



FLATLITE®

The world's widest, thinnest, longest lightbulb™

Technical Bulletin
Battery Operation
March 2002

FLATLITE® Battery Operated Solutions

The extraordinarily low power consumption of FLATLITE® Lamps makes them well suited to many battery powered applications.

While E-Lite Technologies does not market or sell battery systems, both the E-Lite TR Model Power Supplies and the DC Inverters can be used with single use or rechargeable batteries.

Power requirements:

When operating the lamp at 280VAC, use the following watts per sq.in. factor to calculate amperage:

For Model 600, 2200 or 12K Transit Supplies
0.05 watts/ sq.in

For DC Inverters
0.075 watts/ sq.in

Operating the lamp at a lower brightness will reduce the power requirements

Calculating Power Consumption and Battery Life

Battery Life is generally specified in Amp Hours. To determine the amp hour capacity required for a given lamp, use the following formula:

$$\frac{\text{Total sq. inches} \times \text{Power per sq.inch in watts}}{\text{Input Voltage}} = \text{Amperage}$$

Examples:

- A. 250 sq. inch panel, operated from Model 600N-TR-12 Power supply.
250 sq. inches x .05 watts per sq. inch = 12.5 watts total power
12.5 watts/ 12 volts = 1.04 Amps
A 2 Amp Hour 12 Volt battery can operate the panel for approximately 2 hours
- B. 100 sq. inch panel, operated from Model DC27EL-089-107 12VDC Inverter
100 sq. inches x .075 watts per sq. inch = 7.5 watts total power
7.5 watts/ 12 volts = 0.625 Amps
A 2 Amp Hour 12 Volt battery can operate the panel for approximately 3 hours

Notes:

To extend battery life, consider lowering lamp brightness, or flashing lamp on and off. A lamp lit half the time will double the battery life.

A good source for rechargeable battery systems is a professional video supply dealer. Well packaged, high capacity batteries are used by remote/ mobile video and film crews.

The entire line of E-Lite Power Supplies is available for low voltage DC input operation.; Specify a TR-12 or 24 supply when ordering (12 or 24 denotes the input voltage)

For more installation and application information, contact your E-Lite representative, or visit the technical support area at www.e-lite.com

