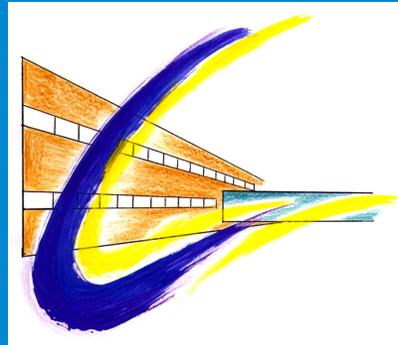


SMX-M1-UF1-NF1-AF1-PRE

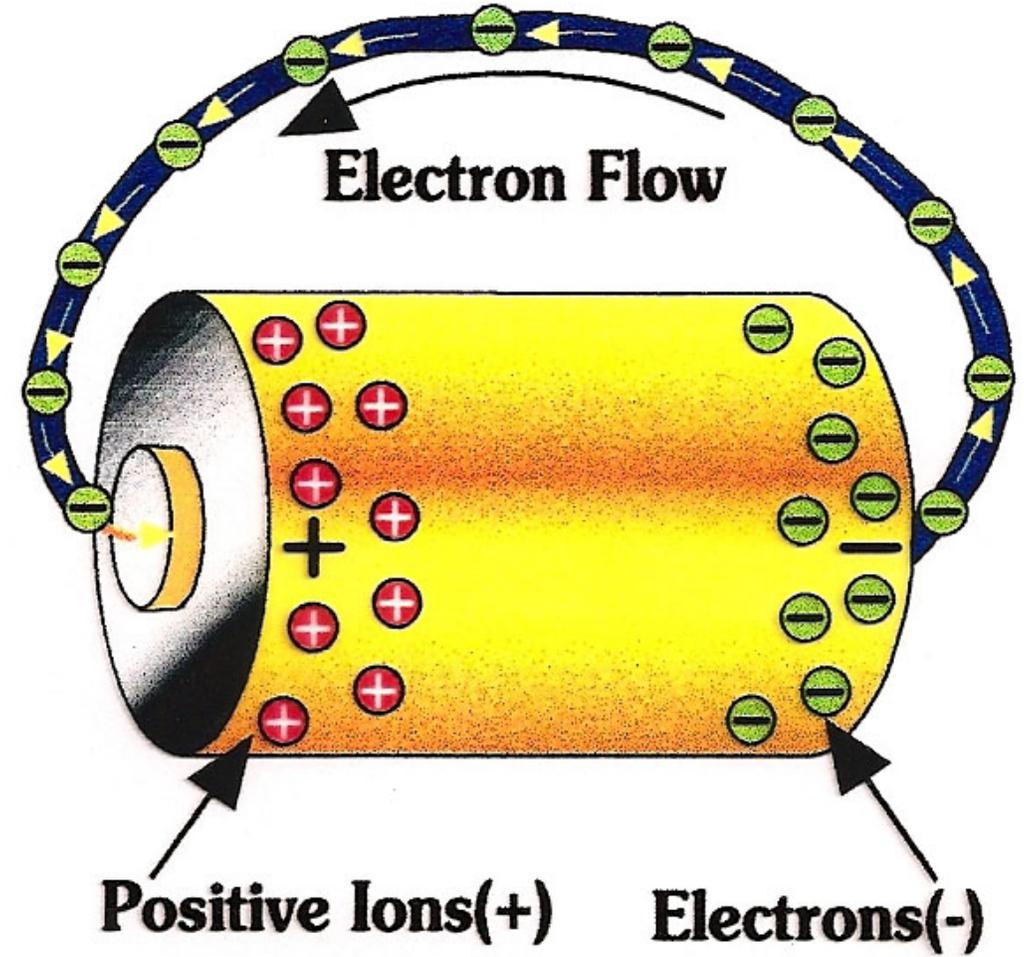
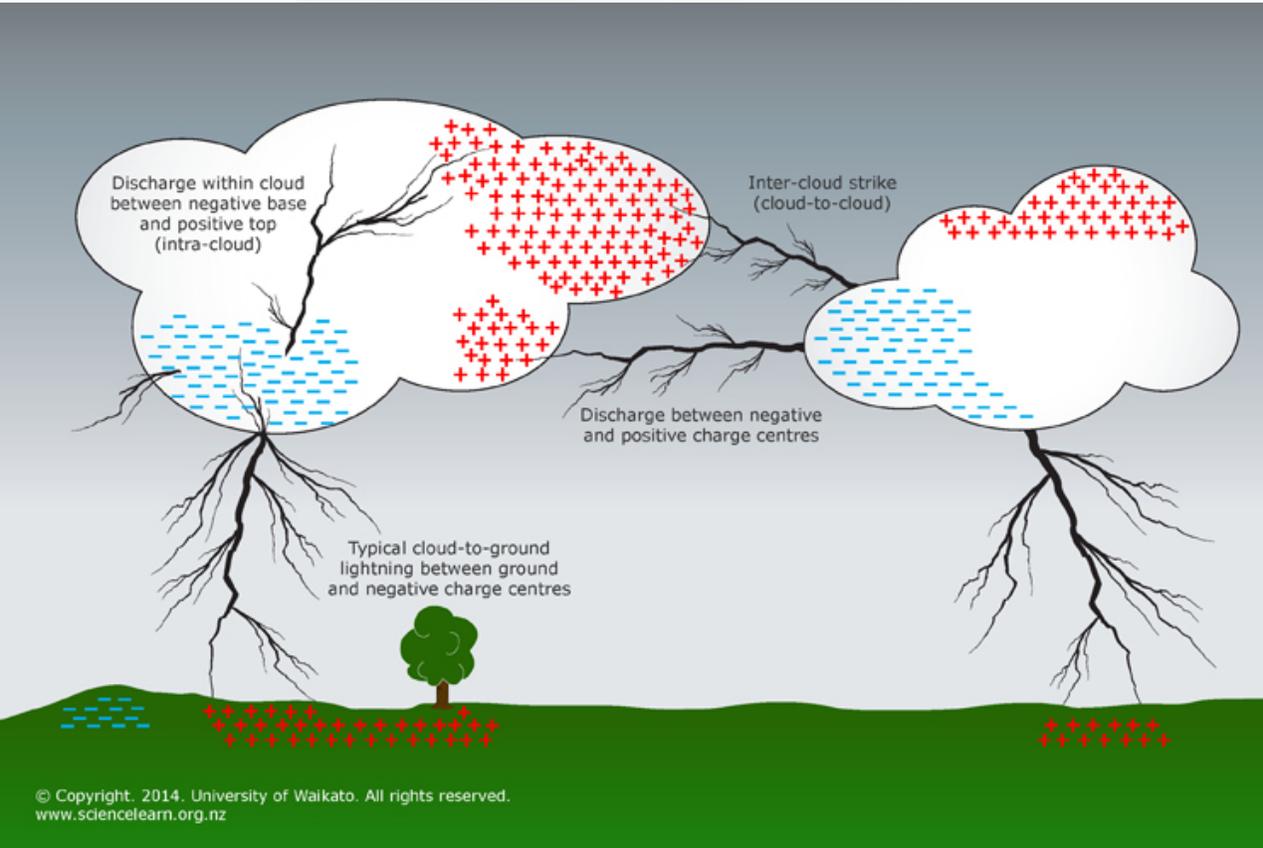
Electricitat



