



Gardco PureForm LED area large P34 features a sleek, low profile design and optimal performance. PureForm area large is designed to achieve maximum pole spacing, with lumen output up to 50,000 lumens. Multiple distribution and shielding options are available to achieve maximum control. A full range of control options provides additional energy savings.

Project: _____

Location: _____

Cat.No: _____

Type: _____

Lamps: _____ Qty: _____

Notes: _____

Ordering guide

example: **P34-96L-800-NW-G2-AR-5-120-F1-MGY**

Prefix	Number of LEDs	Drive Current	LED Color - Generation	Mounting	Distribution	Voltage
P34						
P34 PureForm site and area, 34"	96L 96 LEDs (6 modules)	600 600mA ¹⁶ 800 800mA 900 900mA 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 WY-G2 Warm Yellow 2700K, 80 CRI Generation 2 ^{1,16} AM-G2 Direct Amber (590nm) Generation 2 ^{1,16}	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 1/8" 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° BLC Back Light Control BLC-90 Back Light Control rotated at 90° BLC-270 Back Light Control rotated at 270°	120 120V 208 208V 240 240V 277 277V 347 347V 480 480V UNV 120-277V (50/60Hz) HVU 347-480V (50/60Hz)
	128L 128 LEDs (8 modules)	600 600mA ¹⁶ 900 900mA 1050 1050mA				
Options						
Dimming controls		Motion sensing	Photo-sensing	Electrical	Luminaire	Finish
DD 0-10V External dimming (by others) ^{4,5} DCC Dual Circuit Control ^{4,5,6,15} FAWS Field Adjustable ^{4,5} SW Interface module for SiteWise ^{4,6,7} LLC3 Integral wireless module with #3 lens ^{4,5,6,8} LLC4 Integral wireless module with #4 lens ^{4,5,6,8} BL Bi-level functionality with motion sensor ⁴ DynaDimmer: Automatic Profile Dimming CS50 Security 50% Dimming, 7 hours ^{4,8} CM50 Median 50% Dimming, 8 hours ^{4,8} CE50 Economy 50% Dimming, 9 hours ^{4,8} DA50 All Night 50% Dimming ^{4,8} CS30 Security 30% Dimming, 7 hours ^{4,8} CM30 Median 30% Dimming, 8 hours ^{4,8} CE30 Economy 30% Dimming, 9 hours ^{4,8} DA30 All Night 30% Dimming ^{4,8}		IMR13 Integral with #3 lens IMR17 Integral with #7 lens IMRO Pole mounted motion sensor (see accessories)	PCB Photocontrol Button ^{8,9} TLRDS 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 F3 Canadian Double Pull (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 as standard 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)

- Extended lead times apply. Contact factory for details.
- 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 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
- TB not available with DCC

- Not available with SF and WS. RPAs provided with black finish standard
- HIS not available with Type 5, 5W, and BLC optics
- Not available with 96L (6 modules)
- Amber LEDs (AM) available only in 600mA

P34 PureForm LED area luminaire

Site & Area

PureForm P34 Accessories (ordered separately, field installed)

