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Designed for the perfect fit

Emergency Drivers
Selection Guide
Start . . . . . . . . .
with these easy steps to select the proper emergency LED driver for your fixture.

Load Voltage . . . . . .
Identify the LED’s load voltage (Vf)
This is the total forward voltage (Vf or stacked voltage) of the luminaire’s LED array(s).
This information can be found on the product spec sheet, labeling, or on the LED array(s).

Wattage (W) . . . . . .
Verify maximum power of LED load
The LED load’s rated power must be greater than or equal to the output of the selected EM LED driver.

Current (from AC driver) . . .
Maximum current into EM driver
See the emergency LED current limit in the column Max. AC Driver Output on the chart.

Lumens . . . . . .
Verify emergency lumen output
Find the approximate emergency lumen output for each EM driver on the chart or calculate.

**Specification Guide**

- Identify the fixture being utilized and record the specification data:
  1. Make and model
  2. Load voltage of LED array(s) ____________________________ Vf
  3. LED load rated power ____________________________ Watts
  4. Output current of the AC LED ____________________________ Amps driver into LED load as applied

- **Load Voltage +**
  
- **Total Vf**
  
  Locate your fixture’s (LED array) total load voltage at the top of the chart – *Approximate Load Voltage* – and find the available EM LED drivers for this voltage in the selected column. The type of luminaire and application/location will help determine which EM driver to use.

- **LED load (W) ≥ to EM driver power output (W)**
  
  Designated as **Power (W)** for each EM LED driver on the chart. Use the chart to ensure the LED load’s rated power (W) is greater than or equal to the EM Driver power output (W).

- **AC Driver**

- **EM Driver**

  - **XA** (xxxx mA)
  - **XXA** (xxxx mA)

  The maximum current from the AC driver must be less than or equal to the current the EM driver can accept.*

- **Lumens = lm/w __________ X _________ (W)**

  Emergency illumination (lumens) can be calculated by multiplying the efficacy of the LED load (measured in lm/w) by the output power of the emergency driver (W).

* Use the chart to find the maximum AC Driver Output to confirm the maximum acceptable current for each EM driver.
LED Emergency Lighting for field installation

LED lighting as a general lighting source is becoming commonplace. Not surprisingly, its role in emergency lighting has also expanded. As with other types of lighting, LED lighting must meet the life safety code requirement for emergency illumination. LED fixtures serving as emergency units must, therefore, meet UL 924 emergency lighting requirements and provide at least 90 minutes of emergency lighting. Bodine LED drivers allow these fixtures to meet or exceed code.

Until recently, most emergency LED drivers were UL Component Recognized for factory installation only or were UL Classified. A Classified listing requires both operating compatibility and verification of the fixture with the Design Lights Consortium (DLC) database before the emergency driver can be field installed in the fixture. The restrictions associated with these listings make it more difficult – and in the case of UL Component Recognized drivers, not possible – for contractors or electricians to install an emergency LED driver in the field for new or retrofit applications.

Bodine offers UL Listed, field-installable, emergency LED drivers. Most of the Bodine LED driver portfolio is UL listed for installation in the field, and Bodine was the first to offer field-installable emergency LED drivers for the U.S.

UL Listed, field-installable emergency LED drivers:
1. Eliminate factory installed up charges.
2. Eliminate the legwork involved in the field-install process associated with UL Classified emergency LED drivers.

To use a UL Classified emergency LED driver, one must ensure that:
1. The luminaire that will receive the emergency LED driver is in the DLC database. If it is not included in the database, the emergency driver cannot be installed in the field.
2. The luminaire must be compatible with the emergency LED driver. Even though the luminaire is listed in the database, compatibility is not guaranteed.

Bodine continues to lead the industry by providing the solutions required by lighting professionals.

Some UL Classified emergency drivers simplifies the process for field installation by eliminating the time consuming measures required by a Classified listing.
Start

with these easy steps to select the proper emergency LED driver for your fixture.

Load Voltage

1. Enter the total forward voltage (VF) of the fixture into the EM driver.

2. Enter the supply voltage into the EM driver.

3. Calculate the output voltage of the EM driver into LED load as applied

Load Voltage (VF)

Verify total voltage of LED load

The total voltage of the LED load must not exceed the output voltage of the EM driver.

Load Voltage (VF)

Verify maximum power of LED load

The LED load’s rated power must be less than or equal to the EM driver power output (W).

Current (from AC driver)

Maximum current into EM driver

See the emergency LED current chart in the column AC Driver Output on the chart.

Current (from AC driver)

Lumens

Verify emergency lumens output

Find the appropriate emergency lumens output for each EM driver on the chart or calculate.

Lumens = \(\text{lm}/\text{w} \times \text{W} \)

Emergency lumens per watt (Lm/w) can be calculated by multiplying the efficacy of the LED load (measured in lm/w) by the output power of the emergency driver (W).

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| BSL722 Cold-Pak (C or C-DF) Class 2 | 3.0 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |
| BSL36 Cold-Pak (Red poly case) Class 2 | 3.0 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |
| BSL17 (BSL174004S) Class 2 | 3.0 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |
| BSL4SB (BSL4SB4004S) Class 2 | 3.0 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |

Note: Lumens indicated on this chart are calculated based on a typical LED fixture lumen output of 1040 lm at 3.5V. For different applications, use this chart to determine the output of the EM driver being utilized. Use the maximum value to determine the emergency lumens.

For more information, contact Bodine at: residential@bodine.com or 1-800-222-9383.

Listed for: Factory installation only

Compliant with California Energy Commission (CEC) Title 20

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