Joan Botella Vinaches
Institut Castellbisbal

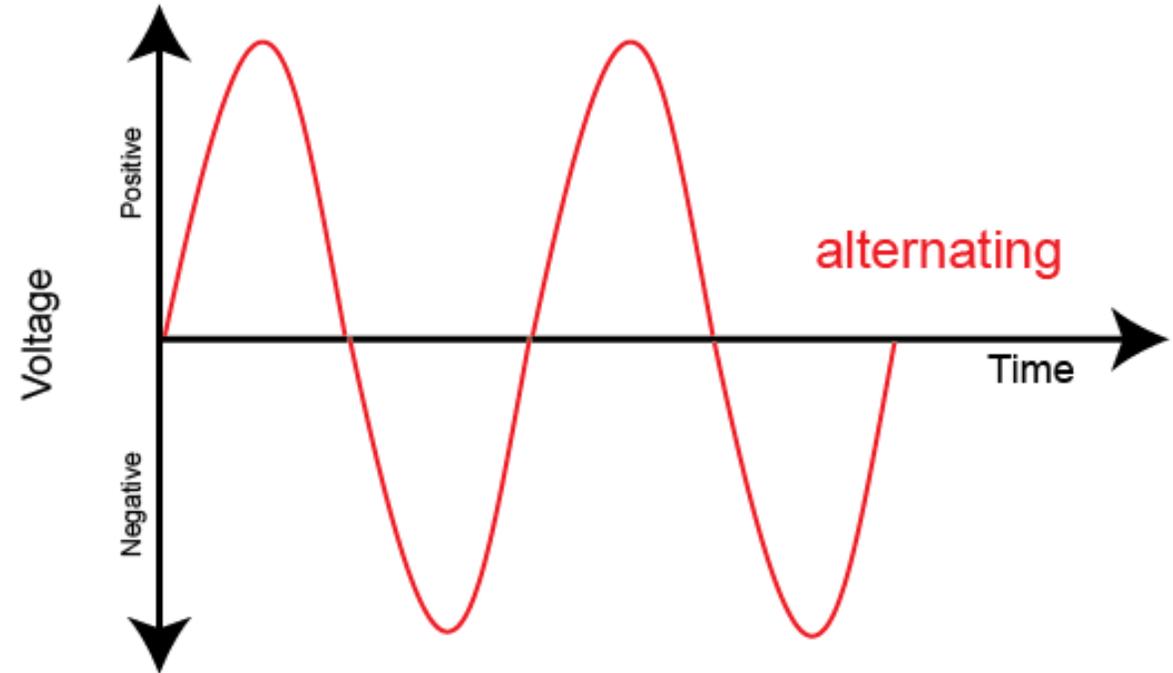
Electricitat

Electricitat

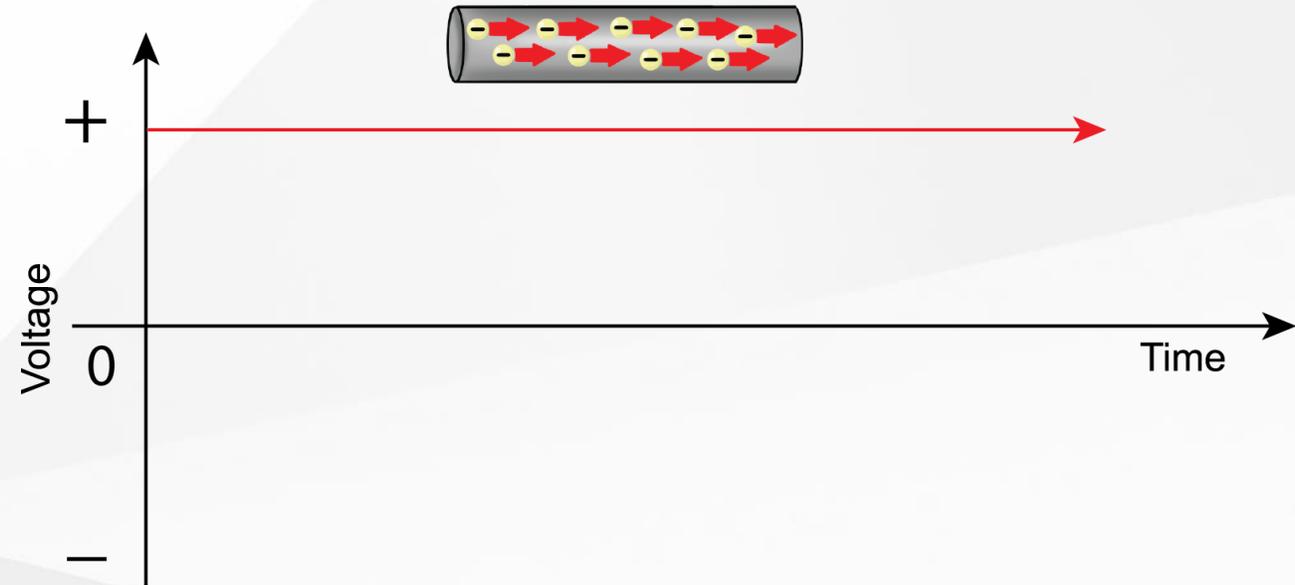


ALUOL

- Corrent alterna
 - Va canviant de sentit.
 - Arriba més lluny més fàcilment.
 - En Europa l'estandard és **220 V a 50 Hz**, en EEUU 220 V a 60 Hz.

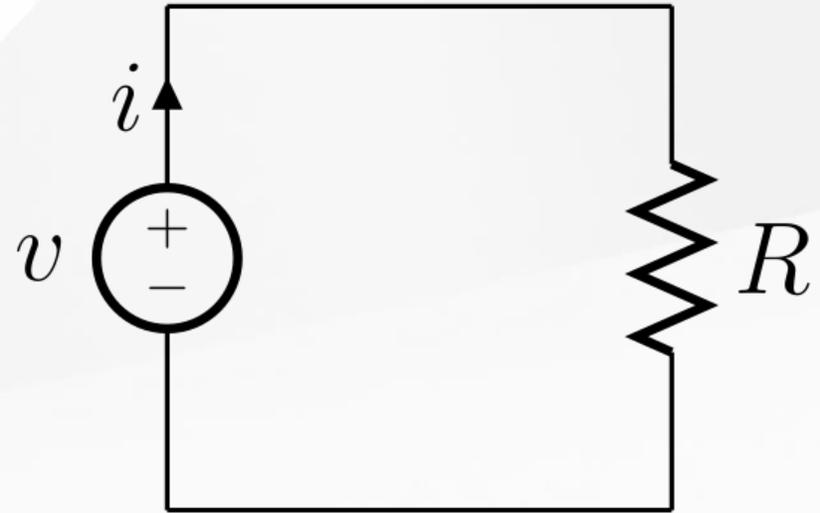


- Corrent contínua
 - La que utilitzen els aparells electrònics.



- La llei d'Ohm

- $V = I * R$
- Voltatge -> Volts (V)
- Intensitat -> Ampers (A)
- Resistència -> Ohms (Ω)

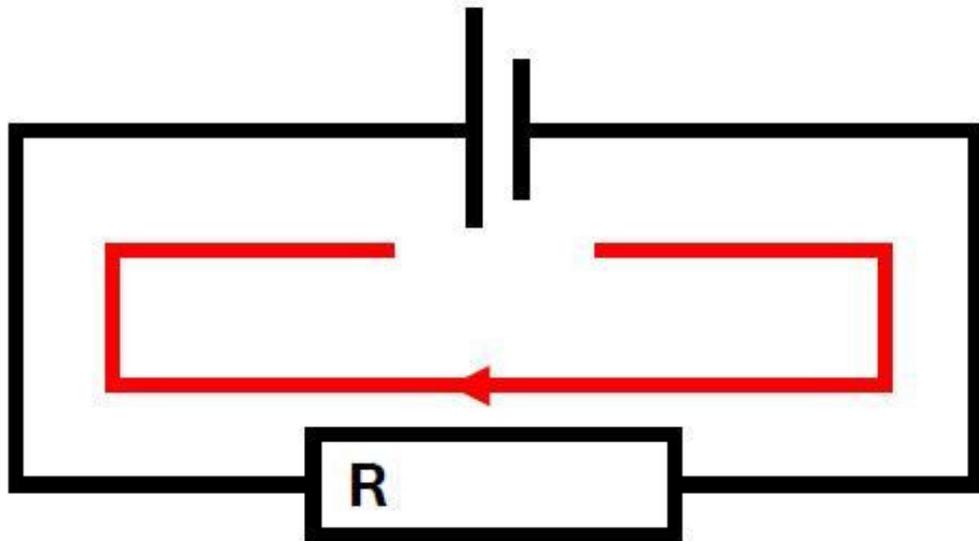


Dirección física de la corriente

(Sentido de los electrones)