Controls Accessories	Shielding Accessories	Mounting Accessories
Pole Mount Motion Sensor MS-A-120V ¹⁷ 120V Input MS-A-277V ¹⁷ 277V Input Wireless systems Remote mount module LLCR3-(F) ¹⁷ #3 lens LLCR4-(F) ¹⁷ #4 lens Central Remote Motion Response (used connected to SiteWise main panel) MS2-A-FVR-3 MS2-A-FVR-7	House Side shield <i>Standard orientation:</i> HIS-96-V ¹⁴ Internal House Side Shield for 96 LEDs (6 modules) HIS-128-V ¹⁴ Internal House Side Shield for 128 LEDs (8 modules) <i>At 90 or 270 orientation:</i> HIS-96-H ¹⁴ Internal House Side Shield for 96 LEDs (6 modules) HIS-128-H ¹⁴ Internal House Side Shield for 128 LEDs (8 modules)	PureForm PTF2 (pole top fitter fits 2 3/8-2 1/2" OD x 4" depth tenon) PTF2-P26/34-1-90-(F) 1 luminaire at 90° PTF2-P26/34-2-90-(F) 2 luminaires at 90° PTF2-P26/34-2-180-(F) 2 luminaires at 180° PTF2-P26/34-3-90-(F) 3 luminaires at 90° PTF2-P26/34-4-90-(F) 4 luminaires at 90° PTF2-P26/34-3-120-(F) 3 luminaires at 120° PureForm PTF3 (pole top fitter fits 3-3 1/2" OD x 6" depth tenon) PTF3-P26/34-1-90-(F) 1 luminaire at 90° PTF3-P26/34-2-90-(F) 2 luminaires at 90° PTF3-P26/34-2-180-(F) 2 luminaires at 180° PTF3-P26/34-3-90-(F) 3 luminaires at 90° PTF3-P26/34-4-90-(F) 4 luminaires at 90° PTF3-P26/34-3-120-(F) 3 luminaires at 120° PureForm PTF4 (pole top fitter fits 3 1/2-4" OD x 6" depth tenon) PTF4-P26/34-1-90-(F) 1 luminaire at 90° PTF4-P26/34-2-90-(F) 2 luminaires at 90° PTF4-P26/34-2-180-(F) 2 luminaires at 180° PTF4-P26/34-3-90-(F) 3 luminaires at 90° PTF4-P26/34-4-90-(F) 4 luminaires at 90° PTF4-P26/34-3-120-(F) 3 luminaires at 120° P34-SF-G2-(F) Slip Fitter Mount (fits to 2 3/8" O.D. tenon) P34-RAM-G2-(F) Retrofit Arm mount kit P34-WS-G2-(F) Wall mount with surface conduit rear entry permitted P34-BD-G2 Bird deterrent (F) = Specify finish

14. HIS not available with Type 5, 5W, and BLC optics

17. DD option required

P34 PureForm LED area luminaire

Site & Area

LED Wattage and Lumen Values

Ordering Code	Total LEDs	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)
P34-96L-800-NW-G2-x	96	800	4000	232	29545	B4-U0-G3	128	28932	B3-U0-G4	125	29585	B3-U0-G4	128
P34-96L-900-NW-G2-x	96	900	4000	263	32636	B4-U0-G4	124	31959	B3-U0-G4	122	32680	B3-U0-G5	124
P34-96L-1050-NW-G2-x	96	1050	4000	310	36434	B4-U0-G4	118	35678	B3-U0-G5	115	36483	B3-U0-G5	118
P34-128L-900-NW-G2-x	128	900	4000	350	42584	B4-U0-G4	122	41700	B4-U0-G5	119	42641	B3-U0-G5	122
P34-128L-1050-NW-G2-x	128	1050	4000	414	47840	B4-U0-G4	115	46847	B4-U0-G5	113	47904	B4-U0-G5	116

Ordering Code	Total LEDs	LED Current (mA)	Color Temp.	Average System Watts	Type 5			Type 5W			Type AFR			Type 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)
P34-96L-800-NW-G2-x	96	800	4000	232	30872	B5-U0-G4	133	30131	B5-U0-G4	130	30715	B4-U0-G3	133	22261	B1-U0-G4	96
P34-96L-900-NW-G2-x	96	900	4000	263	34102	B5-U0-G4	130	33284	B5-U0-G4	127	33928	B4-U0-G3	129	24589	B1-U0-G4	94
P34-96L-1050-NW-G2-x	96	1050	4000	310	38071	B5-U0-G4	123	37157	B5-U0-G4	120	37877	B4-U0-G3	122	27451	B1-U0-G4	89
P34-128L-900-NW-G2-x	128	900	4000	350	44497	B5-U0-G4	127	43429	B5-U0-G5	124	44269	B4-U0-G4	127	32084	B1-U0-G5	92
P34-128L-1050-NW-G2-x	128	1050	4000	414	49989	B5-U0-G5	121	48789	B5-U0-G5	118	49733	B4-U0-G4	120	36044	B1-U0-G5	87

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.

