

PHYSICS - X-PART-12 CLASS 12



LED Bulbs (Construction, repair, reuse and disposal)

\* Parts of the LED bulb.

Part of on LED bulb	Use	Part of the LED bulb	Use
<b>Base unit E22</b>  BASE UNIT	This is the metallic part that connects the bulb to the holder	<b>Power Supply board (LED driver)</b>  POWER SUPPLY BOARD	Function of this is to convert AC into DC and supply necessary output voltage ( The same board can be used for 5W, 7W and 9 W bulbs.)
<b>Heat sink</b> 	The part close to the base unit of the bulb. It is an arrangement for absorbing heat from the base.	<b>Printed Circuit Board (LED Chip Board)</b>  PRINTED CIRCUIT BOARD	LEDs are fixed on this board. In this the positive and negative polarities are marked.
<b>Base plate</b> 	Metal plate that fixes it to the holder.	<b>Diffuser cup</b>  DIFFUSER	This is the part from which light comes out of the bulb.
<b>Back conductor Screws.</b> 	Screws for fixing wires from LED drive to the base unit.		

\* The Main Components of an LED bulb

- 1.Rectifier,
- 2.Load resistor,
- 3.Filter capacitor,
- 4.LED Chip,
- 5.Heat Sink

\* How can the LED bulbs be disposed of scientifically?

1. Segregate the plastic, electronic and metal components of LED bulb and transfer them to their respective disposal units.

Energy saved is equivalent to energy produced

### Assignment

1. Let us assess page no. 29 to 31