+

-

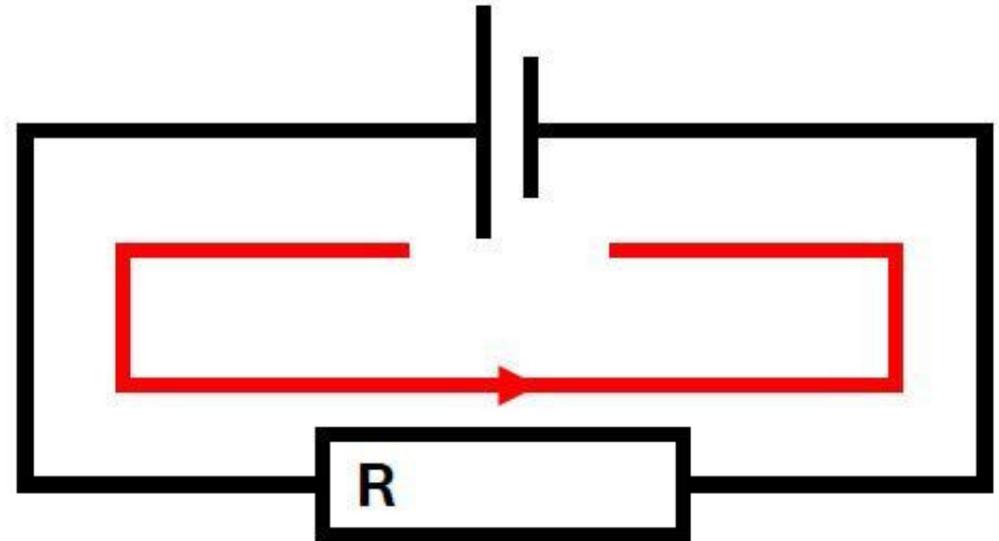


Dirección técnica de la corriente

(Sentido de la intensidad)

+

-





lenovo
Registered Trademark of Lenovo

AC ADAPTER (电源适配器/交換式電源供應器)

MODEL(型号/型號): ADLX45NLC3A

LC PN:36200246

110M-ASMP003 (E01) DIM-ASMP002

INPUT (輸入/輸入): 100-240V~ 1.3A(1,3A) 50-60Hz
OUTPUT (输出/輸出): 20V ~ 2.25A(2,25A)

For use with Information Technology Equipment Only.

ATTENTION: UTILISER AVEC DU MATERIEL INFORMATIQUE SEULEMENT.

Endast för kontorsmaskin.

Laite on liitettävä suojamaadoituskoskettimilla varustettuun pistorasiaan.

Apparatet må tillkoplas jordet stikkontakt.

Apparaten skall anslutas till jordat uttag när den ansluts till ett nätverk.

SOLO PARA USO DE EQUIPO DE INFORMATICA

47 CFR FCC Rules and Regulations Part 15 Subpart B.

Class B Digital Device

CANADA ICES/NMB-003 Class/ Class B

MADE IN CHINA(D) / FABRIQUÉ EN CHINE

(中国制造/中國製造)

制造商: 光宝科技股份有限公司
Manufactured for Lenovo Product of China

Eq contact address: Lenovo, Enslanova 21, 851 01 Bratislava, Slovakia

KC 직류전원장치 AC ADAPTER
 KTL SU10462-12007
 KCC-REM-A1B-ADLX45NLC3

품명: 직류전원장치
 Mfr. Name: LITE-ON TECHNOLOGY
 한국레노버 (CHANGZHOU) CO., LTD.
 A/S Center: 080-513-0880
 최저소비효율기준 만족 제품

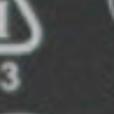
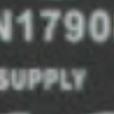
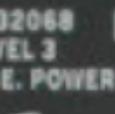
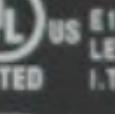
The device complies with part 15 of the FCC rules. Operation is subject to following two conditions:
 (1) This device may not cause harmful interference, and
 (2) This device must accept any interference received, including interference that may cause undesired operation.

Consumo de energía: 51.1368Wh
 En modo de espera: 0.0931 Wh

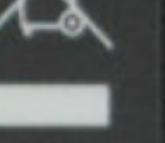
SAFETY MARK
 121570-11

JET
 JET MARK

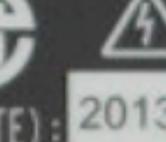
NOM



Energy Verified
 Rendement
 Énergétique Vérifié



NSW25783



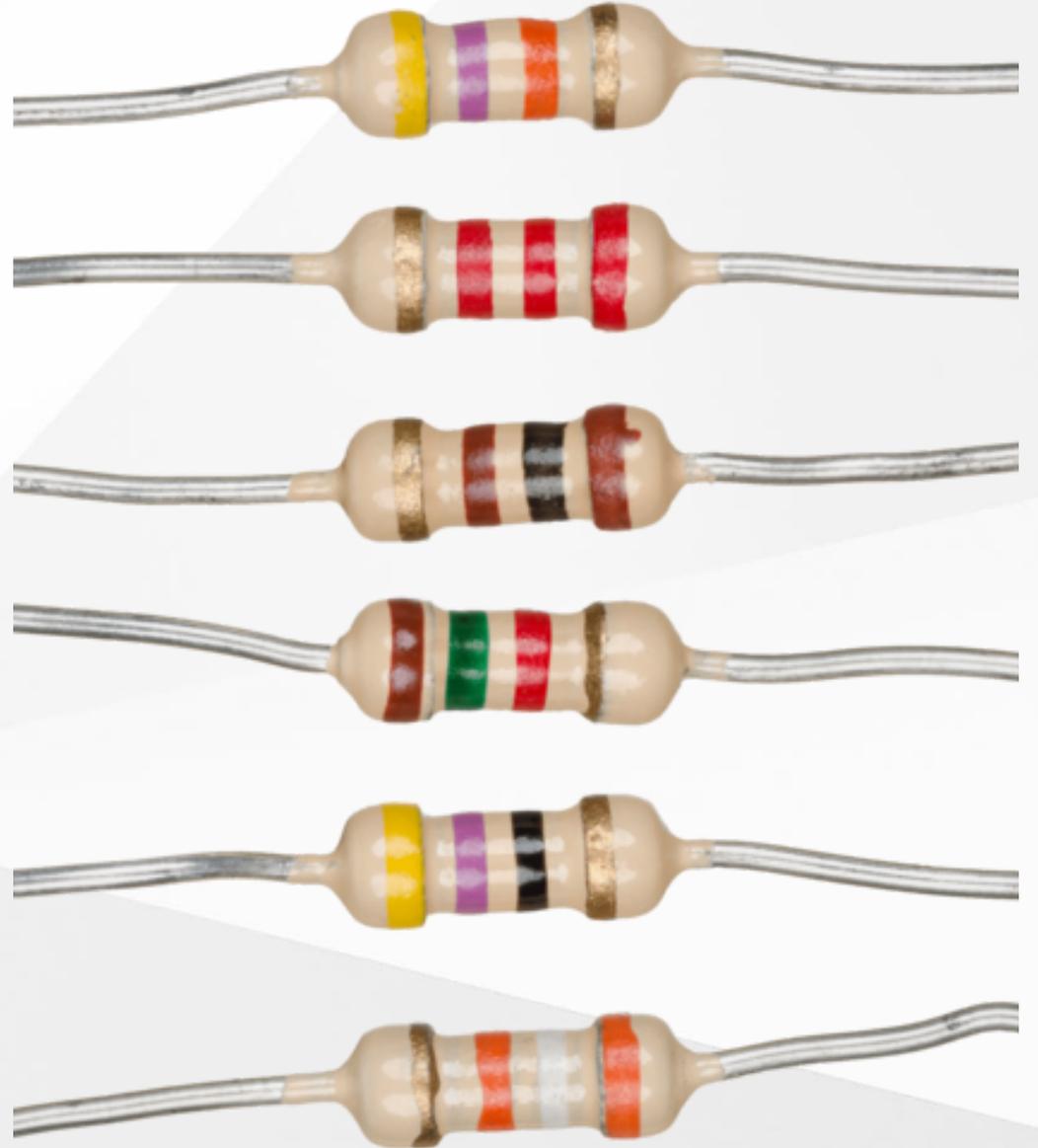
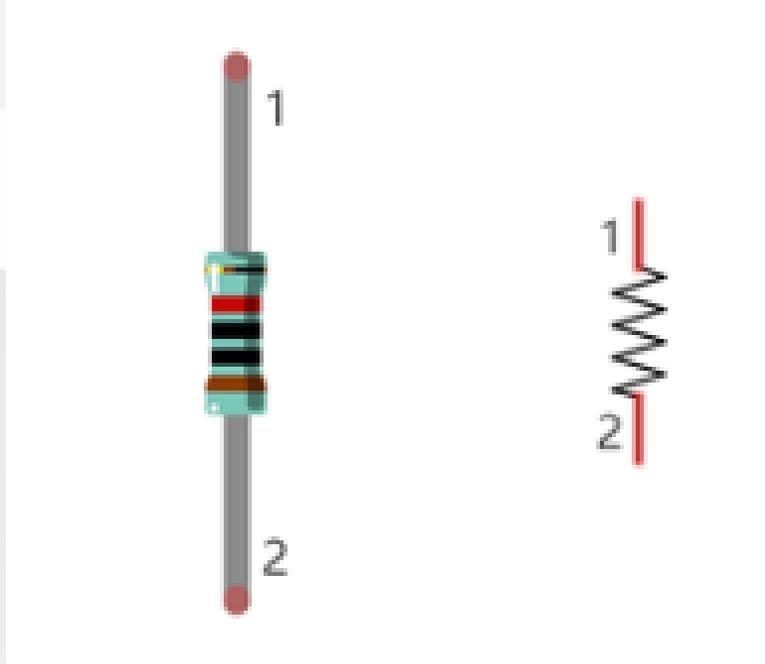
制造日期 (DATE): 2013.05

