

Any Can Light, Single LED or Triple LED light from Feeney can be wired into a DC electrical system or to an AC-DC transformer to utilize 110VAC current or 220VAC. They can also be wired to batteries or solar packs. An LED can be activated by a timer, photovoltaic unit or a manual switch. Dimmers can be used on the 12v side of the system as long as they do not exceed 14volts.

The brightness of any LED is in direct relation to the current. The amount of the current passing through is a function of the temperature and the amount of supplied voltage. Both also affect the lifespan of the LED, although with 70 °F (20C) temperatures and the correct current flow, an LED can last 11 years with continuous use.

Select your power supply based on your planned current capacity:

A voltage exceeding 15 volts should be avoided on any 12V LED. Voltages exceeding 15 volts will NOT increase the intensity or brightness of the LED. Instead, it over drives the unit, damaging the LED and reducing its lifespan. For a brighter light try the Triple LED, the intensity is three times that of the Single LED for the wattage.

Generally, each 12 volt Single LED draws 0.02 amps or conservatively 0.33 watt. (Fifteen Single LEDs in a parallel circuit would draw 0.3 amps or 3.6 watts of power. One circuit with 25 Single LEDs will consume fewer than 8 watts of power.) Wire gauge and current capacity of the power source determine how many lights can be powered on one circuit. It is conceivable to light thousands of Single LEDs on one circuit with a large enough power source and the proportionate wire size. (As a practical example: A Malibu 100 watt—110 v AC to 12 v AC power supply with an NTE 5322 rectifier to convert 12v AC to 12v DC can power up to 220 Single LEDs and not exceed 80% of the power supply's capacity, which should not be exceeded on this transformer.) AC to DC Power Adapters are available from suppliers such as Radio Shack, these convert 110 volt house current to 12 volt DC and do not require a rectifier.

The lights will only work when connected in parallel with correct polarity; the red wire connects to positive and the black to negative. Butt and closed end connectors can be used, as well as soldered connections. Protection of the connections should be considered in adverse environments to avoid corrosion.

The type of wire is dictated by the environment of the application. Moisture, UV exposure and temperature will determine the appropriate type of wire and its insulation. Depending on the application, either speaker wire, bell wire, phone wire or low voltage control wire can be used. A recommended cable is Beldon 8422 or equivalent: 22 gauge 2 conductor in a common outer insulation. Typically, the feed wire to a group of Single LEDs should be 20 gauge wire, although 22 gauge can be used for long runs to individual lights or groups up to 5.

Assuming a 70 degree full beam angle, a Single LED will emit a circle of light approximately equal to the distance from the Single LED bulb to the surface below it - i.e. a circle of 3 feet in diameter will be projected 3 feet from the Single LED. The theoretical circle of light could be 30% greater than this conservative rule of thumb. Typical Luminous Intensity (Ta=25 °C, IF=20mA) -2.2 cd. Directivity (2theta;1/2-35 °).

Depending on usage, any LED might ultimately have to be replaced. To prepare for this, care should be given during the first installation to allow excess wire for the first lights removal and replacement.

Warning: Both static electricity and power surges can damage LEDs. Care must be taken to avoid electrostatic discharge and allow for circuit protection.

