

Emergency for Constant Current

Ordering Part #s:

EM-560-10024 (spec sheet link): Iota Constant Power LED Emergency Driver ILB-CP07-HE-A, Dual Flex, 7W, 10-60Vf range, 120/277V, UL924. 90 minute EM Operation, 0-55°C Operating Temp. High Efficiency (CEC compliant). Dimensions: (L) 13.0" x (W) 2.2" x (H) 1.25" (mounting center 12.6")

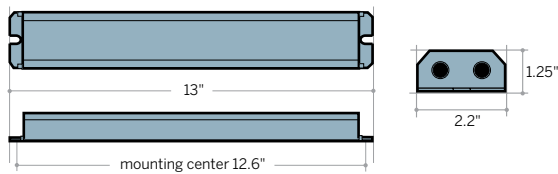
EM-560-10022 (spec sheet link): Iota Constant Power LED Emergency Driver ILB-CP12-A, Dual Flex, 12W, 10-60Vf range, 120/277V, UL924. 90 minute EM Operation, 0-55°C Operating Temp. Dimensions: (L) 13.3" x (W) 2.375" x (H) 1.5" (mounting center 12.75")

The EM drivers for constant current fixtures are Constant Power, which deliver a consistent output wattage to the LED load while operating in the emergency mode, for a minimum of 90 minutes operation.

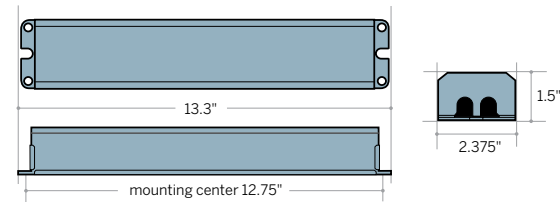
Considerations:

- A. Since the LED engine gets a constant wattage, it illuminates in direct proportion to the wattage, or power, that it is given. If the wattage remains the same, illumination levels also remain the same.
- B. The fixtures that are to be powered in EM mode, require a dedicated Normal power driver (that will be bypassed while in EM mode).
- C. The Constant Power EM driver's wattage needs to be equal or slightly lower* than the total nominal wattage of the fixture(s) being powered, and they need to be feed from a dedicated normal power driver. *If the CP EM driver's wattage were to be higher, the fixture could overheat while in EM, since it would be getting a higher current than in normal power operation.
- D. The fixtures' forward voltage needs to be in the 10-60Vf range
- E. The delivered lumens while in EM mode, will be proportional to the wattage they will be getting while in EM mode, divided by nominal wattage in normal power
- F. The more fixtures you add (up to the maximum forward voltage allowed per output), the less light output you will get from them while in EM mode.

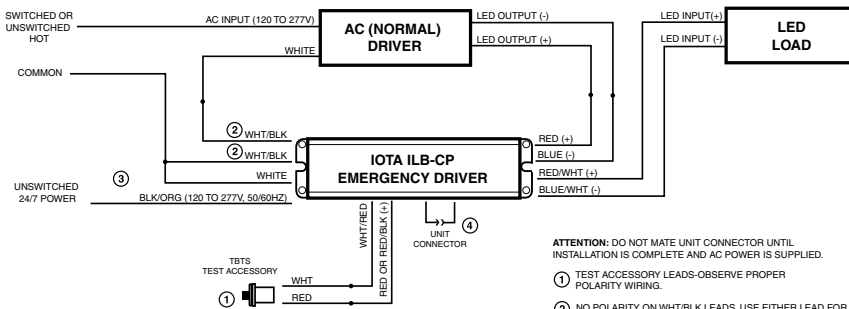
EM-560-10024



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Constant Power (CP) EM driver Typical Wiring Diagram



WIRING THE A.C. INPUT

- A. The CP EM driver and the Normal power driver MUST be on the same branch circuit.
- B. The CP EM Driver requires an unswitched A.C. power source of 120 to 277 VAC, 50/60Hz; therefore when used with switched fixtures, the ILB input must be wired ahead of the switch.

- ATTENTION: DO NOT MATE UNIT CONNECTOR UNTIL INSTALLATION IS COMPLETE AND AC POWER IS SUPPLIED.**
- 1 TEST ACCESSORY LEADS-OBSERVE PROPER POLARITY WIRING.
 - 2 NO POLARITY ON WHT/BLK LEADS. USE EITHER LEAD FOR CONNECTION TO BUILDING COMMON (SWITCHED OR UNSWITCHED) AND OTHER FOR CONNECTION TO AC DRIVER.
 - 3 CONNECT UNSWITCHED POWER. IF A SINGLE BUILDING COMMON IS PRESENT, CONNECT THE WHITE WIRE TO THE COMMON. IF A SEPARATE UNSWITCHED CONDUCTOR FEED IS PRESENT, CONNECT THE WHITE LEAD TO THE COMMON FROM THE UNSWITCHED FEED.
 - 4 MATE UNIT CONNECTOR AFTER INSTALLATION IS COMPLETE AND AC POWER IS SUPPLIED

$$\text{Typical Forward Voltage (Vf)} = \frac{\text{Nominal LED Power (W)}}{\text{Nominal LED Driving Current (mA)}}$$

$$\text{EM Current Level (mA)} = \frac{\text{EM Driver Constant Power (W)}}{\text{Typical Forward Voltage (Vf)}}$$

$$\text{EM Delivered Lumens (lm)} = \frac{\text{Nominal LED Power (W)}}{\text{EM Driver Constant Power (W)}} \times \text{Normal Power Delivered Lumens (lm)}$$

WARNING: EM Current Level must be less than or equal to the nominal current level to prevent fixture from overheating in EM mode.

EM from a Generator / EM breaker panel: When powering fixtures from an EM generator or EM breaker panel, the driver operates exactly the same way as it does when in normal power mode, and the light output is not affected.

Considerations:

- A. The EM circuit needs to be sized-up to be able to power the max input current of the driver at the appropriate AC input voltage (not the driver's rated wattage), regardless of the connected load.
- B. If the driver is integral, the line voltage N and EM power drops coming into the fixture need to be isolated from each other / cannot be in the same conduit.