CT1

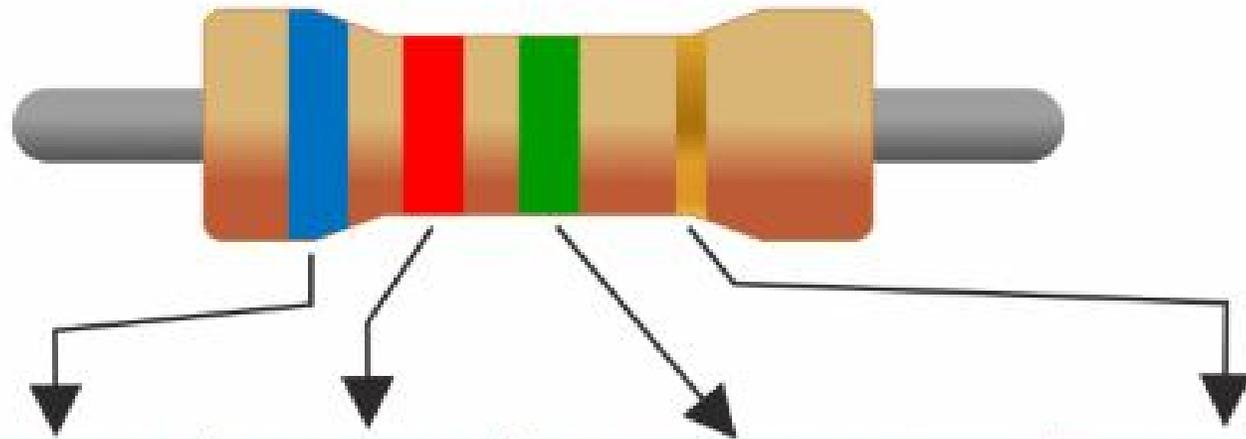
- Potència (W - Watts)
 - Energia que es consumeix en un circuit elèctric en el temps.
 - $P = I * V$

Components electrònics bàsics

- Resistència

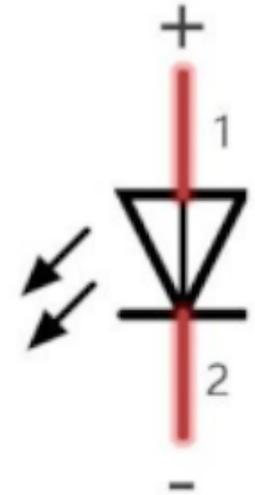
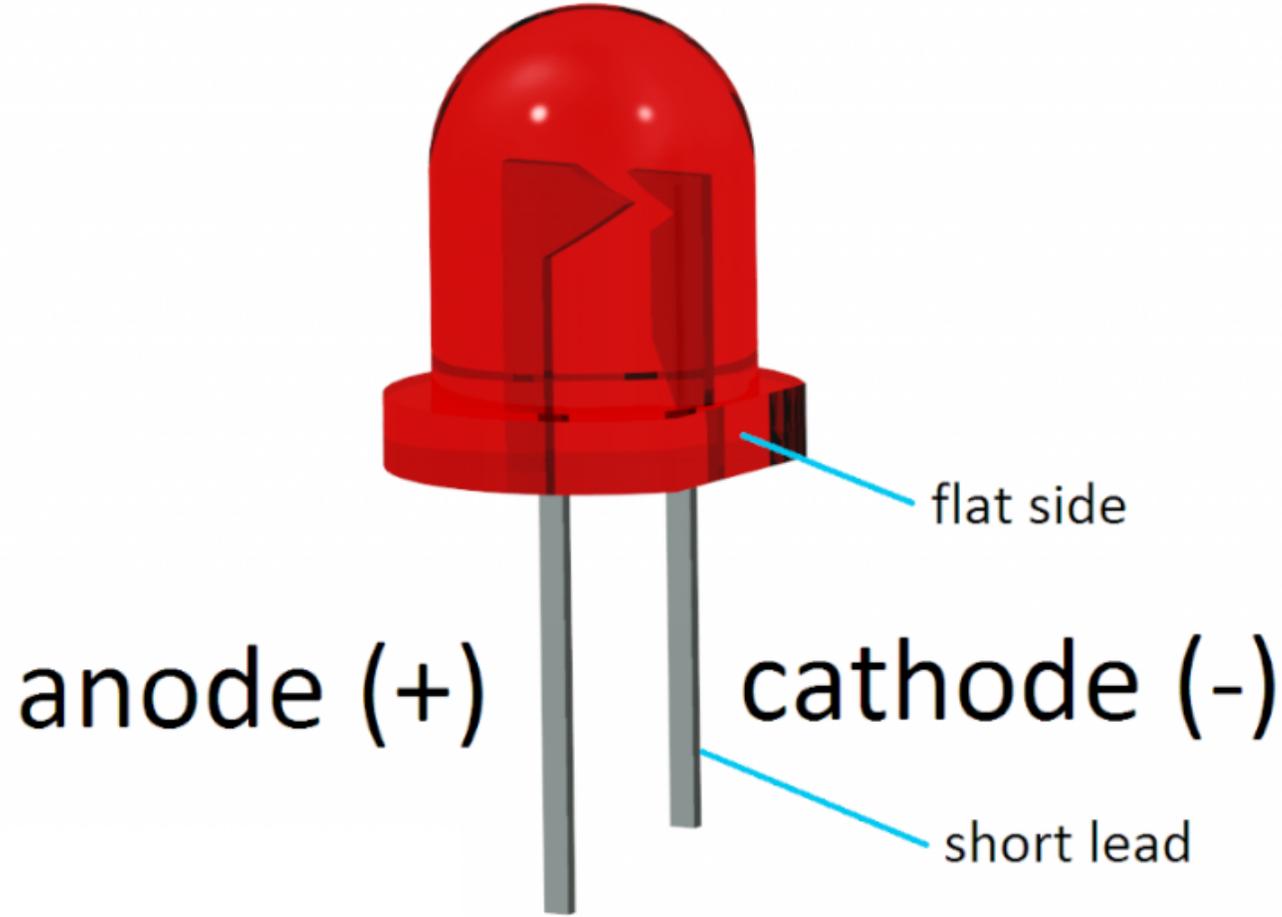


Components electrònics - Resistència

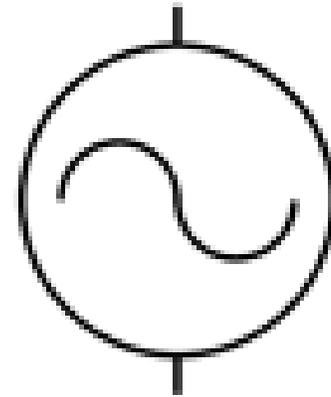


COLOR	BANDA 1	BANDA 2	MULTIPLICADOR	TOLERANCIA
NEGRO	0	0	x 1 Ω	
MARRÓN	1	1	x 10 Ω	+ / - 1%
ROJO	2	2	x 100 Ω	+ / - 2%
NARANJA	3	3	x 1000 Ω	
AMARILLO	4	4	x 10,000 Ω	
VERDE	5	5	x 100,000 Ω	
AZUL	6	6	x 1,000,000 Ω	
VIOLETA	7	7	x 10,000,000 Ω	
GRIS	8	8	x 100,000,000 Ω	
BLANCO	9	9	x 1,000,000,000 Ω	
DORADO			x 0,1 Ω	+ / - 5%
PLATEADO			x 0,01 Ω	+ / - 10%

