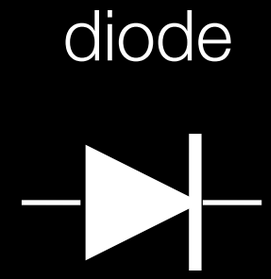
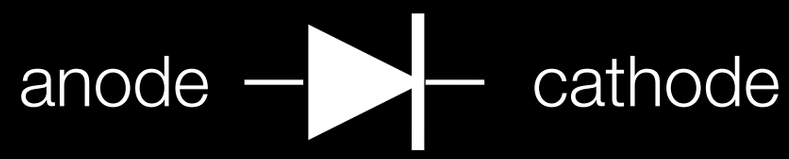
Optoelectronics

di•ode |ˈdīˌōd|

noun Electronics

a semiconductor device which allows current to flow in only one direction.

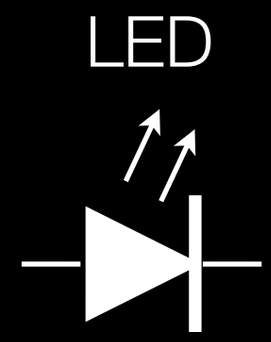




current flows from anode to cathode

fixed voltage drop (typ. 0.6V)

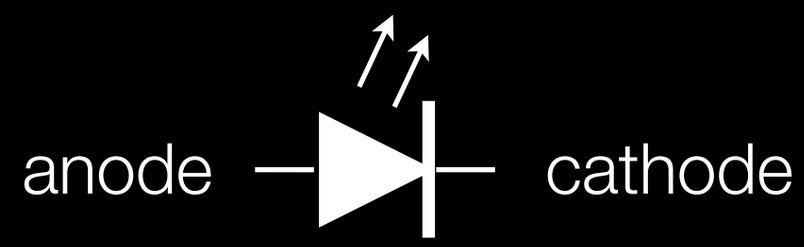
reverse breakdown

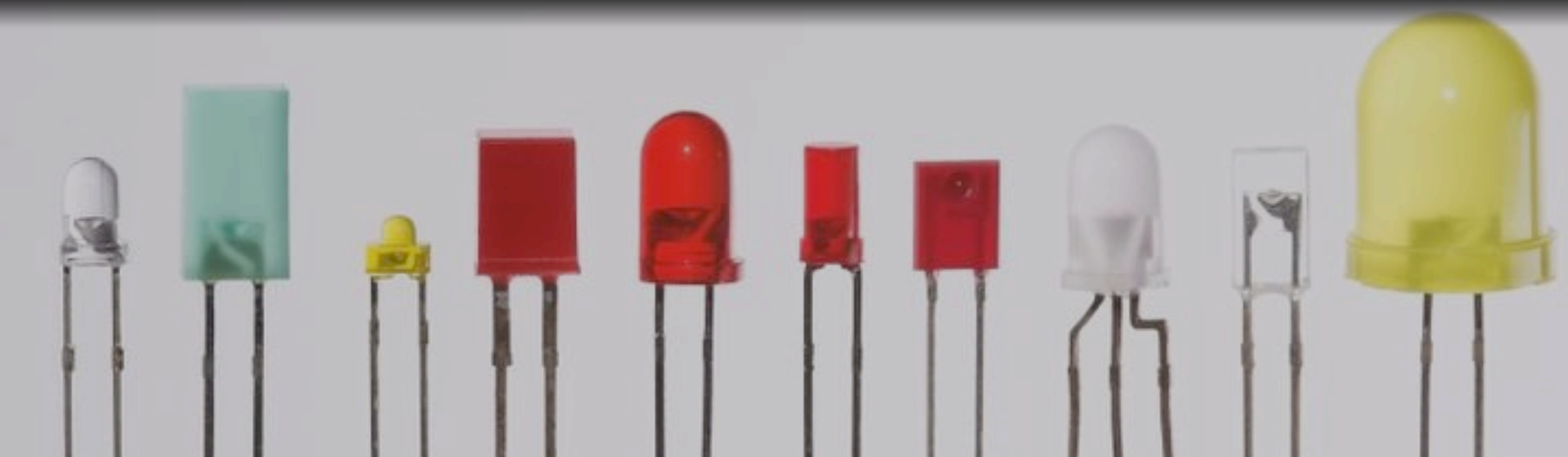


hydraulic analogy:

diode :: check valve

Light-Emitting Diodes





LTE-4206 IR LED

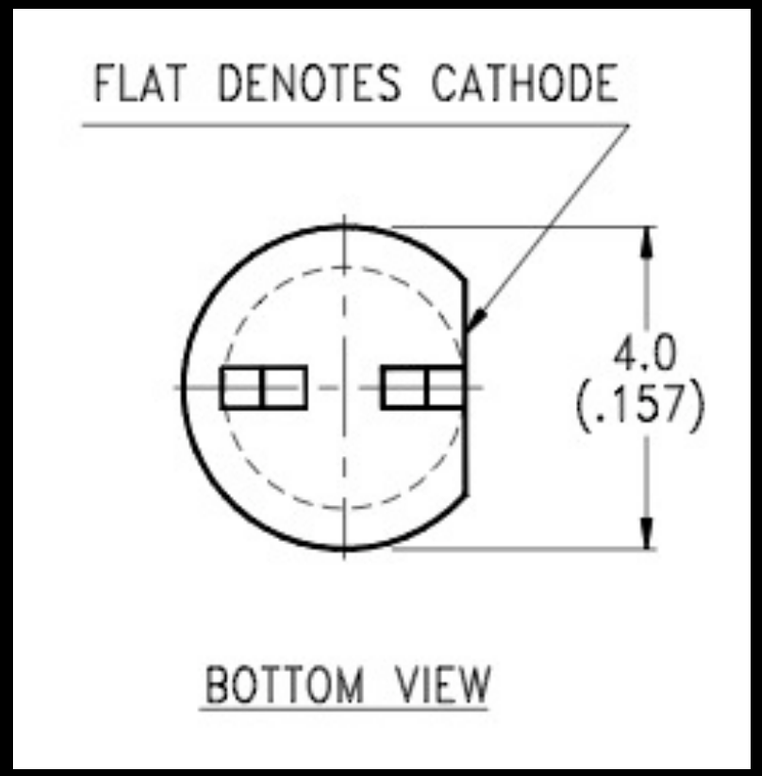
peak wavelength = 940 nm (IR)

max continuous forward current = 60 mA

peak forward current = 1 A

typ. forward voltage = 1.2V

reverse breakdown voltage = 5V

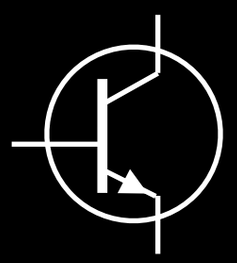


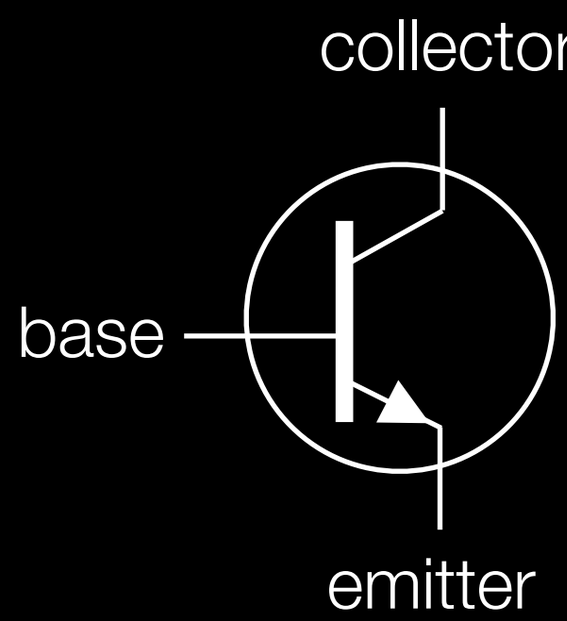
tran•sis•tor |tran'zistər|

noun Electronics

a semiconductor device used to amplify signals, wherein a voltage or current applied to one terminal changes the current flowing through another pair of terminals.

NPN transistor





hydraulic analogy:

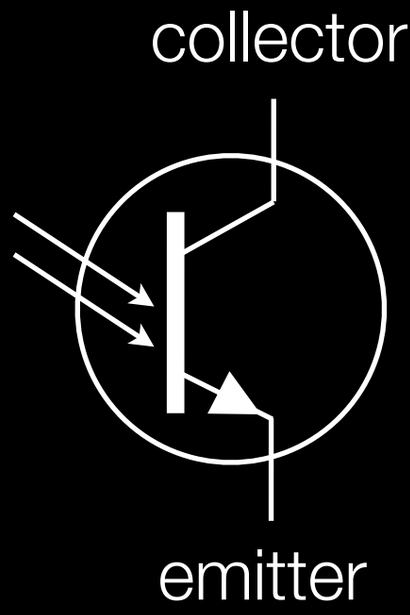
transistor :: control valve

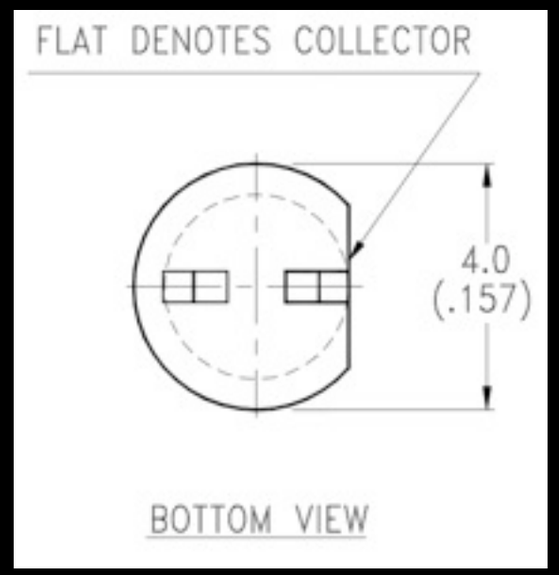
LTR-4206 NPN Phototransistor

peak wavelength = 940 nm (IR)

collector-emitter saturation = 0.4V

emitter-collector breakdown = 5V





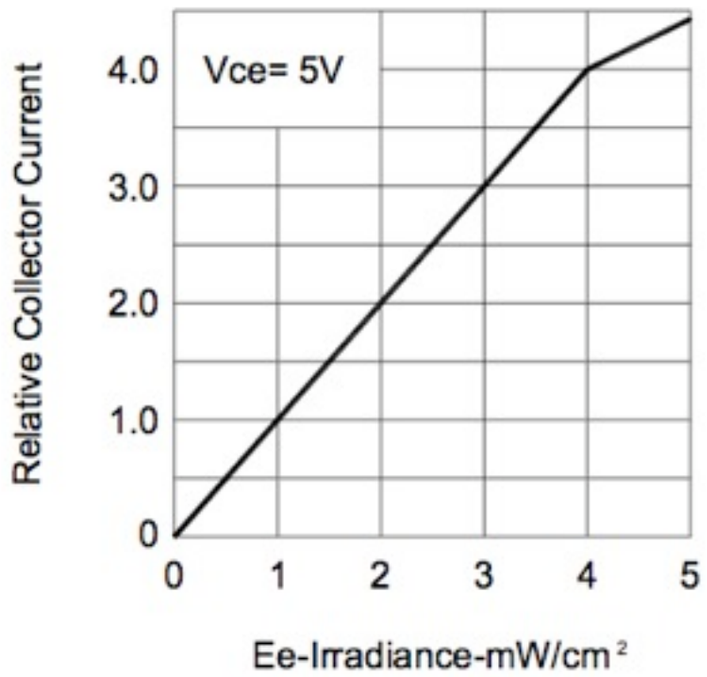


FIG.4 RELATIVE COLLECTOR CURRENT VS IRRADIANCE

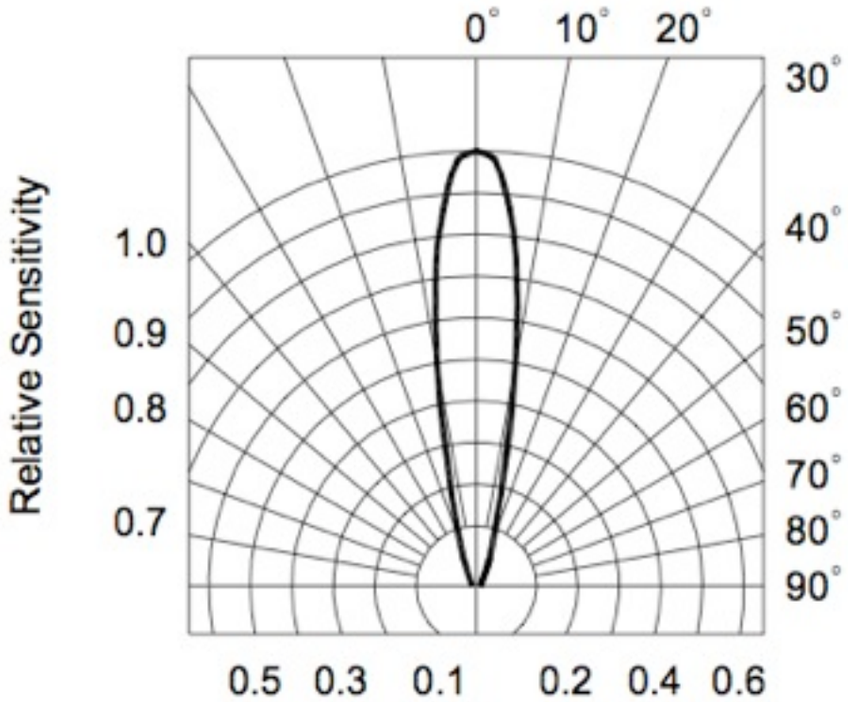


FIG.5 SENSITIVITY DIAGRAM