

Flashlight or miniature bulbs are utilized in a variety of applications. From pen lights to heavy duty flashlights, these bulbs are manufactured in an array of various shapes, sizes & designs. Bulbs are rated according to voltage, amperage, candle power & average life.

VOLTAGE

In battery applications the effective voltage delivered is generally higher than the average voltage. Batteries however are rated by average voltage. Therefore, the correct flashlight bulb should be determined by the effective voltage of the batteries used.

CANDLE POWER

Candle power is a value of the total light output of a bulb operated at effective voltage. Candle power is the industry standard method for rating the total output of light from a bulb. Lumens is another method of measuring brightness of bulbs. Candle power can be converted to Lumens by multiplying the candle power by 12.57 (4p). The brightness of bulbs is also affected by the bulb's shape & if it is gas filled.

BULB SHAPE

Flashlight bulbs with round glass give an even spread of light (see fig.1) These bulbs normally have a miniature screw base.

Pre-Focus flashlight bulbs have an accurately positioned filament in conjunction with a parabolic reflector. This enables a light beam of high intensity. This type of bulb is easily identified by it's distinctive tear drop glass & flange (PR) base. (see fig.2)

Lens-end bulbs have an integral lens at the front of the glass. These normally have a miniature screw base. They are commonly used for pen type lights & produce a strong concentrated spot of light. (see fig.3)

GAS FILLED

Flashlight bulbs can be purchased filled with Halogen or Krypton Gas. While the normal bulb shape remains, these bulbs emit a whiter more visible light. This in turn makes the bulb much brighter, with more light efficiency per watt. A higher light output can be maintained throughout the bulbs longer life.

RATED LIFE

Rated Average laboratory life (hours) is the average life of the bulb. This is obtained by testing the bulb at it's design voltage (+ or - 1%) in closely controlled laboratory conditions.

This is not necessarily the same as service life where conditions such as shock, vibration, voltage fluctuations, & environment may result in a shorter attained life.

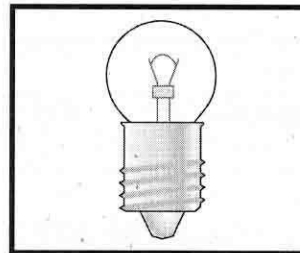


Fig. 1

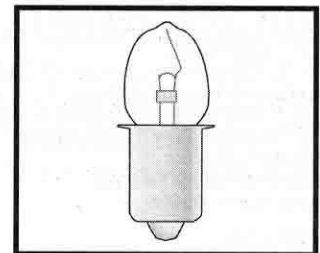


Fig. 2

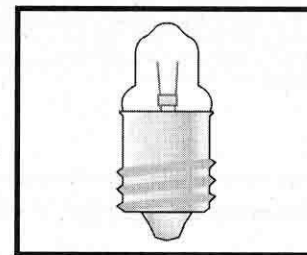


Fig. 3