

Project: _____
 Location: _____
 Cat. #: _____
 Type: _____
 Quantity: _____



FFR P G2 4 | LED Industrial Retrofit Kit

Features:

- High performance LED technology
- 90+ CRI standard
- 0-10V dimming drivers standard
- DALI drivers available
- Field replaceable LED boards and drivers
- Frosted diffuser optimized to balance efficiency and aesthetics
- Available in a wide variety of lumen outputs for maximum flexibility
- Quick and easy installation helps save on labor costs
- Advanced controls available
- Buy American Act compliant *(All base luminaires are BAA compliant. Addition of options may change eligibility. Contact factory for details.)*

Applications:

Custom fit for 4' industrial-style louvered luminaires. Specifications of existing fixture required to ensure proper fit.

Predicted Lifetime:

- L70: 129,000 hrs (calculated)
- L80: 81,000 hrs (calculated)
- L90: 39,000 hrs (reported)
- 85% lumen maintenance @ 60,000 hrs *(based on LM80 and insitu laboratory testing)*

Construction:

- Precision brake formed from cold rolled steel
- Frosted acrylic diffuser
- Matte white finish

Certifications:

- UL 1598 listed for US and Canada, suitable for damp locations



Warranty:

- 5 year limited system warranty - see 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: FFR P G2 4 MD UV FA 935 ZSOL BAA

| Series | Length | Output | Voltage | Shielding | CRI/CCT | Controls | Options |
|--------------------------------|----------------|--|---|------------------------------|--|---|--|
| FFR P G2 | 4 | | | FA | | | |
| FFR P G2 FFR P Gen 2 | 4 4' | SL Super Low VL Very Low LW Low MD Medium HI High VH Very High SH Super High | UV 120-277 34 347V | FA Frosted Acrylic | 930 90 CRI/3000K 935 90 CRI/3500K 940 90 CRI/4000K 950 90 CRI/5000K | Blank No Controls ZSOL Leviton Programmable PIR Occupancy/Daylight Harvesting Sensor (On/Off/Dim) ⁽¹⁾ ZOSMD Microwave Daylight/Motion Sensor With Step-Dimming (High/Low/Off) ⁽²⁾ ZSLFC2 Keystone SmartLoop Wireless Bluetooth Mesh Occupancy/Daylight Harvesting Smart Sensor ⁽¹⁾ ZLDS Leviton Intellect DALI Sensor with Dimming/ Occupancy/Daylight Harvesting with Newtork Capabilities ⁽³⁾ ZL7S Leviton Intellect 0-10V Sensor with Dimming/ Occupancy/Daylight Harvesting with Newtork Capabilities ⁽³⁾ ZLDC Leviton Intellect DALI Fixture Controller with Newtork Capabilities ⁽³⁾ ZL7C Leviton Intellect 0-10V Fixture Controller with Newtork Capabilities ⁽³⁾ ZENLO Enlighted One Micro Sensor with Dimming/ Occupancy/Daylight Harvesting ⁽³⁾ ZENLC Enlighted Connected Micro Sensor with Dimming/Occupancy/Daylight Harvesting ⁽³⁾ ZENLI Enlighted IoT Micro Sensor with Dimming/ Occupancy/Daylight Harvesting ⁽³⁾ | Blank No Options EXT10 10-Year Extended Warranty ⁽⁴⁾ EM6 6.5W Emergency Pack ⁽⁵⁾ EM10 10W Emergency Pack ⁽⁵⁾ EM14 14W Emergency Pack ⁽⁵⁾ LVL 0-10V Dimming Leads for Easy Field Access BAA Buy American Act Compliant |

Notes

⁽¹⁾ See page 4 for more details.

⁽²⁾ 120-277V only. See page 4 for more details.

⁽³⁾ See page 5 for more details.

⁽⁴⁾ Not available on all models. Certain conditions apply.

Consult factory or sales representative for details.

⁽⁵⁾ 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. FFR P G2 4 MD UV FA 940 EM10 → 144.5 LPW x 10W = 1,445 lm

Controls Accessories (order separately)



For Leviton Programmable Sensor

ZLS0R-RA1 IR Programming Remote



For Keystone SmartLoop Controls

KTSL-WS1-B-SG/G2 5-Button Bluetooth Wireless Wall Switch

KTSL-TK1-USB USB Time Keeper



For Leviton Intellect Controls

DRKDN-U1W 1-Button Wireless Wall Controller

DRKDN-U2W 2-Button Wireless Wall Controller

DRKDN-U2W 4-Button Wireless Wall Controller

DRKDN-U8W 8-Button Wireless Wall Controller



For Enlighted Controls

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

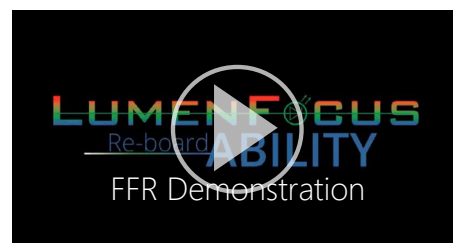
WS-2-00-IL Enlighted Remote Control Wall Switch
(for Enlighted One)


