



Project: \_\_\_\_\_  
 Location: \_\_\_\_\_  
 Cat. #: \_\_\_\_\_  
 Type: \_\_\_\_\_  
 Quantity: \_\_\_\_\_

LED

## PBL A G2 4N | LED Aisle High Bay

### Features:

- High performance LED technology
- 0-10V dimming drivers standard
- DALI drivers available
- Field replaceable LED boards and drivers
- A wide variety of lumen packages allows for flexibility in design and helps maximize energy savings
- Enhanced specular reflector designed to provide even vertical illumination on shelving and maximize lighting in the aiseways
- Buy American Act compliant *(All base luminaires are BAA compliant. Addition of options may change eligibility. Contact factory for details)*

### Applications:

Suitable for most commercial, industrial and institutional applications

- Warehouse aisles
- Corridors
- Cold/Frozen Storage *(cold temperature rules apply. Refer to warranty document at [www.lumenfocus.com/support](http://www.lumenfocus.com/support) for details)*

### Ambient Operating Temp.:

- -30°C to 45°C

### Construction:

- Housing is precision brake formed from heavy gauge cold rolled steel with highly durable white finish
- LED tray is precision brake formed from highly reflective aluminum

### Certifications:

- UL 1598 listed for US and Canada, suitable for damp locations
- DesignLights Consortium qualified on specific configurations (refer to DLC qualified products list for exact model numbers) <http://designlights.org/>



**10 YEAR**  
 EXTENDED  
 WARRANTY  
 AVAILABLE ON  
 CERTAIN MODELS

### Predicted L70 Lifetime:

- L70: 174,000 hrs (calculated)
- L80: 107,000 hrs (calculated)
- L90: 49,000 hrs (reported)
- 86% lumen maintenance @ 72,000 hrs *(based on LM80 and insitu laboratory testing)*

### Warranty:

- 5 year limited system warranty - see [www.LumenFocus.com](http://www.LumenFocus.com) for complete warranty terms and conditions
- 10 year warranty option available on specific models *(Not available on all models. Certain conditions apply. Consult factory or sales representative for details.)*



Ordering Guide:

example: PBL A G2 4N MD UV 850 QC C6 OS

Series	Version	Length	Output	Voltage	CRI/CCT	Hanging	Controls	Options
PBL A	G2	4N						
PBL A	G2 Gen 2	4N 4' - Narrow Body	LW Low	UV 120-277	835 80 CRI/3500K	Blank None	Blank No Controls	Blank No Options
			MD Medium	34 347V	840 80 CRI/4000K	QC 10' Quick Hang Cable Kit	ZOS Occupancy Sensor (On/Off)	EXT10 10-Year Extended Warranty <sup>(5)</sup>
			HI High	48 480V	850 80 CRI/5000K	QC20 20' Quick Hang Cable Kit	ZOSD Occupancy Sensor (On/Off/Dim)	C6 6' Single Circuit Cord
			VH Very High				ZOFD1 Leviton Bluetooth-enabled Programmable Dimming/Occupancy/Daylight Harvesting Sensor with Grouping (120-277V) <sup>(1)</sup>	C65W 6' Single Circuit Cord with Low Voltage Connections
							ZOFDU Leviton Bluetooth-enabled Programmable Dimming/Occupancy/Daylight Harvesting Sensor with Grouping, Scheduling (120-480V) <sup>(1)</sup>	C10 10' Single Circuit Cord
							Z221BL_ Wattstopper Programmable Photo/Motion Multi-Voltage Sensor (high/low/off) <sup>(2)</sup>	C105W 10' Single Circuit Cord with Low Voltage Connections
							Z321BL_ Wattstopper Bluetooth-enabled Programmable Photo/Motion Multi-Voltage Sensor (high/low/off) <sup>(2)</sup>	D6 6' Dual Circuit Cord
							ZPC Photocell	D10 10' Dual Circuit Cord
							ZOSMHB Leviton High Bay Microwave 0-10V Multi-Level Occupancy Sensor with Photocell <sup>(3)</sup>	P(NEMA) Plug (Specify NEMA configuration)
							ZENLC Enlighted Ruggedized Sensor with Dimming/Occupancy/Daylight Harvesting and Enlighted Connected System <sup>(4)</sup>	SC Safety Cable
							ZENLI Enlighted Ruggedized Sensor with Dimming/Occupancy/Daylight Harvesting and Enlighted IoT System <sup>(4)</sup>	F Fuse
								EM6 6.5W Emergency Pack <sup>(6)</sup>
								EM10 10W Emergency Pack <sup>(6)</sup>
								EM14 14W Emergency Pack <sup>(6)</sup>
								SDT(480V) 480V to 277V Step Down Transformer
								CC Conformal Coating
								LVL 0-10V Dimming Leads for Easy Field Access
								AC Aligner Clips for Continuous Row Mounting
								BAA Buy American Act Compliant

