



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

LED

## PBL 4 | LED High Bay

### Features:

- High performance LED technology
- 0-10V dimming drivers standard on all models - dimmable to <10% on all models, with most dimmable to 1%
- DALI drivers available based on configuration
- Field replaceable LED boards and drivers through Re-boardABILITY (more info on Page 3)
- Frosted diffusers available to help minimize glare and improve aesthetics
- A wide variety of lumen packages allows for flexibility in design and helps maximize energy savings
- Multiple controls options available

### Applications:

- Suitable for most commercial, industrial and institutional applications
- Retail
  - Warehouse
  - Manufacturing
  - Cold/Frozen Storage

### Ambient Operating Temp.:

- -30°C to 40°C

### Predicted L70 Lifetime:

- Up to 189,000 hrs (calculated)  
*(L70 information for specific configurations available upon request)*
- For BAA compliant configurations - up to 189,000 hrs (calculated)

### Construction:

- Housing and LED tray is precision brake formed from aluminum
- Pre-painted with a highly durable, highly reflective white finish

### 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/>



## Ordering Guide:

example: PBL 4 HI UV 850 QC20 OSD C6

Series	Length	Output	Performance	Voltage	Shielding	CRI/CCT	Hanging	Controls	Options	Finish
PBL	4									
PBL	4 4'	<b>SL</b> Super Low	<b>Blank</b> Standard	<b>UV</b> 120-277	<b>Blank</b> No Lenses	<b>835</b> 80 CRI/3500K	<b>Blank</b> None	<b>Blank</b> No Controls	<b>Blank</b> No Options	<b>Blank</b> White
		<b>VL</b> Very Low	<b>HE</b> High Efficiency	<b>34</b> 347V <sup>(1)</sup>	<b>FR</b> Frosted Acrylic Diffusers	<b>840</b> 80 CRI/4000K	<b>QC</b> 10' Quick Hang Cable Kit	<b>ZOS</b> Occupancy Sensor (On/Off)	<b>EXT10</b> 10-Year Extended Warranty <sup>(5)</sup>	<b>BK</b> Matte Black
		<b>LW</b> Low		<b>48</b> 480V <sup>(1)</sup>		<b>850</b> 80 CRI/5000K	<b>QC20</b> 20' Quick Hang Cable Kit	<b>ZOSD</b> Occupancy Sensor (On/Off/Dim)	<b>C6</b> 6' Single Circuit Cord	<b>SL</b> Metallic Silver
		<b>MD</b> Medium					<b>SM</b> Surface Mount	<b>Z221BL_</b> Wattstopper Programmable Photo/Motion Multi-Voltage Sensor (high/low/off) <sup>(2)</sup>	<b>C65W</b> 6' Single Circuit Cord with Low Voltage Connections	
		<b>HI</b> High						<b>Z321BL_</b> Wattstopper Bluetooth-enabled Programmable Photo/Motion Multi-Voltage Sensor (high/low/off) <sup>(2)</sup>	<b>C10</b> 10' Single Circuit Cord	

## Notes

- <sup>(1)</sup> PBL 4 VL and PBL 4 VL HE currently only available in 120-277V, or with step-down transformer in an application where 347V-480V is needed.  
<sup>(2)</sup> " \_ " = lens type. See Page 5 for lens descriptions.  
<sup>(3)</sup> Max ceiling height for Douglas FMS sensor: 40 feet. See Page 4 for more details on advanced controls.  
<sup>(4)</sup> Max ceiling height for Enlighted Ruggedized sensor 50 feet. See Page 4 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> EM2 - Up to 16W. 120-277V / 0°C-50°C ambient.

