diode | 'dīˌōd|
noun Electronics
a semiconductor device which allows current to flow in only one direction.

anode ←→ cathode

current flows from anode to cathode
fixed voltage drop (typ. 0.6V)
reverse breakdown

hydraulic analogy:

diode :: check valve
Light-Emitting Diodes

anode → cathode
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
transistor | 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.

hydraulic analogy:

transistor :: control valve
LTR-4206 NPN Phototransistor

peak wavelength = 940 nm (IR)

collector-emitter saturation = 0.4V

emitter-collector breakdown = 5V

![Diagram of phototransistor with labels for collector and emitter.]