



PLD10 Emergency LED Battery Pack

FEATURES

Application

The Dual-Lite PLD10 is a universal input (120-277V) emergency LED battery pack that works with an AC LED driver to allow an LED lighting load to be used in both normal and emergency operation. When normal AC power is lost, the PLD10 operates to provide 10 watts of constant emergency power at a rated output voltage of 20-56Vdc. The constant power design provides backup for a minimum of 90 minutes with no loss of emergency lumen output. 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

The Dual-Lite PLD10 consists of a compact case constructed of polycarbonate thermoplastic. The unit contains a solid-state charger with automatic transfer circuit, a 2-wire test switch and LED charging indicator light, and a high-temperature, Nickel-Cadmium battery.

Installation

The PLD10 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 ballast. The emergency battery packs must be fed from the same branch circuit as the AC LED driver. Due to its thermoplastic construction, the PLD10 must either be installed inside the fixture, or enclosed if remote mounted outside the fixture. The PLD10 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 PLD10 will operate an LED load, that has a power rating of 10 watts or greater, for a minimum of 90 minutes. 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 PLD10 output power (10w).

Compliances

UL 924 Recognized 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-400-2014-009-CMF (CEC Battery Charger Efficiency Standard)

Warranty

5 Year Full Warranty

ORDERING GUIDE

PLD10

Model

Catalog Number	
Comments	Type



ACCESSORIES (ORDER SEPARATELY)

PLRTS Remote test switch/charge indicator module⁽¹⁾

⁽¹⁾ Fits single-gang box.



SPECIFICATIONS

Operation

The PLD10 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 PLD10 emergency battery pack will return to the 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.

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

- 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.

Standard Features Include

- Provides a minimum of 90 minutes of emergency lighting
- Can be used with normally-on, normally-off or switched fixtures
- Constant 10W design provides emergency lighting without loss of lumen output
- Auto-sensing output voltage throughout full Vf range of 20-56V
- 2-wire, universal input voltage: 120-277VAC, 50/60Hz operation
- Long life, maintenance-free Nickel-Cadmium battery with 7-10 year life expectancy
- Electronic AC lockout and low voltage disconnect (LVD) circuit
- 2-wire test switch and LED charging indicator supplied standard

Input Voltage

120 - 277VAC (Universal), 50/60Hz

Input Power

4.2 Watts (maximum)

Output Voltage

20-56VDC (Class 2 Compliant)

Output Power

10 Watts (constant)

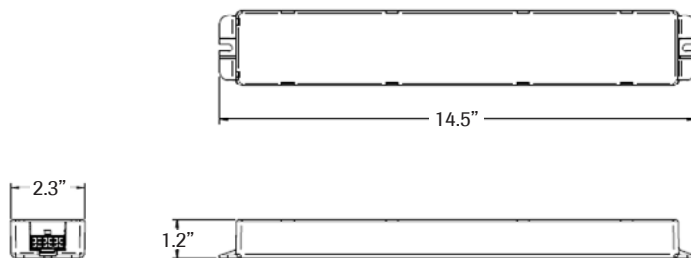
Output Current

0.50A (@ 20VDC) - 0.17A (@ 56VDC)

Recharge Time

24 Hours (maximum)

DIMENSIONS



Nominal Dimensions: 14.5" L x 2.3" W x 1.2" H

Emergency Operation

90 minutes (minimum)

Battery

High Temperature Nickel-Cadmium,
7-10 years life expectancy

Operating Temperature

0°C to 55°C (32°F to 131°F)

Weight

2.1 lbs (0.95 kg)