## Controls Accessories (order separately)



### For Douglas Controls

- BT-DMSW-U-A Bluetooth 1 Zone Dimmer  
 BT-4BTSW-U-A Bluetooth 4-Button Wall Station  
 BT-8BTSW-U-A Bluetooth 8-Button Wall Station



### For Enlighted Controls

- WS-2-00 Enlighted Remote Control Wall Switch (for Enlighted Connected & IoT)  
 WS-2-00-IL Enlighted Remote Control Wall Switch (for Enlighted One)



<b>ZPC</b> Photocell	<b>D6</b> 6' Dual Circuit Cord
<b>ZFMS</b> Douglas FMS Sensor with Dimming/Occupancy/Daylight Harvesting with Newtork Capabilities <sup>(3)</sup>	<b>D10</b> 10' Dual Circuit Cord
<b>ZENLO</b> Enlighted Ruggedized Sensor with Dimming/Occupancy/Daylight Harvesting and Enlighted One System <sup>(4)</sup>	<b>P(NEMA)</b> Plug (Specify NEMA configuration)
<b>ZENLC</b> Enlighted Ruggedized Sensor with Dimming/Occupancy/Daylight Harvesting and Enlighted Connected System <sup>(4)</sup>	<b>WG</b> Wire Guard
<b>ZENLI</b> Enlighted Ruggedized Sensor with Dimming/Occupancy/Daylight Harvesting and Enlighted IoT System <sup>(4)</sup>	<b>WGE</b> Extended Wire Guard for End-Mounted Sensor
	<b>SC</b> Safety Cable
	<b>F</b> Fuse
	<b>EM2</b> Emergency Pack <sup>(6)</sup>
	<b>SDT(480V)</b> 480V to 277V Step Down Transformer
	<b>CC</b> Conformal Coating
	<b>LVL</b> 0-10V Dimming Leads for Easy Field Access
	<b>BAA</b> Buy American Act Compliant

## Schematic:



## Performance Chart:

Catalog #	Lumens	Watts	LPW	Catalog #	Lumens	Watts	LPW	Catalog #	Lumens	Watts	LPW
PBL 4 SL HE UV 835	12018	84	143.1	PBL 4 SL HE UV 840	12416	84	147.8	PBL 4 SL HE UV 850	12788	84	152.2
PBL 4 VL HE UV 835	13905	100	139.1	PBL 4 VL HE UV 840	14365	100	143.7	PBL 4 VL HE UV 850	14796	100	148.0
PBL 4 LW HE UV 835	15913	118	134.9	PBL 4 LW HE UV 840	16439	118	139.3	PBL 4 LW HE UV 850	16932	118	143.5
PBL 4 MD HE UV 835	19697	140	140.7	PBL 4 MD HE UV 840	20349	140	145.3	PBL 4 MD HE UV 850	20959	140	149.7
PBL 4 HI HE UV 835	23543	174	135.3	PBL 4 HI HE UV 840	24322	174	139.8	PBL 4 HI HE UV 850	25051	174	144.0
PBL 4 SL UV 835	11998	86	139.5	PBL 4 SL UV 840	12394	86	144.1	PBL 4 SL UV 850	12766	86	148.4
PBL 4 VL UV 835	13982	104	134.4	PBL 4 VL UV 840	14444	104	138.9	PBL 4 VL UV 850	14877	104	143.1
PBL 4 LW UV 835	17193	136	126.4	PBL 4 LW UV 840	17761	136	130.6	PBL 4 LW UV 850	18294	136	134.5
PBL 4 MD UV 835	20866	155	134.6	PBL 4 MD UV 840	21556	155	139.1	PBL 4 MD UV 850	22203	155	143.2
PBL 4 HI UV 835	22943	174	131.9	PBL 4 HI UV 840	23701	174	136.2	PBL 4 HI UV 850	24412	174	140.3

Lumen Adjustment Factors: FR lens: 0.93  
WG: 0.90  
FR w/ WG: 0.85

## LUMENFOCUS Re-boardABILITY

The PBL 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.](#)

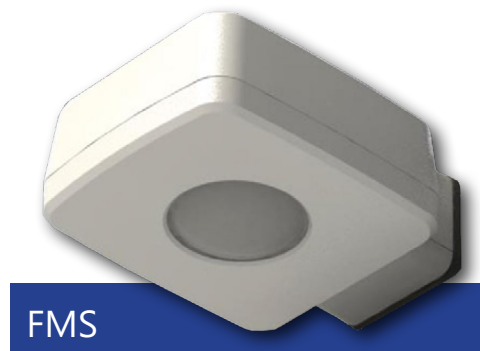
Note: Exact time varies depending on the model.



## Douglas Lighting Controls, Inc.: Cloud-based controls

The PBL can be equipped with the Douglas FMS sensor, which is designed for high bay applications.

