

**PHILIPS**  
**bodine**

AC/EM Drivers

UltimateOne

BAC40EM6



**Combination AC/Emergency driver for LED strips**

Class 2 output

40 Watts output power (AC)

6 Watts output power (Emergency)

Product order number: BAC40EM6 – individual carton (metal case + separate battery)

Project: \_\_\_\_\_  
 Type: \_\_\_\_\_  
 Model. No: \_\_\_\_\_ Qty: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Notes: \_\_\_\_\_

**Specifications**

**UL Recognized**

Factory Installation Only  
(Indoor and Damp)

**Universal Input Voltage**

120 thru 277 VAC, 50/60 Hz

**Output Voltage**

22.5 – 54V

**Temperature Rating**

Electronic Case: Tc Life - 75°C  
UL - 85°C

Operating Ambient Temp Range:  
0°C - 50°C (32°F to 122°F)

**Warranty**

5 Years (NOT pro-rata)

**Emergency Operation**

**Illumination Time**

90 Minutes Emergency

**AC Input Current**

60 mA Maximum (Charging Only)

**AC Input Power Rating**

5.5 W Maximum (Charging Only)

**Output Power**

6.0 W Maximum (Emergency)

**Test Switch Charging Indicator Light**  
Illuminated Test Switch

**Battery**

High-Temp, Maintenance-Free  
Nickel-Cadmium Battery  
7- to 10-Year Life Expectancy

**Weight**

2.0 lbs. / 0.91 kgs. Including battery

**Recharge Time**

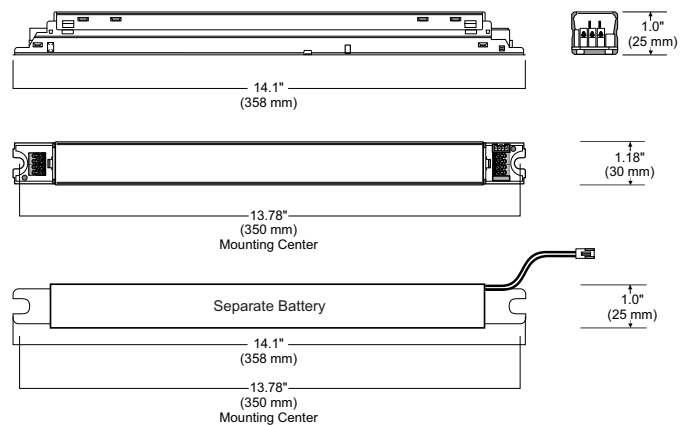
24 Hours

**Features & Benefits:**

- Combined AC and Emergency LED driver in one compact, low-profile case
- AC/EM driver compatibility is confirmed
- Separate battery for mounting flexibility
- Fewer wires to simplify installation
- Class 2 output – UL 1310 Certified, CSA 22.2 No 223-M91 compliant
- Emergency mode lumen output of up to 800 lumens
- Compatible with a variety of LED strip manufacturers
- SimpleSet Programming for AC operation
- 0 - 10V dimming to 1%
- RoHS compliant

**Dimensions**

Case – 14.1" x 1.18" x 1.0" (mounting center –13.78")  
 Battery – 1" Diameter x 14.1"L (mounting center – 13.78")  
 (see back page for additional drawings)



**AC Operation**

**Maximum Output Power**

40W

**Output Current (Programmable)**

.1 – 1.1A

**AC Input Current**

0.45A @ 120V  
0.18A @ 277V

**Maximum Input Power**

51W

**THD @ Maximum Load**

<10%

**Power Factor @ Max Load**

>0.95

**Surge Protection (Ring Wave, KV)**

2.5KV

**Dimming**

0-10V Analog, Class 1 or  
Class 2 wiring

**Dimming Range**

(with specified dimmers)  
1% ~ 100% (for output current  
range 0.25 – 1.1A)

**Minimum Output Current**

0.0025A

**Dimming Source Current**

150 µA

Additional information can be found on the Normal Driver Datasheet for the BAC40EM6 Combo Driver.



# BAC40EM6

## Combination AC and Emergency LED Driver

### Application

The BAC40EM6 is a combination 40W dimming LED driver and a 6W Emergency LED Driver in one low profile case. The BAC40EM6 is supplied with a separate high-temperature nickel-cadmium battery, with one simple connection point. The BAC40EM6 can deliver up to 6 watts to an LED load (measured at nominal battery voltage) for 90 minutes in the emergency mode. The BAC40EM6 is suitable for indoor and damp locations. The BAC40EM6 is universal input (120-277 V), and dims to 1%. The AC operation of the BAC40EM6 must be programmed with Philips SimpleSet technology.

### Operation

During normal operation, the BAC40EM6 operates as a standard SimpleSet programmable 40W AC driver, with 0-10VDC dimming compatibility and a minimum dim level of 1%. When AC power fails, the BAC40EM6 immediately switches to the emergency mode, operating the LEDs at a reduced lumen output for a minimum of 90 minutes. When AC power is restored, the emergency driver automatically returns to the charging mode.