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	Driver mA	Calculated L ₇₀ Hours	L ₇₀ per TM-21	Lumen Maintenance % at 60,000 hrs
25°C	up to 1050 mA	>100,000 hours	>54,000 hours	>89%

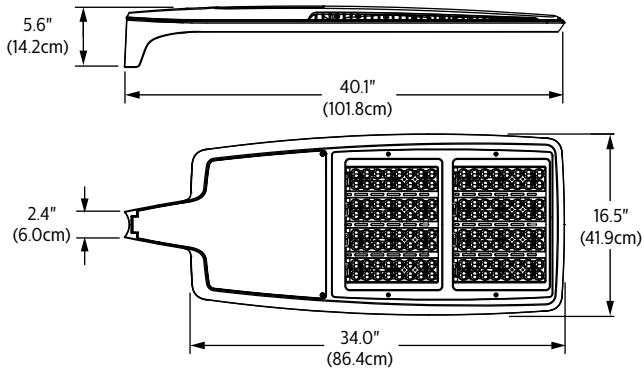
P34 PureForm LED area luminaire

Site & Area

Dimensions

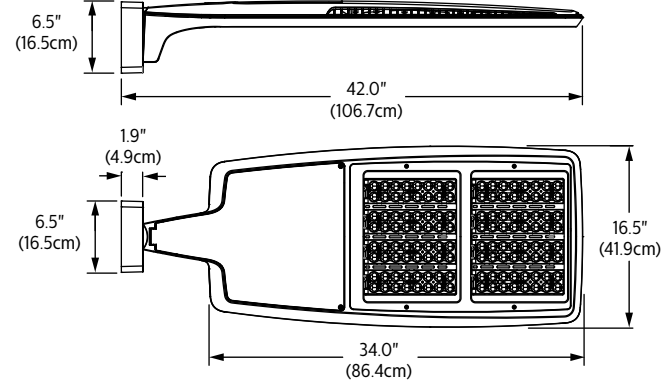
Standard Arm (AR)

Weight: 35 Lbs (15.8 Kg) EPA: 0.30ft² (.028m²)



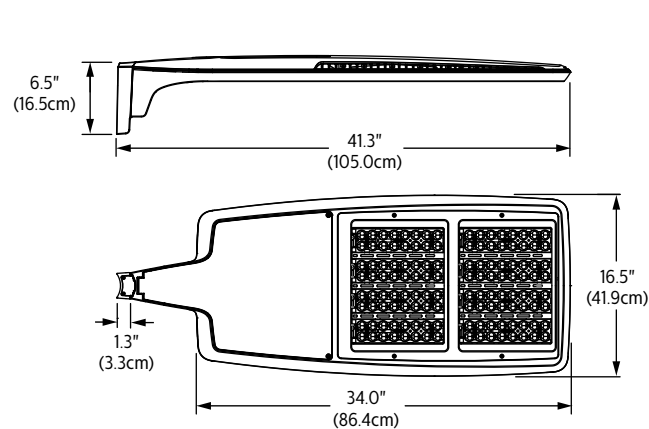
Wall (WS)

Weight: 37 Lbs (16.8Kg) EPA: 0.35ft² (.033m²)