- [LED](#) (*Light Emitting Diode*)

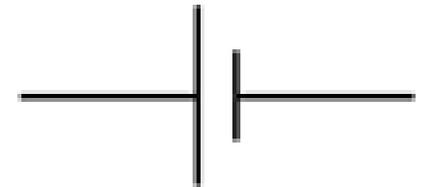


- **Generador**
 - de corrent alterna
 - de corrent contínua



10 V

AC Voltage Source



10 V

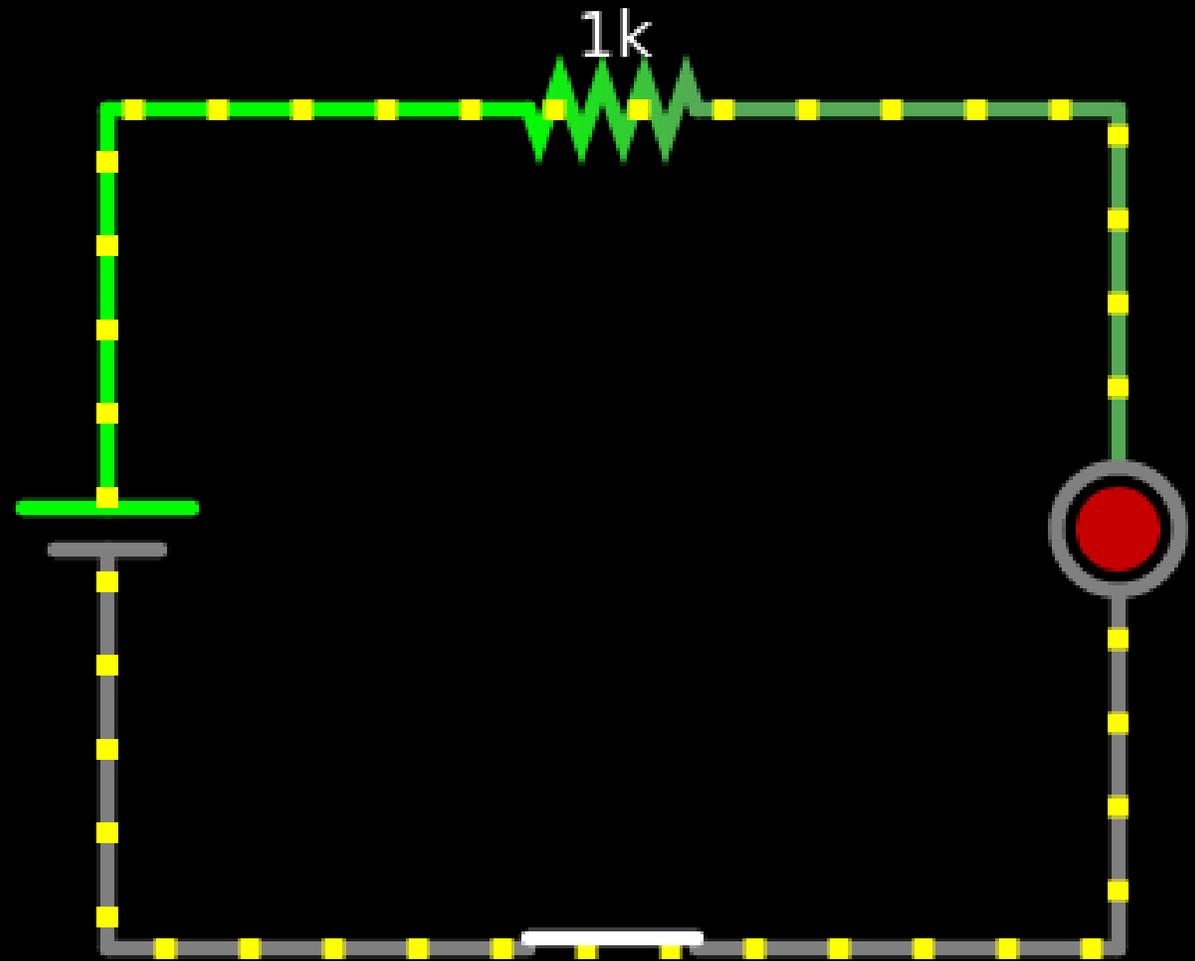
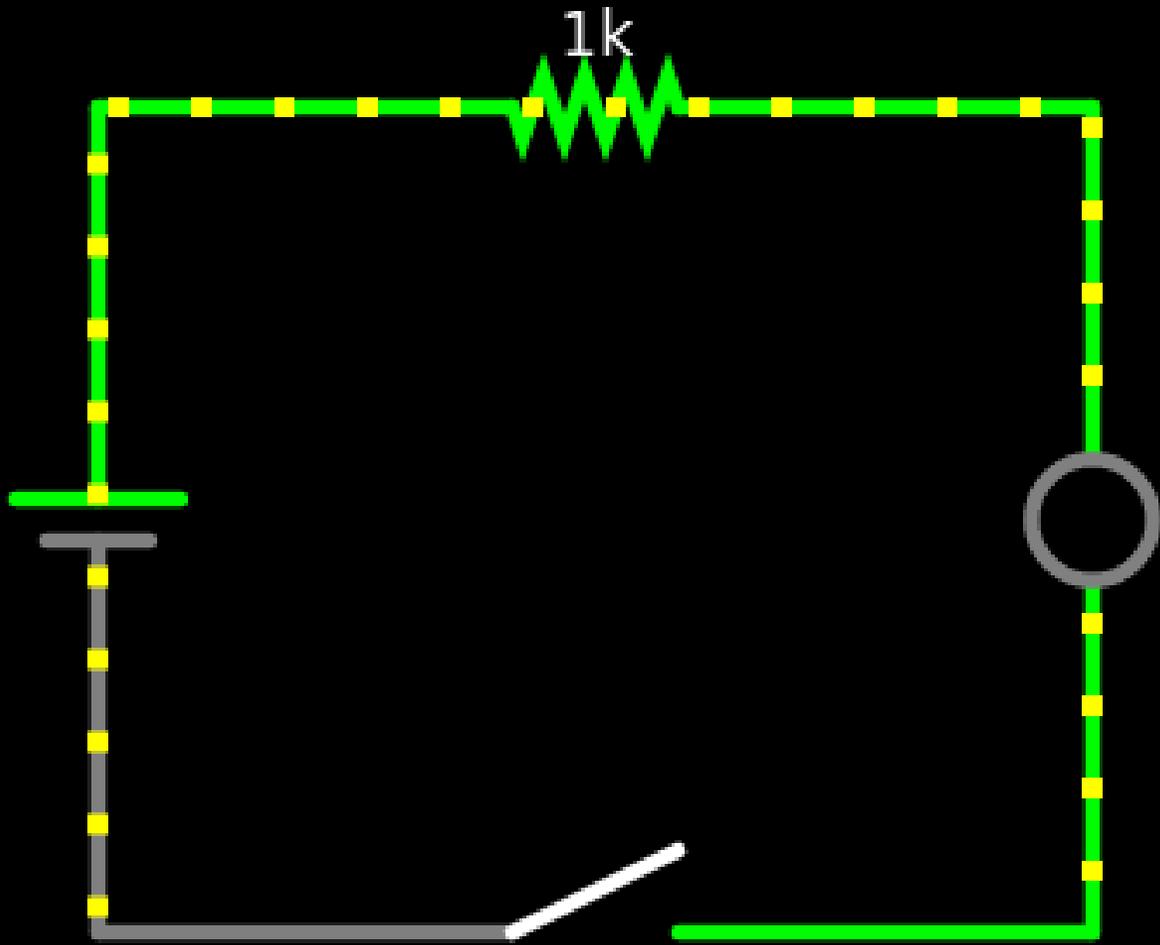
DC Voltage Source

