



# PLD10M PLUS Series

EMERGENCY LED BATTERY PACK

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	



## FEATURES

- Provides up to 120 minutes of emergency lighting
- Can be used with normally-on, normally-off or switched fixtures
- Auto-sensing output voltage throughout full Vf range of 20-56V
- 2-wire input voltage: 120/277VAC, 50/60Hz operation
- EZ-Plug™ automatic battery connector
- Electronic AC lockout and low voltage disconnect (LVD) circuit
- 2-wire test switch and LED charging indicator supplied standard
- Optional Remote Test Switch / Charge Indicator
- Optional Spectron® self-diagnostics/self-testing



## SPECIFICATIONS

### APPLICATION

- The Dual-Lite PLD10M PLUS is a 120/277V emergency LED battery pack that works with an AC LED driver (Max. 1.2A) to allow an LED lighting load to be used in both normal and emergency operation.
- When normal AC power is lost, the PLD10M PLUS operates to provide emergency power at a rated output voltage of 20-56VDC for a minimum of 90 minutes.
- When used with emergency-only LED fixtures, no AC driver is needed.
- The UL924 Listing allows for both field and factory installations of suitable LED loads including LED luminaires, DC voltage driven LED replacements for fluorescent lamps and others.

### CONSTRUCTION

- Compact case constructed of durable, galvanized steel.
- The unit contains a solid-state charger with automatic transfer circuit, a 2-wire test switch, LED charging indicator light and a LiFePO4 battery.

### INSTALLATION

- The PLD10M PLUS emergency battery pack does not affect normal LED fixture operation and may be used with either switched or unswitched fixtures.
- If a switched fixture is used, an unswitched hot lead must be connected to the emergency battery.
- The emergency battery pack must be fed from the same branch circuit as the AC LED driver.
- Due to its steel construction, the PLD10M PLUS is designed to be mounted outside the LED fixture.
- The PLD10M PLUS emergency battery pack is suitable for use in damp locations where the ambient temperature is between 0°C (32°F) and 55°C (131°F).
- It is not suitable for installation in heated air outlet fixtures and wet or hazardous location fixtures.

### ILLUMINATION

- The PLD10M PLUS will operate an LED load, that has a power rating of 10 watts or greater, for a minimum of 90 minutes.
- During the initial 90 minutes of emergency operation, the PLD10M PLUS will provide 10W of constant power. After the initial 90 minutes, the PLD10M PLUS will provide 6.5W of constant power for an overall minimum of 120 minutes. See operating temperatures for details.

### ILLUMINATION (CONTINUED)

- Using the LED load's efficacy in lm/w, as published by the Design Lights Consortium website (<http://www.designlights.org>), Energy Star - Certified Products - product finder website (<http://www.energystar.gov/productfinder>) or given by the luminaire manufacturer on product catalog specification sheets, lumen output can be calculated by multiplying by the PLD10M PLUS output power (10w).

### COMPLIANCES

- UL 924 Listed and Damp Location Listed for field installation
- UL 1310 Certified (Class 2 output)
- CSA C22.2 No. 141 (Canadian Life Safety Standard)
- NFPA 101 (Life Safety Code)
- NFPA 70 (National Electrical Code)
- CEC Title 20 Compliant (CEC Battery Charger Efficiency Standard)
- FCC Certified

### WARRANTY

- 5 Year Full



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## ORDERING GUIDE

Example: PLD10M+

CATALOG # \_\_\_\_\_

PLD	10	M+	
Model	Output Power	Housing	Self-Diagnostic
PLD Battery Pack	10 10 Watts	M+ Metal	Blank None Spectron® self-testing/self-diagnostic electronics

Accessories (Order Separately)	
PLRTS	Remote Test Switch/Charge Indicator Module <sup>1</sup>

Notes:  
1 Works with Standard or Spectron® models

## PRODUCT DETAILS

### OPERATION

The PLD10M PLUS emergency LED battery pack is designed to provide a minimum of 90 minutes of emergency lighting to commercial or industrial LED fixtures. Operation is fully automatic. A solid-state charger maintains the battery at full charge as long as utility power is present. Upon interruption of utility power, the unit will activate and the automatic transfer circuit will switch to the emergency mode, keeping the LED load illuminated for a minimum of 90 minutes. Lumen output during emergency mode is estimated as described below. Upon restoration of utility power, the PLD10M PLUS emergency battery pack will return to charging mode. Full battery recharge is accomplished within 24 hours. A test switch and LED status indicator light is provided for testing and monitoring of unit performance.