### Installation

The BAC40EM6 does not affect normal fixture operation and may be used with either a switched or unswitched fixture. If a switched fixture is used, an unswitched hot lead must be connected to the AC/EM driver. Installation is not recommended with fixtures where the ambient temperature may fall below 0° C. The product is suitable for installation in sealed and gasketed fixtures.

### Emergency Illumination

In the Emergency mode, the BAC40EM6 operates an LED load of up to 6 Watts at nominal battery voltage for a minimum of 90 minutes.

### Specification

Normal and Emergency lighting shall be provided by using an LED fixture equipped with a Philips Bodine BAC40EM6 combination AC and Emergency LED Driver, with universal input (120-277 V), SimpleSet, and 0-10VDC dimming to 1%. The BAC40EM6 shall include all AC/EM Driver functions in one case, and a

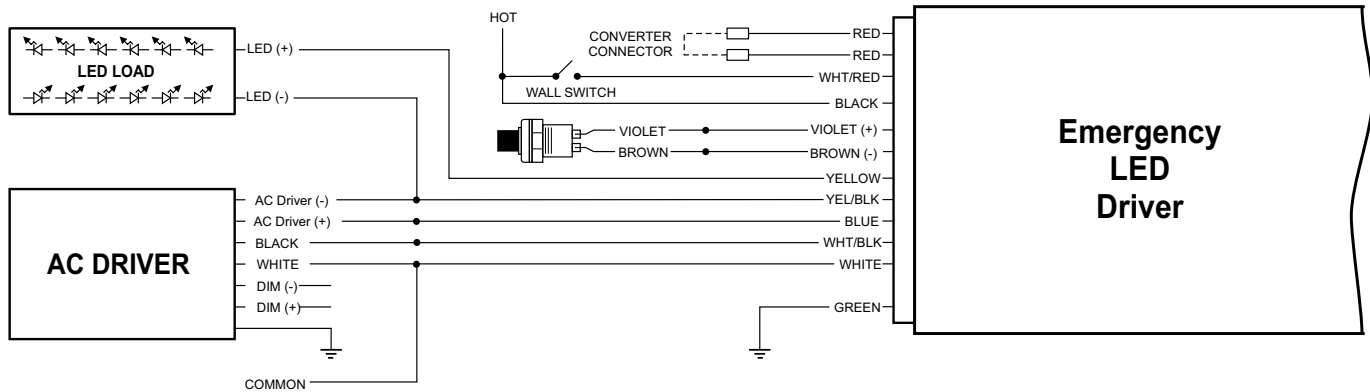
separate high-temperature, maintenance-free nickel-cadmium battery with an easy connect wiring harness. An illuminated test switch (ITS) to monitor charger and battery and installation hardware shall be provided. The combination AC and Emergency driver shall be capable of delivering up to 40W AC under normal operation and 6 watts to an LED load for a minimum of 90 minutes in the event of AC power loss. The BAC40EM6 is suitable for indoor and damp locations. The BAC40EM6 shall have a maximum of 5.0 watts of battery input power and a 21.6 Watt-hour battery capacity and shall comply with emergency standards set forth by the current NEC. This BAC40EM6 complies with Part 15 of the FCC Rules and shall be UL Recognized for factory installation only.

### Warranty

The BAC40EM6 is warranted for five (5) full years from date of manufacture. See web site for details.

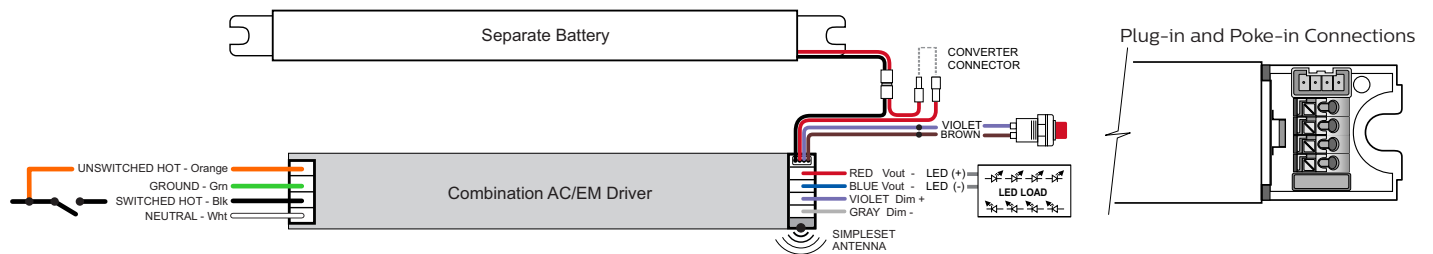
### Traditional solution

with wire splicing and wire nuts



### New and better solution

with fewer wires for simpler installation using poke-in connections



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