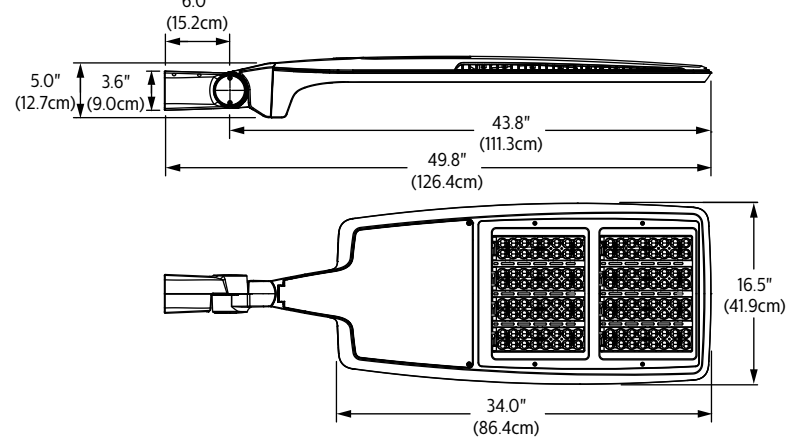
Retrofit Arm (RAM)

Weight: 39 Lbs (17.7 Kg) EPA: 0.33ft² (.031m²)

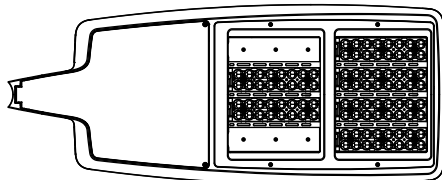


Slip fitter (SF)

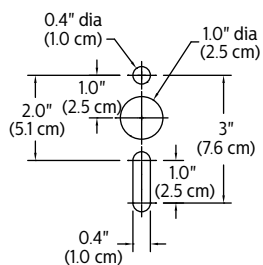
Weight: 40 Lbs (18.1 Kg) EPA: 0.43ft² (.040m²)



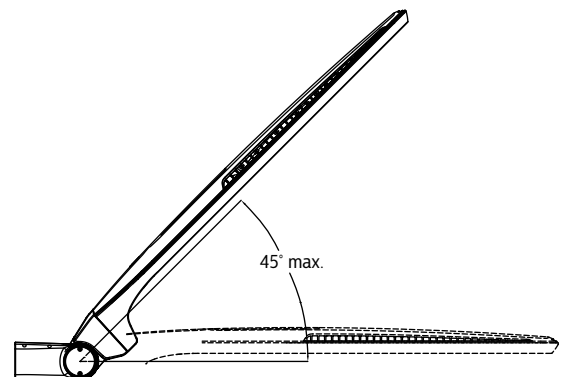
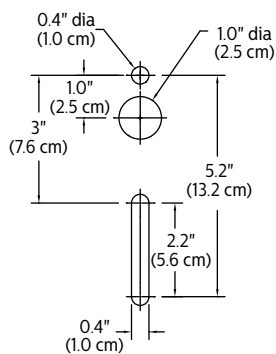
6 module configuration



Standard Arm (AR) drill pattern



Retrofit arm (RAM) drill pattern



P34 PureForm LED area luminaire

Site & Area

Specifications

Housing

Two-piece sealed enclosure with main part of the housing designed as the structural and heat sink frame enclosed by cover to give its unique form. It also includes heat sinks, integral arm and separate, self-retained hinged, one-piece die cast door frame. All die-cast parts made of low copper die cast aluminum alloy for a high resistance to corrosion. The sleek profile with optimized surface area allows housing to provide excellent convection heat transfer with minimum use of heat fins, giving the freedom to have a clean minimalist aesthetic design. Luminaire housing rated to IP65, tested in accordance to Section 9 of IEC 60598-1.

Vibration resistance

Luminaire is tested and rated 1.5G over 100,000 cycles conforming to standards set forth by ANSI C136.31-2010. Testing includes vibration to 1.5G acceleration 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 6 and 8 modules or 96 and 128 LEDs. Module is RoHS compliant. Color temperatures: 3000K +/- 125K, 4000K, 5000K +/- 200K. Minimum CRI of 70. Also available in 2700K and Amber (590nm) with extended lead times. Contact factory for details. LED light engine is rated IP66 in accordance to Section 9 of IEC 60598-1.