The egress illumination levels can be estimated by doing the following:

- Find the efficacy of the LED lighting fixture. Luminaire efficacy information can be found at the Design Lights Consortium website (<http://www.designlights.org>), Energy Star - Certified Products - product finder website (<http://www.energystar.gov/productfinder/>) or given by the luminaire manufacturer on product catalog specification sheets. The LED fixture efficacy will be given in lumens per watt (lm/w).
- Lumens can be calculated by multiplying the output power of the emergency LED driver (10W) by the efficacy of the LED load. In many cases the actual lumen output in emergency mode will be greater than this calculation yields, however it will provide a good estimate for beginning the lighting design of the system.

$$\text{Lumens In Emergency Mode} = \text{Lumens Per Watt of Fixture} * \text{Output Power of Chosen Product (LUMENS)} = (\text{LM/W}) * \text{W}$$

- Using the results of this calculation and industry standard lighting design tools, calculate the anticipated illumination levels in the path of egress.

**NOTE: After installation, it will be necessary to measure the egress lighting illumination levels to ensure compliance with national, state and local code requirements. Consult Installation Instructions for fixture compatibility requirements.**

### STANDARD FEATURES INCLUDE

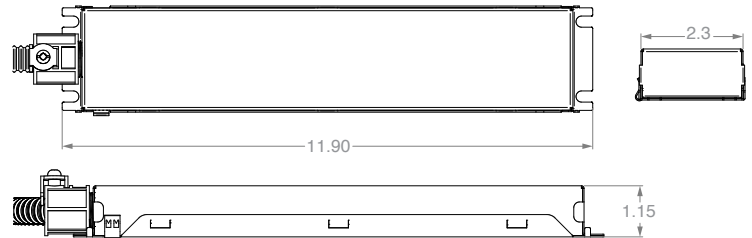
- Constant power design provides emergency lighting without loss of lumen output for a minimum of 90 minutes. After the initial 90 minutes, the PLD10M PLUS will provide 6.5W of constant power for an overall minimum of 120 minutes
- Can be used with normally-on, normally-off or switched fixtures
- Auto-sensing output voltage throughout full Vf range of 20-56V
- 2-wire input voltage: 120/277VAC, 50/60Hz operation
- Long life, maintenance-free Lithium Iron Phosphate battery with 6-8 year life expectancy
- Electronic AC lockout and low voltage disconnect (LVD) circuit
- 2-wire test switch and LED charging indicator supplied standard

### OPTIONAL SPECTRON® INCLUDES:

- Self-diagnostics monitors LED status, LED driver circuit, battery capacity and charger function and displays any fault detection by means of a flashing code
- Self-Test feature automatically runs a 1 minute test once a month and a 90 minute test once every 6 months
- Multi-color LED indicator provides visible fault detection and charging status
- User initiated 1, or 90-minute system test feature
- 15 minute re-transfer delay
- Automatic unit transfer in brown-out conditions (below 80% of nominal AC input voltage)

## DIMENSIONS

NOMINAL DIMENSIONS: 11.9"L X 2.3"W X 1.15"H



**INPUT VOLTAGE**  
120/277VAC, 50/60Hz

**INPUT POWER**  
120VAC 60Hz - 0.027A - 3.24 Watts  
277VAC 60Hz - 0.016A - 3.50 Watts

**OUTPUT VOLTAGE**  
20-56VDC (Class 2 Compliant)

**OUTPUT POWER**  
10 Watts (constant) for 90 minutes

**OUTPUT CURRENT**  
0.5A (@ 20VDC) - 0.18 (@ 56VDC)

**RECHARGE TIME**  
24 Hours (maximum)

**EMERGENCY OPERATION**  
Constant power design provides 90 minutes of emergency lighting without loss of lumen output

**BATTERY**  
LiFePO4

**OPERATING TEMPERATURE**  
90 minutes: 0°C to 55°C (32°F to 131°F)  
120 minutes: 5°C to 55°C (41°F to 131°F)

**WEIGHT**  
1.9 lbs (.86 kg)