Notes

- <sup>(1)</sup> For 8' to 40' mounting heights. See Page 4 for more details.
- <sup>(2)</sup> " " = lens type. See Page 4 for lens descriptions.
- <sup>(3)</sup> 120-277V Only. Max ceiling height is 50 feet. See page 4 for more details.
- <sup>(4)</sup> Max ceiling height for Enlighted Ruggedized sensor 50 feet. See Page 5 for more details on advanced controls.
- <sup>(5)</sup> Not available on all models. Certain conditions apply. Consult factory or sales representative for details.
- <sup>(6)</sup> 120-277V / 0°C-55°C ambient. To estimate lumen output in emergency mode, multiply EM wattage by the Lumens per Watt of the luminaire it is installed in.  
ex. PBL A G2 4N MD UV 850 EM14 → 169.8 LPW x 14W = 2,377 lm


Accessories (order separately)

- WG(PBLA4N) Wire Guard
- WGE(PBLA4N) Extended Wire Guard for use with end-mounted sensor


Controls Accessories (order separately)



**For Enlighted Controls**  
WS-2-00 Enlighted Remote Control Wall Switch (for Enlighted Connected & IoT)



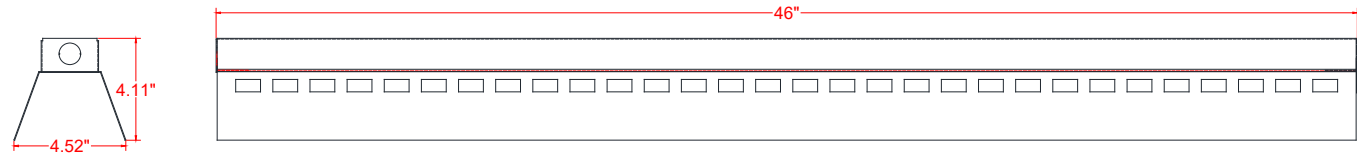
**For Z221BL\_ Sensor**  
FSIR-100 Wireless Configuration Tool



**For ZOSMHB Sensor**  
ZLS0R Wireless Configuration Tool



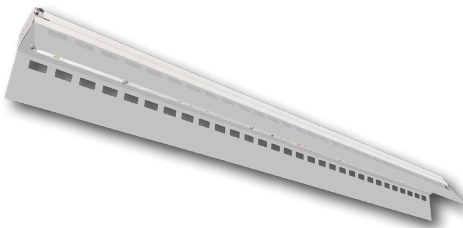
Schematic:



Performance Chart:

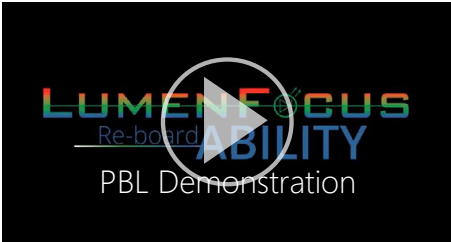
Catalog #	Watts	Lumens (835)	LPW (835)	Lumens (840)	LPW (840)	Lumens (850)	LPW (850)
PBL A G2 4N LW UV 8xx	47.2	7743.8	164.2	8159.9	173.0	8159.9	173.0
PBL A G2 4N MD UV 8xx	59.9	9659.4	161.2	10178.5	169.8	10178.5	169.8
PBL A G2 4N HI UV 8xx	71.8	11542.8	160.9	12163.2	169.5	12163.2	169.5
PBL A G2 4N VH UV 8xx	86.5	13614.2	157.3	14345.8	165.8	14345.8	165.8

Lumen Adjustment Factors: WG: 0.95



LUMENFOCUS  
Re-boardABILITY

The PBL A G2 features field replaceable boards and drivers. This allows you to upgrade to more efficient technology in the future. Or, in the rare event of a failure, you can rapidly replace defective components. Re-boardABILITY helps to ensure you won't get stuck with an obsolete light fixture. [Learn more about Re-boardABILITY here.](#)



[Click here for a video demonstration of the re-boarding process on a PBL.](#)  
Note: Exact time varies depending on the model.



