



## Practical-3

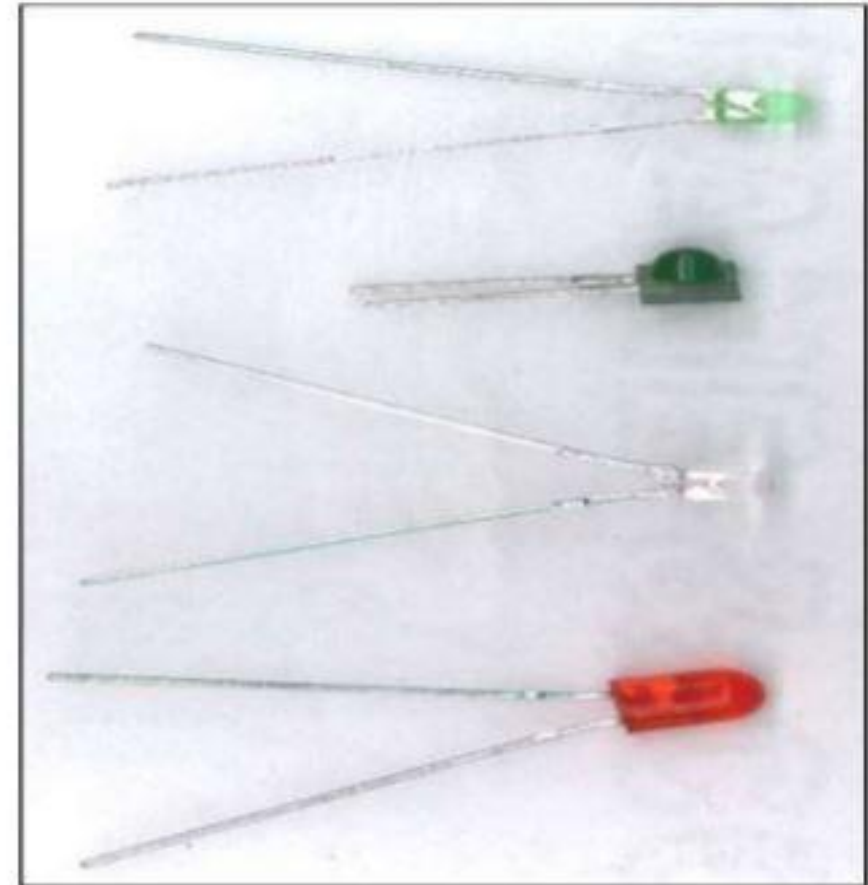
# LED(Light-emitting diode)