Components electrònics

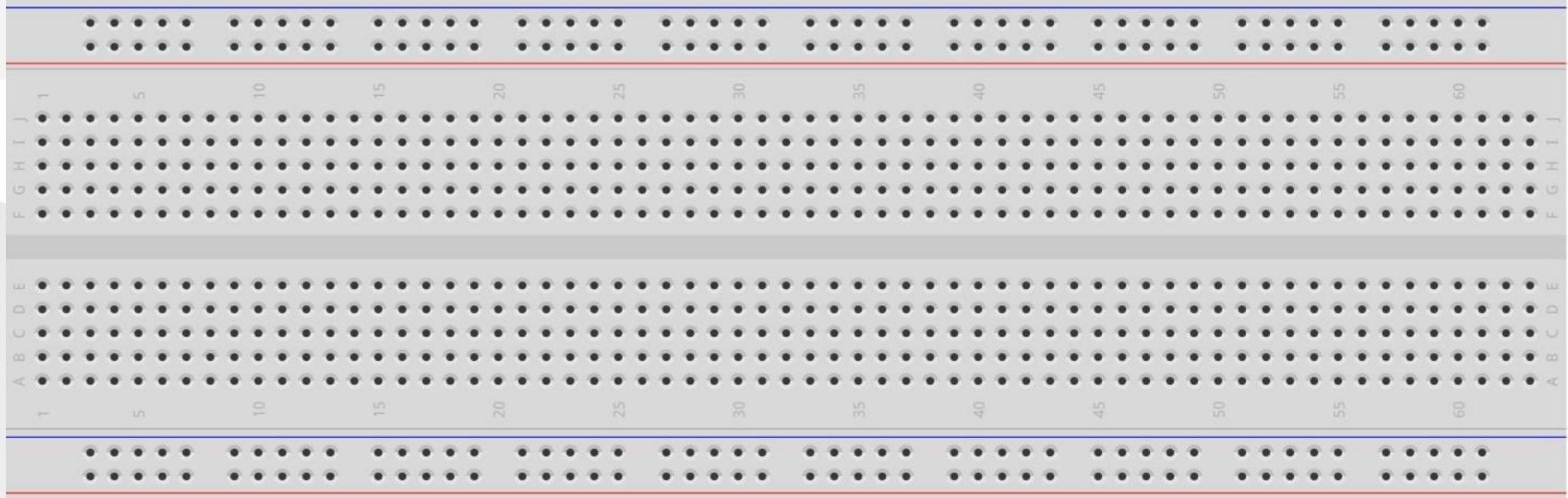
- Interruptor
 - Obri o tanca el circuit.



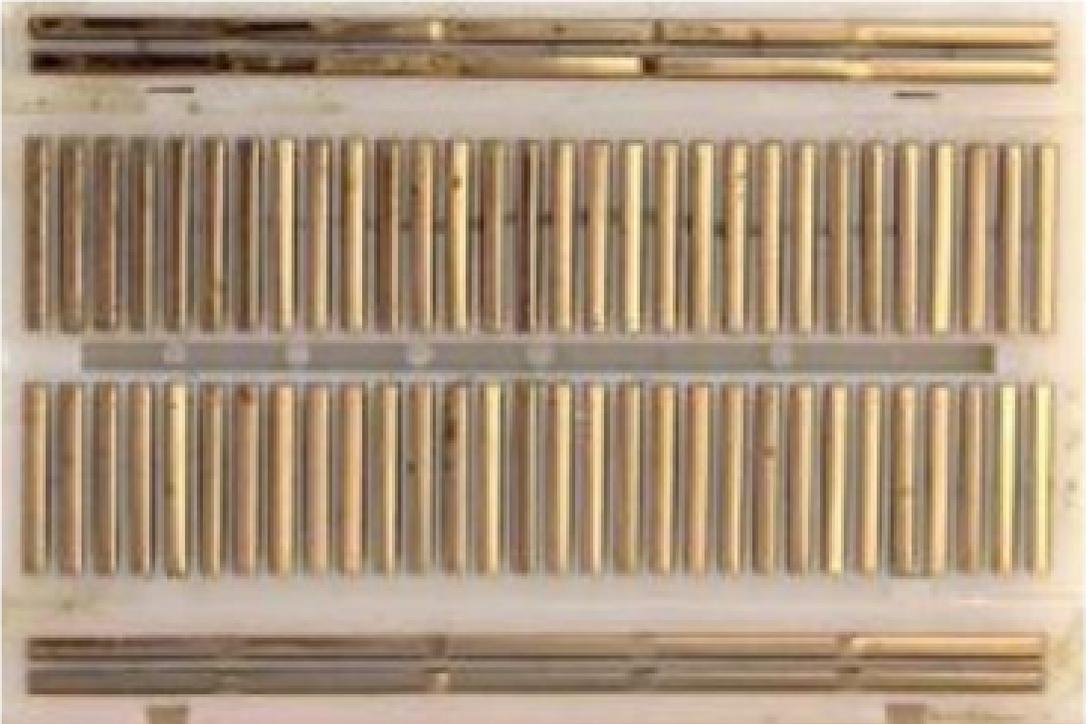
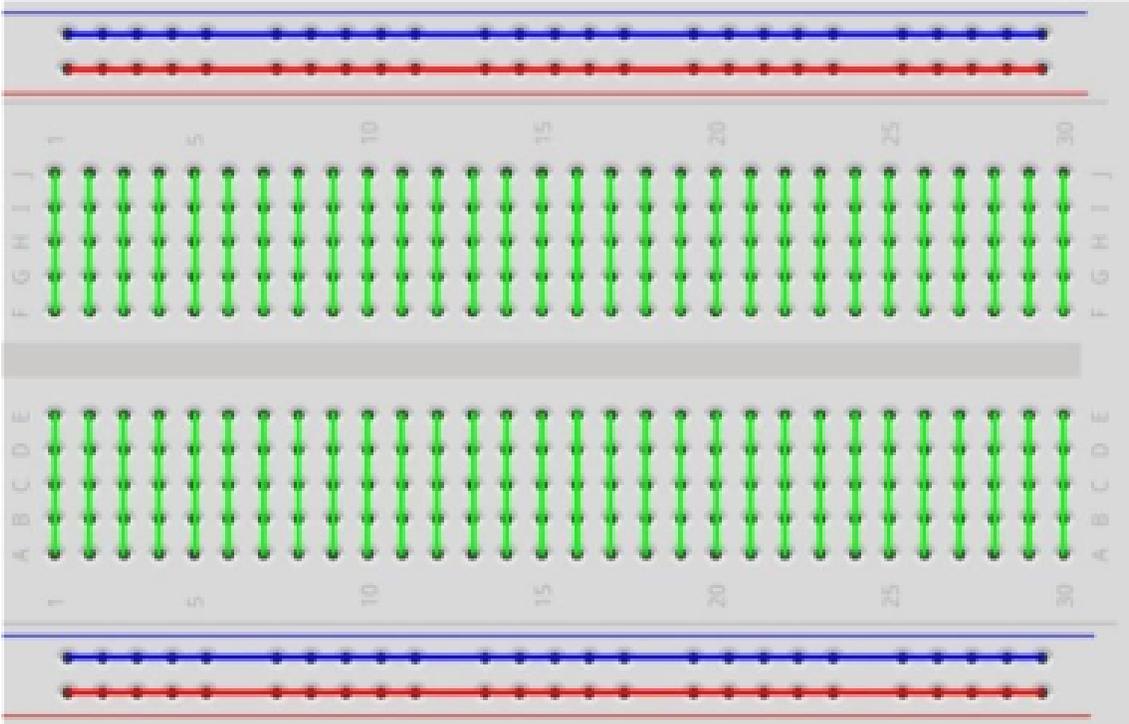
Components electrònics - Interruptor