## Controls Summary:

Control Code	Type	Capabilities	Communication
ZOS	Motion (PIR)	On/Off	Wired
ZOSD	Motion (PIR), Photosensor	On/Low/Off	Wired 1-10V
ZOFD1	Motion (PIR), Daylight Harvesting	High/Low/Off, High-End Trim, Grouping	Wired 0-10V, Programmable via Bluetooth App (iOS, Android)
ZOFDU	Motion (PIR), Daylight Harvesting	High/Low/Off, High-End Trim, Grouping, Scheduling	Wired 0-10V, Programmable via Bluetooth App (iOS, Android)
Z221BLx	Motion (PIR), Photosensor	High/Low/Off, High-End Trim	Wired 0-10V, Programmable via IR remote (sold separately)
Z321BLx	Motion (PIR), Daylight Harvesting	High/Low/Off, High-End Trim	Wired 0-10V, Programmable via Bluetooth App (iOS, Android)
ZOSMHB	Motion (Microwave), Photosensor	On/Low/Off	Wired 0-10V, Programmable via ZLSOR IR remote (sold separately)
ZPC	Photosensor	On/Off	Wired
ZENLC	Motion (PIR), Daylight Harvesting	High/Low/Off, High-End Trim, Grouping, Scheduling*, Energy Monitoring*, BMS Integration*, LLLC (Enlighted IoT)*, Space - Building Utilization*, Upgradable to IoT (ZENLI), LLLC (Enlighted IoT)*	Wireless Bluetooth Low Energy Mesh, Programmable via Enlighted IoT Software
ZENLI	Motion (PIR), Daylight Harvesting	High/Low/Off, High-End Trim, Grouping, Scheduling*, Energy Monitoring*, BMS Integration*, LLLC (Enlighted IoT)*, Space - Building Utilization*, Where - Real Time Location Services*	Wireless Bluetooth Low Energy Mesh, Programmable via Enlighted IoT Software

LLLC = Luminaire Level Lighting Control

\* Additional equipment required. Contact LumenFocus representative for details



### ZOSMHB Sensor Option

- Provides occupancy detection and multi-level control with adjustable time-outs
- Tri-level dimming control
- Comes pre-installed on the end cap
- Suitable for cold storage locations
- Built-in photocell reads brightness values. Sensor does not switch luminaire on if there is sufficient ambient light
- Control parameters selected manually via DIP switches, or using the optional ZLSOR remote (sold separately) - adjustable parameters include sensitivity, hold time, lux level, stand-by light level, stand-by hold time
- Maximum mounting height of 50 feet, with adjustable coverage radius up to 30 feet



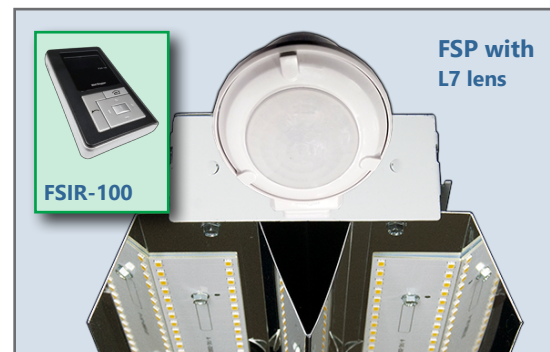
**ZLSOR**



The ZOFD option includes four sensor lenses that can easily be installed or swapped out in the field. From left: the high bay lens (20'-40' mounting), the high bay lens with aisleway mask, the low bay lens (8'-20' mounting), and the low bay lens with aisleway mask.

### ZOFDx Sensor Option

- Leviton Smart IP66 passive infrared (PIR) sensors
- Features mesh grouping (16 devices per group), occupancy sensing, daylight harvesting, scheduling (for ZOSFDU only), single-level switching
- Comes pre-installed on the end cap
- Rated for cold locations
- Configurable through the Leviton Smart Sensor App using a smartphone or other Bluetooth-enabled iOS or Android device



**Phone app interface for Z321B**

### Z221B and Z321B Sensor Options

- The Wattstopper FSP sensor provides multi-level control based on motion and/or daylight contribution
- Comes pre-installed on the end cap
- Rated for cold locations
- Parameters for Bluetooth-enabled Z321B adjustable via phone app - iOS or Android
- Parameters for Z221B adjustable via wireless configuration tool (FSIR-100 - sold separately)
- Three lenses available, tailored for the ideal detection area and mounting height:
  - **L2:** 360° lens, maximum coverage 48', diameter from 8' height
  - **L3:** 360° lens, maximum coverage 40', diameter from 20' height
  - **L7:** 360° lens, maximum coverage 100', diameter from 40' height



Enlighted: All-in-one sensors, upgradeable systems

Enlighted's IP65-rated Ruggedized Sensor is an all-in-one unit: task tuning, high-end trimming, daylight harvesting, and occupancy/vacancy detection. Max installation height is 50 feet.