Performance Chart:

| Catalog # | Watts | Lumens (830) | LPW (830) | Lumens (835) | LPW (835) | Lumens (840) | LPW (840) | Lumens (850) | LPW (850) |
|-------------------------|-------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|
| FFR P G2 4 SL UV FA 9xx | 15.1 | 2012.7 | 132.9 | 2021.1 | 133.5 | 2069.2 | 136.6 | 2069.2 | 136.6 |
| FFR P G2 4 VL UV FA 9xx | 21.4 | 2957.8 | 138.1 | 2970.3 | 138.7 | 3040.8 | 142.0 | 3040.8 | 142.0 |
| FFR P G2 4 LW UV FA 9xx | 28.4 | 3964.3 | 139.7 | 3981.0 | 140.3 | 4075.6 | 143.6 | 4075.6 | 143.6 |
| FFR P G2 4 MD UV FA 9xx | 35.2 | 4944.2 | 140.5 | 4965.0 | 141.1 | 5083.0 | 144.5 | 5083.0 | 144.5 |
| FFR P G2 4 HI UV FA 9xx | 43.5 | 5947.2 | 136.8 | 5972.3 | 137.4 | 6114.1 | 140.6 | 6114.1 | 140.6 |
| FFR P G2 4 VH UV FA 9xx | 56.8 | 7865.0 | 138.4 | 7898.2 | 139.0 | 8085.8 | 142.3 | 8085.8 | 142.3 |
| FFR P G2 4 SH UV FA 9xx | 74.4 | 9873.9 | 132.6 | 9915.6 | 133.2 | 10151.1 | 136.4 | 10151.1 | 136.4 |

LUMENFOCUS Re-boardABILITY

The FFR P 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 FFR.](#)
Note: Exact time varies depending on the model.

Controls Summary:

| Control Code | Type | Capabilities | Communication |
|--------------|-----------------------------------|--|--|
| ZSQL | Motion (PIR), Daylight Harvesting | High/Low/Off, High-End Trim | Wired 0-10V, Programmable via IR remote (sold separately) or via dip switches on sensor |
| ZOSMD | Motion (Microwave), Photosensor | On/Low/Off | Wired 1-10V |
| ZSLFC2 | Motion (PIR), Daylight Harvesting | High/Low/Off, High-End Trim, Grouping, Scheduling, LLLC (Keystone Tech.-SmartLoop) | Wireless Bluetooth Mesh, Programmable via Keystone SmartLoop App for iOS or Android |
| ZLxS | Motion (PIR), Daylight Harvesting | High/Low/Off, High-End Trim, Grouping, Scheduling, Demand Response*, BMS Integration*, LLLC (GreenMAX DRC) | Wireless Zigbee 2.4 GHz Mesh, Programmable via GreenMAX DRC app. for iOS or Android along with DRKDN-UxW Wall Controller (sold separately) |
| ZLxC | Controller, No Sensors | High/Low/Off, High-End Trim, Grouping, Scheduling, Demand Response*, BMS Integration*, LLLC (GreenMAX DRC) | Wireless Zigbee 2.4 GHz Mesh, Programmable via GreenMAX DRC app. for iOS or Android along with DRKDN-UxW Wall Controller (sold separately) |
| ZENLO | Motion (PIR), Daylight Harvesting | High/Low/Off, High-End Trim, Grouping, Upgradable to Connected (ZENLC) or IoT (ZENLI) | Wireless Bluetooth Low Energy Mesh, Programmable via Enlighted Room Controller WS-2-00-IL (sold separately) |
| ZENLC | Motion (PIR), Daylight Harvesting | High/Low/Off, High-End Trim, Grouping, Scheduling*, Energy Monitoring*, BMS Integration*, 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



ZSOL option: Leviton Intellect Solo Sensor

The FFR P G2 can be equipped with an integrated Leviton Intellect Solo Sensor ("ZSOL" option). This is a 0-10V dimming Passive Infrared (PIR) occupancy and daylight harvesting sensor.

Features:

- Partial-on
- Partial-off
- **8' to 10' mounting height**
- IP20 rated
- Detection angle: 120 degrees
- IR remote available for programming sensor from the floor (sold separately)
- Can be used to comply with IECC, ASHRAE 90.1 and 2019 Title 24, Part 6 dimming, occupancy/vacancy sensing and daylight harvesting requirements.