With a max sensor height up to 40 feet, the FMS is ideal for applications like warehouses and manufacturing facilities. It can be installed for on/off control or bi-level light functionality. The daylight sensor provides additional savings by dimming the lights to work with the amount of natural available daylight.



- Configuration from the floor via smartphone app
- Bluetooth mesh network is created between devices for control over a group of Douglas sensors
- Occupancy and daylight sensing
- IP65-rated
- 0-10V dimming
- 150 feet clear line of site, 50 feet through standard walls (distances may vary based on location and environment)

## CheckLight® Energy Management System

Douglas controls can be integrated with the CheckLight® Energy Management system. This system can help you uncover energy conversion opportunities, create conservation strategies, analyze lighting load inefficiencies, and make configuration changes from anywhere with Douglas' user-friendly interface. You can get measurements, reports, and control your system from a web-based application.

CheckLight® has the capability to look at different facilities within a portfolio and use data benchmarks to compare building performances.

- Find energy conservation opportunities
- Create energy saving strategies
- Analyze load inefficiencies
- Optimize energy management

## 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 sensors come standard with the Enlighted One system (the "ZENLO" option). Enlighted Connected ("ZENLC") offers even more options. The Enlighted IoT ("ZENLI") option allows the full implementation of Enlighted's services. Each system can be fully upgraded to the next tier in the future. So if you start with Enlighted One but want to add energy reporting or building management systems integration in the future, you can.



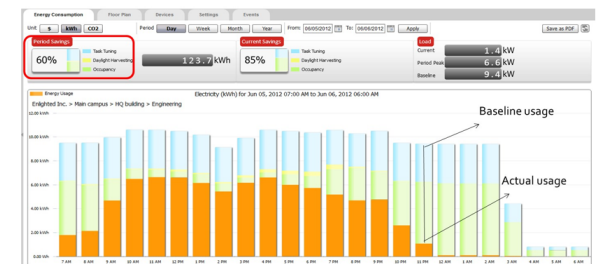
Enlighted Capabilities*	Enlighted One (ZENLO)	Enlighted Connected (ZENLC)	Enlighted IoT (ZENLI)
Motion and Switch Groups	✓	✓	✓
Daylight Harvesting	✓	✓	✓
Schedule Lighting		✓	✓
Energy Reporting & Optimization		✓	✓
Environment Data & Lighting Controls API		✓	✓
Building Management System Integration		✓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

**Note:** Additional equipment required for ZENLC and ZENLI

## 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



Learn more about our available advanced controls options here:

[www.lumenfocus.com/controls-overview](http://www.lumenfocus.com/controls-overview)

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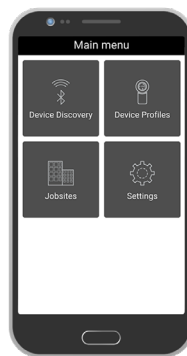
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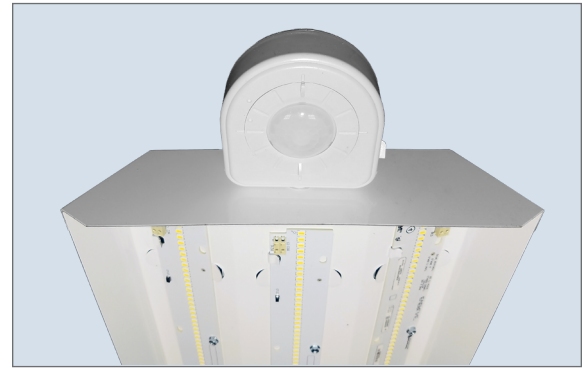


## Dimming Sensors (Z221B/Z321B)

- 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



Phone app interface for Z321B



## On/Off Occupancy Sensors (ZOS)

An optional occupancy sensor controls individual fixtures on or off based on occupancy in detection zone. Sensor used: Leviton OSFHU-ITW (pictured), or an equivalent.



## Finish Options (BK, SL)

In addition to the standard white finish, the PBL is also available in matte black (BK) and metallic silver (SL).

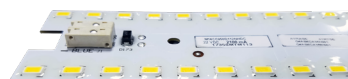
## Other Options:



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



**Shielding** Frosted acrylic diffuser lenses minimize glare and improve aesthetics.



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



**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.