Enlighted Connected ("ZENLC") offers many features, including motion and switch groups, daylight harvesting, energy reporting, and more. The Enlighted IoT ("ZENLI") option allows the full implementation of Enlighted's services. Enlighted Connected can be fully upgraded to the next tier in the future. So if you start with ZENLC but want to add the functionality of the ZENLI option, you can.

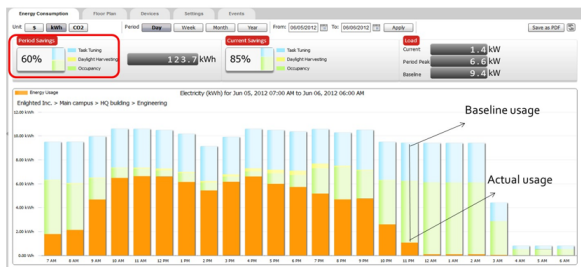


Enlighted Capabilities*	Enlighted Connected (ZENLC)	Enlighted IoT (ZENLI)
Motion and Switch Groups	✓	✓
Daylight Harvesting	✓	✓
Schedule Lighting	✓	✓
Energy Reporting & Optimization	✓	✓
Environment Data & Lighting Controls API	✓	✓
Building Management System Integration	✓	✓
Where & Space Applications		✓
Location & Occupancy APIs & Beacons		✓
Future App & API Ready		✓

Real-time data analytics

Enlighted's control units compile data in real-time, which can be viewed via the Energy Manager. The Energy Manager is part of the Enlighted Connected and Enlighted IoT configurations.

- Real-time measurements and verification of energy savings
- Space analytics - data can be compiled into motion trails and heat maps
- Analyze traffic density and congestion in a space



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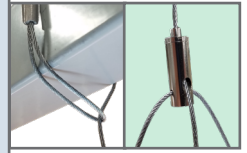
## Other Options:



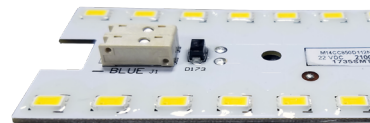
**Cords** are available in single circuit or dual circuit, 6' or 10'. Standard plug is optional, as are other NEMA configurations if specified.



**Safety cables** affix directly to the luminaire and provide a sturdy cable hanging alternative.



**Hanging** The QC hanging kit from ALP comes in 10' or 20'. Cables are pre-looped for easy installation and designed for easy fixture height adjustment. QCs come boxed with each fixture.



## Conformal coating

Grants LED boards added protection from moisture and corrosion in more hazardous environments.

## Photometric Data:

### PBL A G2 4N VH UV 840

Test No.: LLIA001839-001

Luminaire Lumens: 14,346 lm

Luminaire Watts: 86.5W

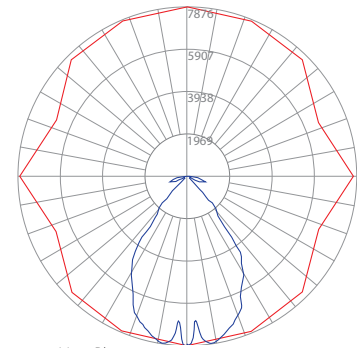
Efficacy: 165.8 LPW

Spacing Criterion (0-180): 1.28

Spacing Criterion (90-270): 1.04

### Luminance Data (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	58245	26345	1631
55	54753	1987	93
65	48370	368	5018
75	36501	3637	6121
85	13417	1048	42



— Vert. Plane  
— Horiz. Cone

### Zonal Lumen Summary

Zone	Lumens	%Fixt
0-20	2803.4	19.5
0-30	5851.1	40.8
0-40	9080.8	63.3
0-60	12791.1	89.2
0-80	14161.5	98.7
0-90	14304.3	99.7
90-120	9.4	0.1
90-130	15.5	0.1
90-150	29.9	0.2
90-180	41.9	0.3
0-180	14346.2	100.0

### Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

RC		80				70				50				30			
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106			
1	111	107	103	100	108	104	101	98	100	98	95	96	94	92			
2	102	96	90	85	100	94	89	84	90	86	82	87	83	80			
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71			
4	88	78	70	65	86	77	70	64	74	68	63	72	67	62			
5	82	71	63	57	80	70	63	57	68	61	56	66	60	56			
6	77	65	57	51	75	64	56	51	62	56	51	61	55	50			
7	72	60	52	46	70	59	51	46	57	51	46	56	50	46			
8	67	55	47	42	66	54	47	42	53	46	42	52	46	41			
9	63	51	43	38	62	50	43	38	49	43	38	48	42	38			
10	59	47	40	35	58	47	40	35	46	39	35	45	39	35			

Tested in accordance with IES standards utilizing absolute photometry per LM-79-08