- [Breadboard](#) o protoboard



Components electrònics - Breadboard

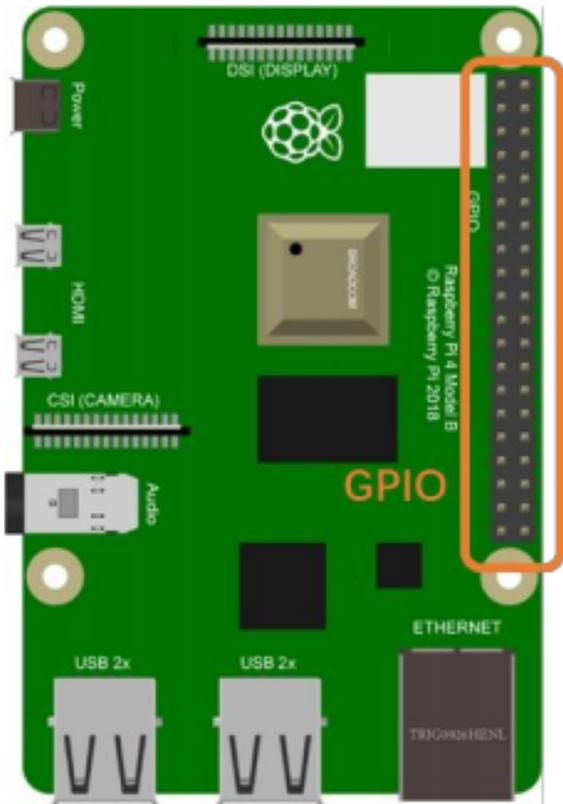


Raspberry Pi

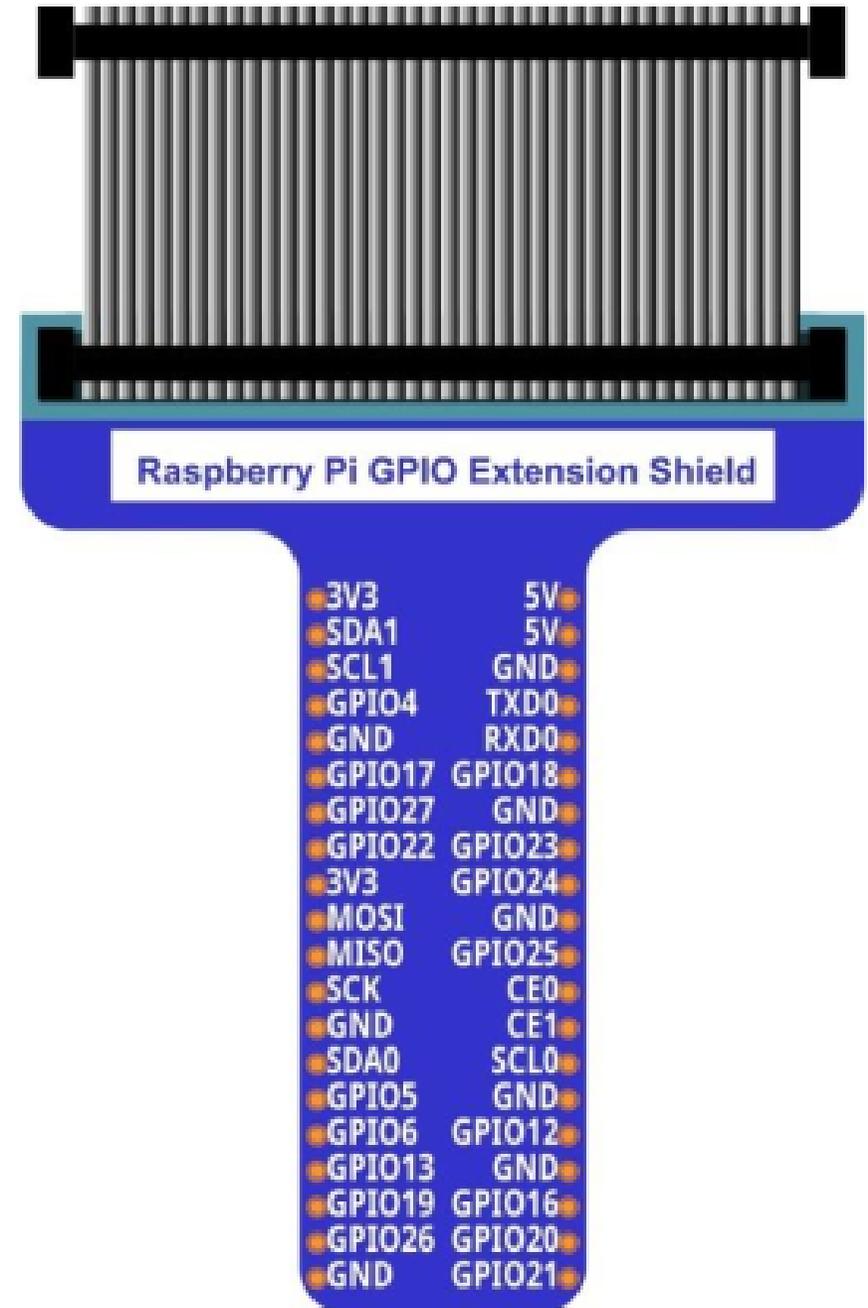
Raspberry Pi



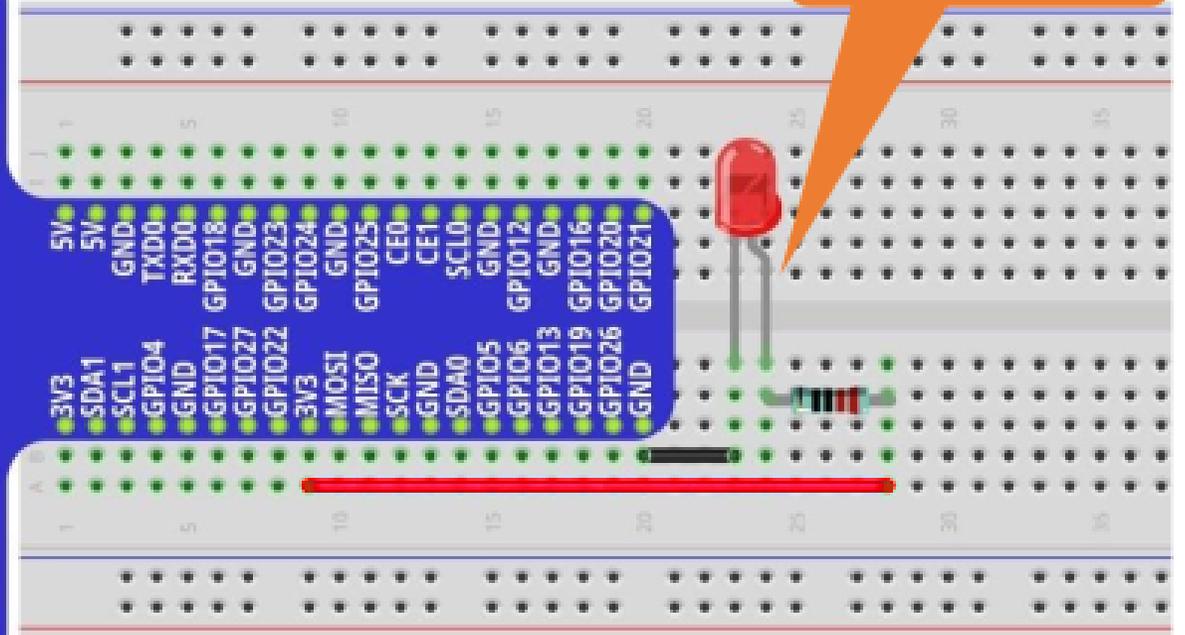
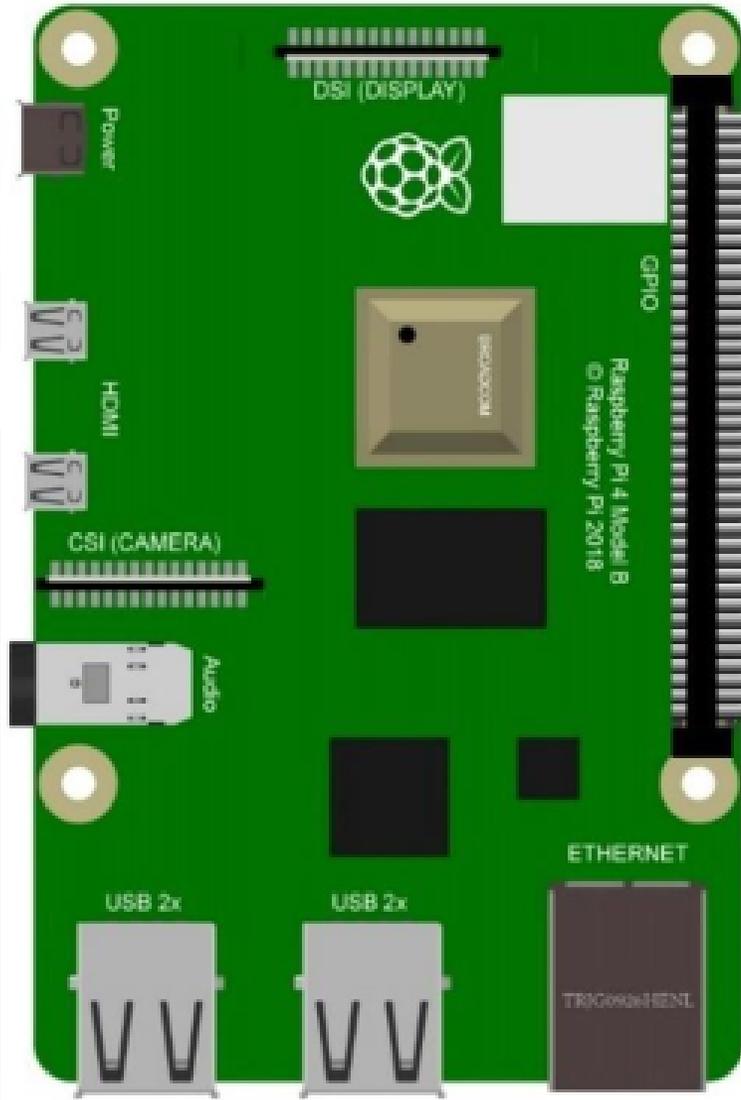
Raspberry Pi