Energy saving benefits

System efficacy up to 129 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, 3, 4, 5, 5W, and AFR distributions available. Internal Shield option mounts to LED optics and is available with Type 2, 3, 4, and AFR distributions including a dedicated BLC optic to provide the best backlight control possible for those stringent requirements around property lines. Types 2, 3, 4, AFR, and BLC when specified and used as rotated, are factory set only. Performance tested per LM-79 and TM-15 (IESNA) certifying its photometric performance. Luminaire designed with 0% uplight (UO 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. Round Pole Adapter (RPA) required for 3-3.9" poles. 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 slipfitter and wall mounting accessories.

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.

Dual Circuit Control (DCC): Luminaire equipped with the ability to have two separate circuits controlling drivers and light engines independently. Permits separate switching of separate modules controlled by use of two sets of leads, one for each circuit. Not recommended to be used with other control options, motion response, or photocells.

SiteWise (SW): SiteWise system includes a controller fully integrated in the luminaire that enables the luminaires to communicate with a dimming signal transmitter cabinet located on site using patented central dimming technology. A locally accessible mobile app allows users to access the system and set functionalities such as ON/OFF, dimming levels and scheduling. SiteWise is available with motion response options in order to bring the light back to 100% when motion is detected. Cannot be used with other control options or photocell options. Additional functionalities are available such as communication with indoor lighting and connection to BMS systems. Complete information on the control system can be found on the SiteWise website at signify.com/sitewise.

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%

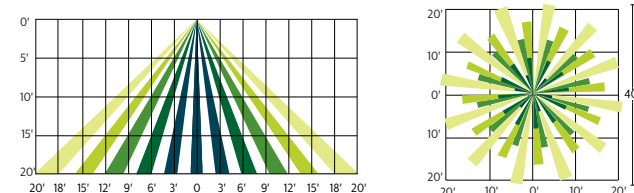
Automatic Profile Dimming (CS/CM/CE/CA): Standard dimming profile of 30% or 50% provide flexibility towards energy savings goals while optimizing light levels during specific dark hours. When used in combination with not programmed motion response it overrides the controller's schedule when motion is 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)
- **CE50/CE30:** Economy for 9 hours night duration (Ex., 9 PM - 6 AM)
- **CA50/CA30:** for all night (during all dark hours)

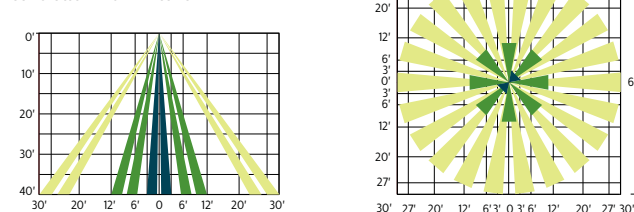
Cannot be used with other control options.

Wireless system (LLC): Optional wireless controller integral to luminaire ready to be connected to a Limelight 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. Equipped with motion response with #3 lens (LLC3) for 8-25' mounting heights or #4 lens (LLC4) for 25-40' mounting heights. Also available with remote pod accessory where pod is mounted separate from luminaire to pole or wall.

LLC3/LLCR3 Luminaire or remote mount controller with #3 lens



LLC4/LLCR4 Luminaire or remote mount controller with #4 lens



P34 PureForm LED area luminaire

Site & Area

Specifications (cont'd)

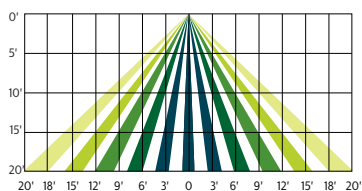
Motion response options

Bi-Level Infrared Motion Response (BL-IMRI): Motion Response module is mounted integral to luminaire factory pre-programmed to 50% dimming when not ordered with other control options. P50-IMRI 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).