ZOSMD option: Leviton 0-10V High Frequency Microwave Sensor

The FFR P G2 can be equipped with an integrated Leviton 0-10V dimming high frequency microwave sensor ("ZOSMD" option). The ZOSMD detects motion through low density materials allowing it to be installed out of site, under the FFR P's frosted lens. The high frequency waves offer less interference and false tripping than traditional sensing technology for reliable occupancy applications. The integrated daylighting sensor detects natural light and turns lights ON or keeps lights OFF in response to available natural light or the daylight set point when motion is detected.

Features:

- Automatic switching or dimming based on motion
- Ambient light override
- Designed to detect movement behind low-density fixture materials or behind objects made of plastic or glass
- **up to 40' mounting height**
- Detection Zone: 52' diameter x 40' Height Max
- Standby Dimming Level: 10% / 20% / 30% / 50%
- IP20 rated
- 120-277V



Keystone SmartLoop Wireless Control System

The SmartLoop wireless lighting control system by Keystone is a Bluetooth mesh lighting control system that allows you to set up and manage your lighting ecosystem quickly and easily. It's powerful enough to run a space with multiple lighting zones, but simple enough to program in minutes with your smartphone – perfect for warehouses, offices, schools, and auditoriums, whether new construction or retrofit.

- Wireless Bluetooth 2.4 GHz mesh network
- Supports up to 100 devices on a single region, with unlimited regions
- Independent per-fixture control: Occupancy, Daylight Harvesting, Task Tuning, Grouping, Scene Setting, Scheduling
- Commissioned via SmartLoop mobile app for iPhone and Android



- Low voltage individual fixture controller for SmartLoop system
- Integrated daylight and PIR motion sensors
- **Up to 16' mounting height.** 16' radius at 16' height.
- Works with 0-10V dim-to-off drivers with 12V aux. power

SmartLoop Accessories

- Bluetooth Wireless Wall Switch: **KTSL-WS1-B-SG/G2**
 - Battery Powered: 2x CR2032
 - 5 Button: Power Toggle, Dimming, Automatic Sensor/Preset Level Operation, Scene Activation
- USB Time Keeper: **KTSL-TK1-USB**
 - Relays time to system components after a power loss
 - Powered by standard USB charging port
 - Internal CR1220 battery backup



GreenMAX DRC Wireless Networked Control System with Leviton Intellect Sensors & Controllers

The GreenMAX DRC Wireless Keypad Room Controllers are used as the brain of the system, managing the fixture integrated Leviton Intellect sensors & controllers. Wirelessly commission, configure, control, monitor and provision the GreenMAX DRC system using the GreenMAX DRC App and an Android or iOS smart device.

- Occupancy/Vacancy Sensing
- Multi-Level Lighting, Partial-On, Partial-Off
- Daylight Harvesting
- Task Tuning
- Scheduling
- Grouping
- Demand Response
- BMS Integration
- ZigBee 2.4 GHz Wireless Mesh Network
- Up to 75' between devices

** DRKDN-UxW room controller required for full functionality and programming of Intellect sensors & controllers*



ZLxS



- PIR Occupancy Sensor
- Daylight Sensor
- 0-10V or DALI
- Up to 20' mounting height

ZLxC



- Wireless fixture controller, no sensor
- 0-10V or DALI

DRKDN-UxW Room Controllers



- 1-, 2-, 4-, and 8-button configurations
- Line voltage powered: 120-277V
- Max capacity: 60 devices
- Programmable: On/Off/Raise/Lower/ Toggle/Scene
- Use any Android or iOS device for configuration using the GreenMAX DRC App

Enlighted: All-in-one sensors, upgradeable systems

Enlighted's SMART Micro Sensor is an all-in-one unit: task tuning, high-end trimming, daylight harvesting, and occupancy/vacancy detection. **Max installation height is 15 feet.** For higher mounting applications, contact the factory for controls options.

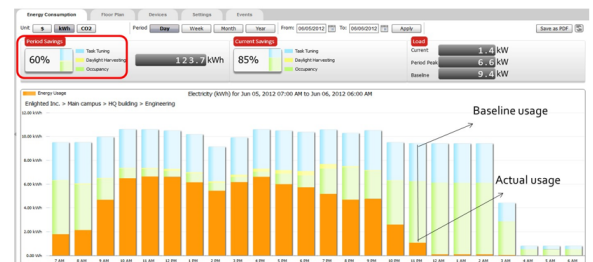
Enlighted sensors come standard with the Enlighted One system (the "ZENLO" option). Enlighted Connected ("ZENLC") offers even more options. The Enlighted IoT ("ZENLI") option allows the full implementation of Enlighted's services. Each system can be fully upgraded to the next tier in the future. So if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



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



| 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 ZENLC and ZENLI

Learn more about our available advanced controls options here:

www.lumenfocus.com/controls-overview

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