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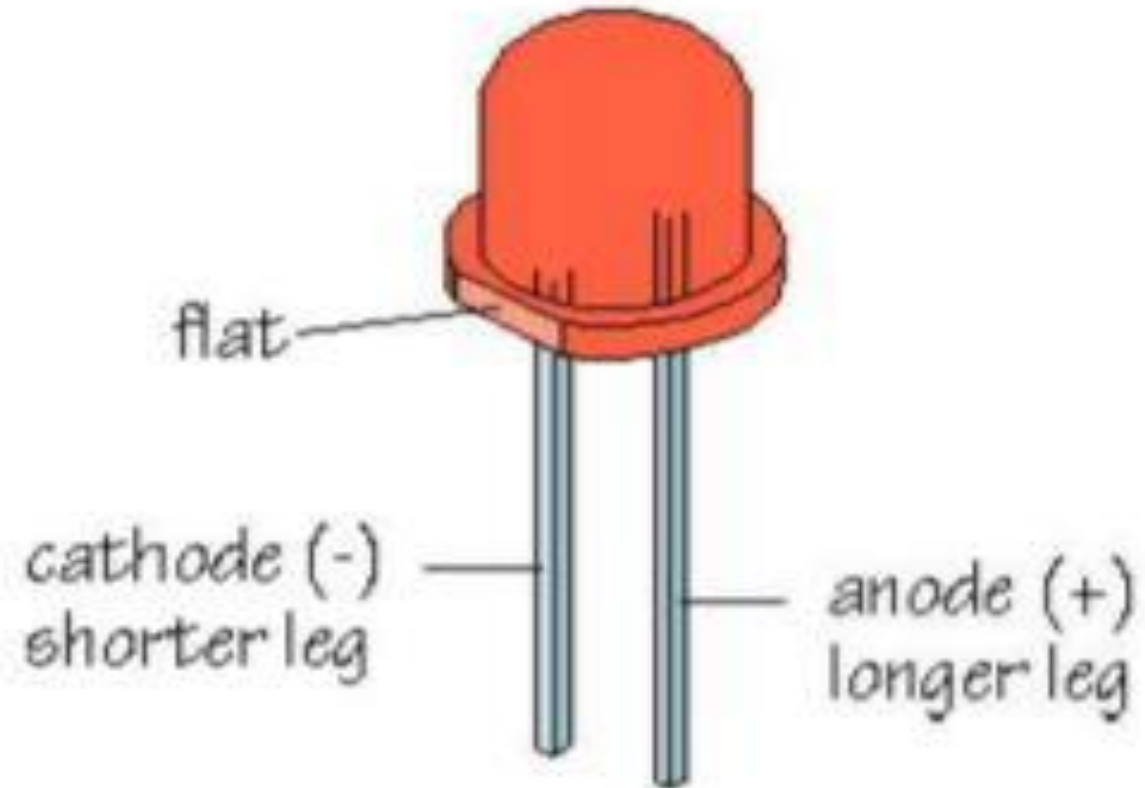
# Light-Emitting Diode

- An LED screen is actually an LCD screen, but instead of having a normal CCFL backlight, it uses light emitting diode (led's) as a source of light behind the screen .
- An led energy is more efficient.