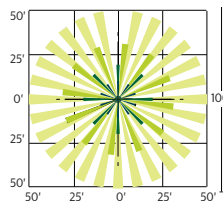
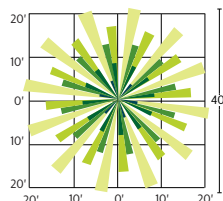
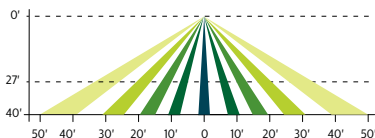
Infrared Motion Response with Other Controls: When used in combination with other controls (Automatic Dimming Profile and SiteWise), motion response device will simply override controller's schedule with the added benefits of a combined dimming profile and sensor detection. In this configuration, the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

Infrared Motion Response Lenses (IMRI3/IMRI7): Infrared Motion Response Integral module is available with two different sensor lens types to accommodate various mounting heights and occupancy detection ranges. Lens #3 (IMRI3) is designed for mounting heights up to 20' with a 40' diameter coverage area. Lens #7 is designed for higher mounting heights up to 40' with larger coverage areas up to 100' diameter coverage area. See charts for approximate detection patterns:

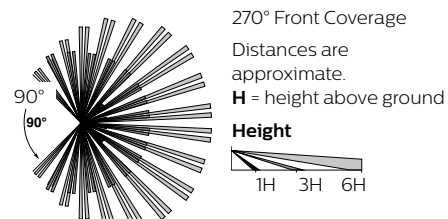
IMRI3 Luminaire or remote mount controller with #3 lens



IMRI7 Luminaire or remote mount controller with #7 lens



Infrared Motion Response Outboard (IMRO): Infrared Motion Response Outboard combines the benefits of both automatic profile dimming and motion response. PIR sensor features a pole mounted motion sensor per pole (order MS-A-120 or MS-A-277 separately). IMRO sensors require single voltage 120V or 277V input. If motion is detected during the time that the luminaire is operating at profile dimming mode specified, the luminaire returns to 100% power and light output. The luminaire remains on high until no motion is detected for the duration period, after which the luminaire returns back to automatic profile dimming. Duration period is factory set at 15 minutes, and is field adjustable from 5 minutes up to 15 minutes. The area motion detector provides coverage equal to up to 6 times the sensor height above ground, 270° from the front-center of the sensor (see chart for approximate detection patterns).



Pole Details: IMRO requires that the pole include additional hand hole 15 feet above the pole base, normally oriented 180° to the standard hand hole. For Gardco poles, order the pole with the Motion Sensor Mounting (MSM) option which includes the hand hole and a special hand hole cover plate for the sensor with a 1/2" NPT receptacle centered on the hand hole cover plate into which the motion sensor mounts. Once the motion sensor is connected to the hand hole cover plate, then wiring connections are completed in the pole. The plate (complete with motion sensor attached and wired) is then mounted to the hand hole. If poles are supplied by others, the customer is responsible for providing suitable mounting accommodations for the motion sensor in the pole (see Gardco Poles specification sheets for more information).

Electrical

Twist-Lock Receptacle (TLRD5/TLRD7/ TLRPC): Twist Lock Receptacle with 5 pins enabling dimming or with 7 pins with additional functionality (by others) can be used with a twistlock photoelectric cell or a shorting cap. Dimming Receptacle Type B (5-pin) and 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 housing. When specifying receptacle with twistlock photoelectric cell, voltage must be specified.

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 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): 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.

P34 PureForm LED area luminaire

Site & Area

Specifications (cont'd)

Listings

UL/cUL wet location listed to the UL 1598 standard, suitable for use in ambient temperatures from -40° to 40°C (-40° to 104°F). Most PureForm P34 configurations are qualified under Premium DesignLights Consortium® category. Consult DLC Qualified Products list for more details.

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](https://www.signify.com/warranties) for complete details and exclusions.

