoor LED lighting range for the lower post-top applications. **TownGuide** is most suitable for parks and recreation, city centers, pedestrian areas and bike paths, campuses, public areas and green projects.

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

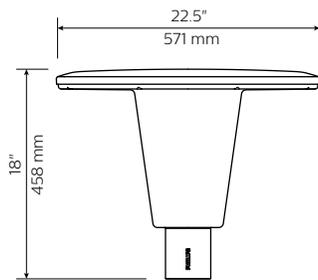
Ordering guide

Example: PBDP103-101W128LED4K-MP-PC-C-LE5-UNV-CDMGM25-RCD-PH8-P120-12-GR

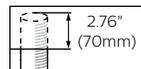
Series	Lamp	Lamp type	Globe material	Globe finish	Optical system	Voltage	Driver options	House Side Shield	Luminaire options	Luminaire accessory	Pole type & height	Finish
PBDP103		MP	<input type="checkbox"/>			<input type="checkbox"/>	DMG	<input type="checkbox"/>				
PBDP103 Classic T	3000K 50W64LED3K 61W64LED3K 75W96LED3K 95W128LED3K 101W128LED3K 4000K 50W64LED4K 61W64LED4K 75W96LED4K 95W128LED4K 101W128LED4K	MP	PC FO	C	LE2 LE3 LE5	UNV HVU		HS	N RCD7 ¹	PH8 PH9	P120-8 P120-10 P120-12 P120-14 P150-8 P150-10	BKST BRST GR MGY WHST

1. Use of Luminaire accessory **PH8** or **PH9** is required to ensure proper illumination.

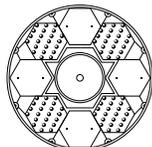
Luminaire



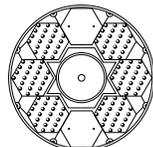
EPA: 1.001sq. ft.
Weight: 15.98 lbs



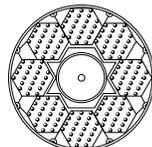
Arrangement of the LED modules in the luminaire, viewed from the road axis.



4 modules (64LED)



6 modules (96LED)



8 modules (128LED)

Poles

P120



P150