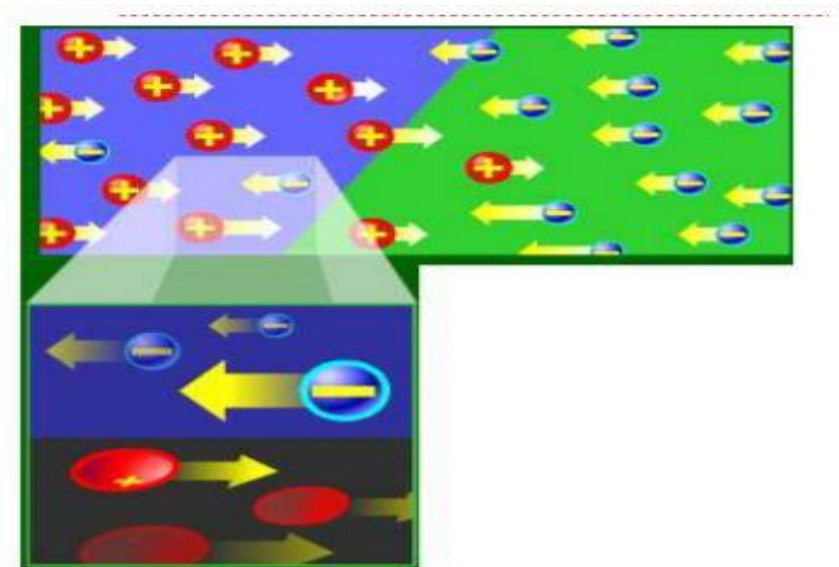
# Light-Emitting Diode

- Light-emitting diode
- Semiconductor
- Has polarity



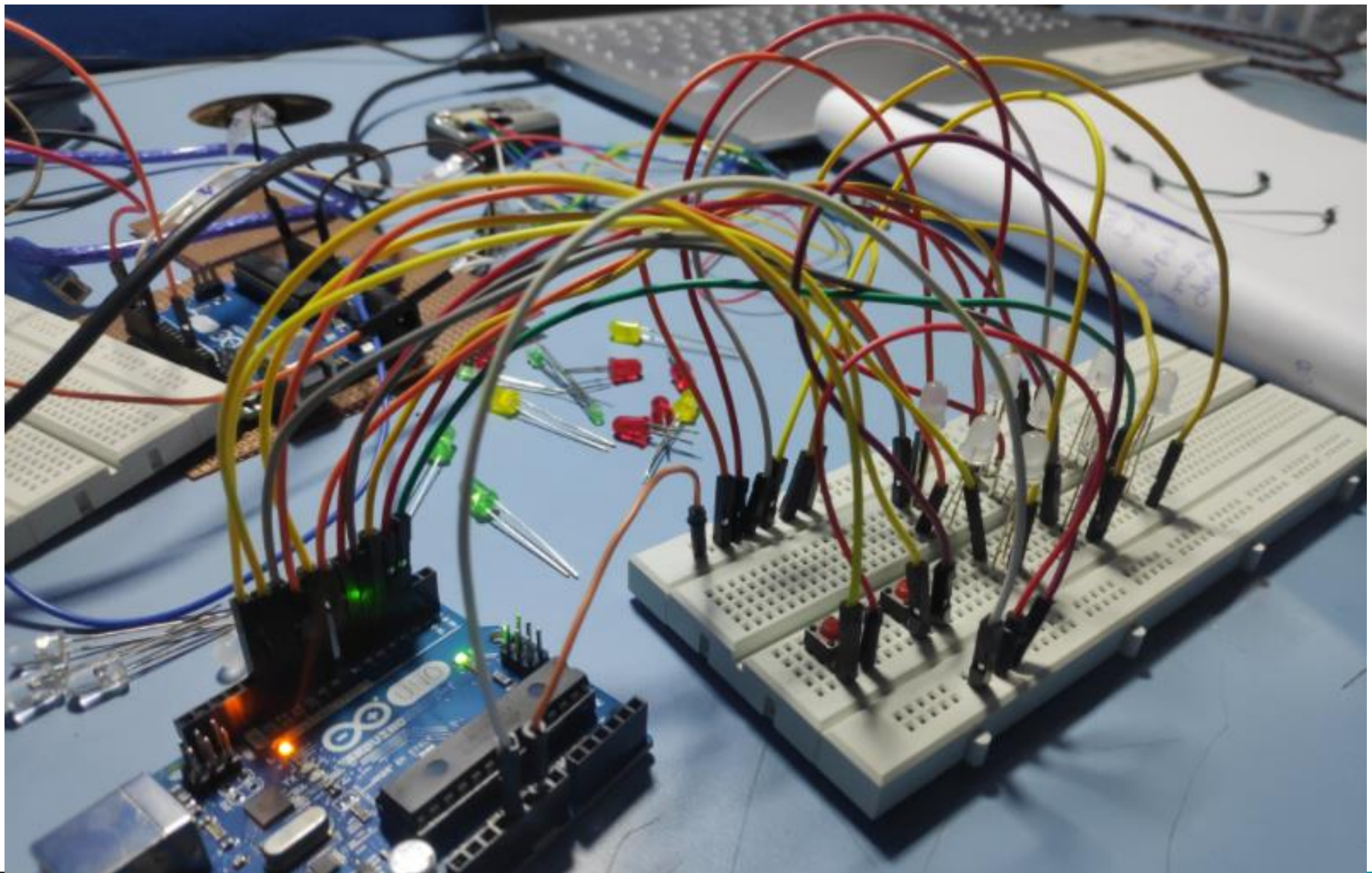
# LED: How It Works

- When current flows across a diode .
- Negative electrons move one way and positive holes move the other way



# LED: How It Works

- The holes exist at a lower energy level than the free electrons
- Therefore when a free electrons falls it loses energy
- This energy is emitted in a form of a photon, which causes light
- The color of the light is determined by the fall of the electron and hence energy level of the photon





# Applications:

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- Traffic lights
- Televisions
- Camera flashes
- Automotive headlamps
- Medical devices