Pin 1	Pin 2	Pin 3	Pin 4
+3V3	+5V	+5V	+5V
GPIO2 / SDA1	+5V	+5V	+5V
GPIO3 / SCL1	GND	GND	GND
GPIO4	TXD0 / GPIO 14	TXD0 / GPIO 14	TXD0 / GPIO 14
GND	RXD0 / GPIO 15	RXD0 / GPIO 15	RXD0 / GPIO 15
GPIO17	GPIO 18	GPIO 18	GPIO 18
GPIO27	GND	GND	GND
GPIO22	GPIO 23	GPIO 23	GPIO 23
+3V3	GPIO 24	GPIO 24	GPIO 24
GPIO10 / MOSI	GND	GND	GND
GPIO9 / MISO	GPIO 25	GPIO 25	GPIO 25
GPIO11 / SCLK	CE0# / GPIO8	CE0# / GPIO8	CE0# / GPIO8
GND	CE1# / GPIO7	CE1# / GPIO7	CE1# / GPIO7
GPIO0 / ID_SD	ID_SC / GPIO1	ID_SC / GPIO1	ID_SC / GPIO1
GPIO5	GND	GND	GND
GPIO6	GPIO12	GPIO12	GPIO12
GPIO13	GND	GND	GND
GPIO19 / MISO	CE2# / GPIO16	CE2# / GPIO16	CE2# / GPIO16
GPIO26	MOSI / GPIO20	MOSI / GPIO20	MOSI / GPIO20
GND	SCLK / GPIO21	SCLK / GPIO21	SCLK / GPIO21
Pin 39	Pin 40		



Raspberry Pi



Multímetre

Multímetre

- Tipus
 - Analògic
 - Digital



Multímetro

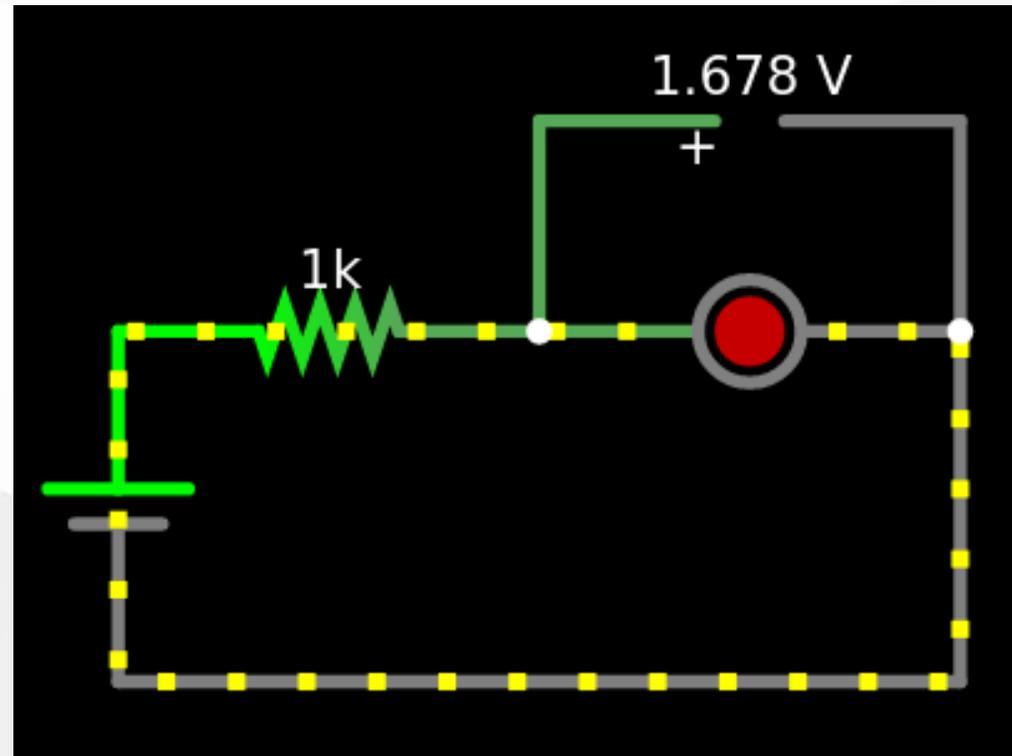
- Consumibles
 - Pila
 - Fusible



Com mesurar

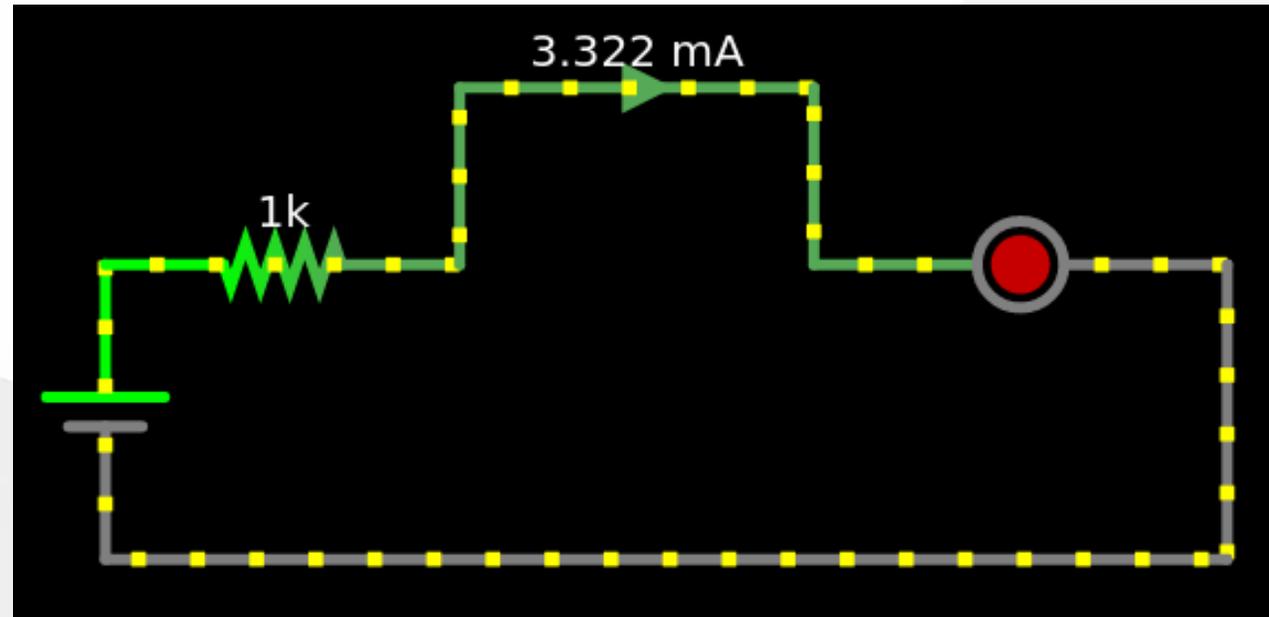
Com mesurar

- Volts -> voltímetre -> en paral·lel



Com mesurar

- Ampers -> amperímetre -> en sèrie



Com mesurar

- Ohms -> òhmetre -> desconnectant el circuit

