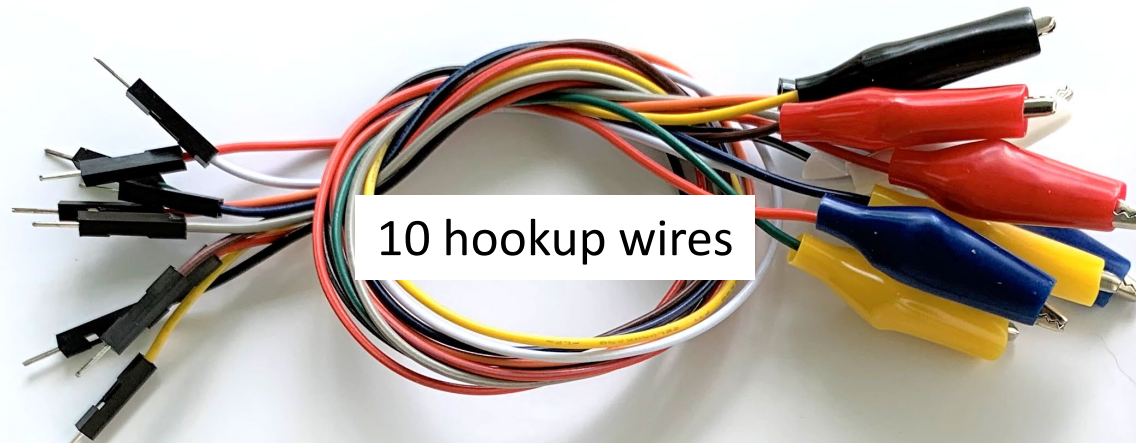
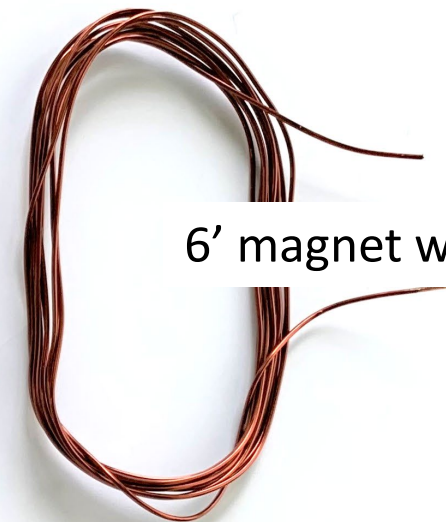


Accessory Pack for Electricity and Magnetism





10 hookup wires



6' magnet wire



220 μ f



Red
LED



56 μ f



Green
LED



22 μ f



Si diodes



100 mH



1 Ω



100 Ω



1 k Ω



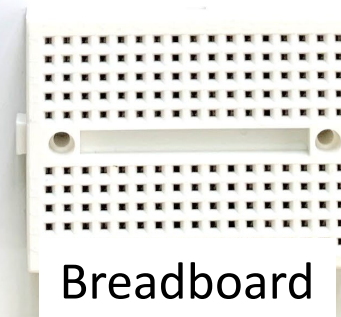
2 k Ω



4.7 k Ω



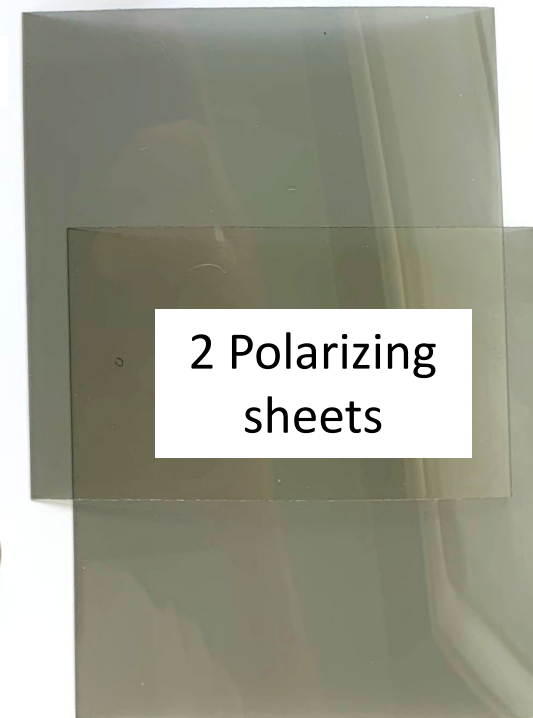
10 k Ω



Breadboard



Magnet



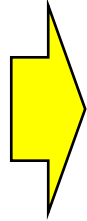
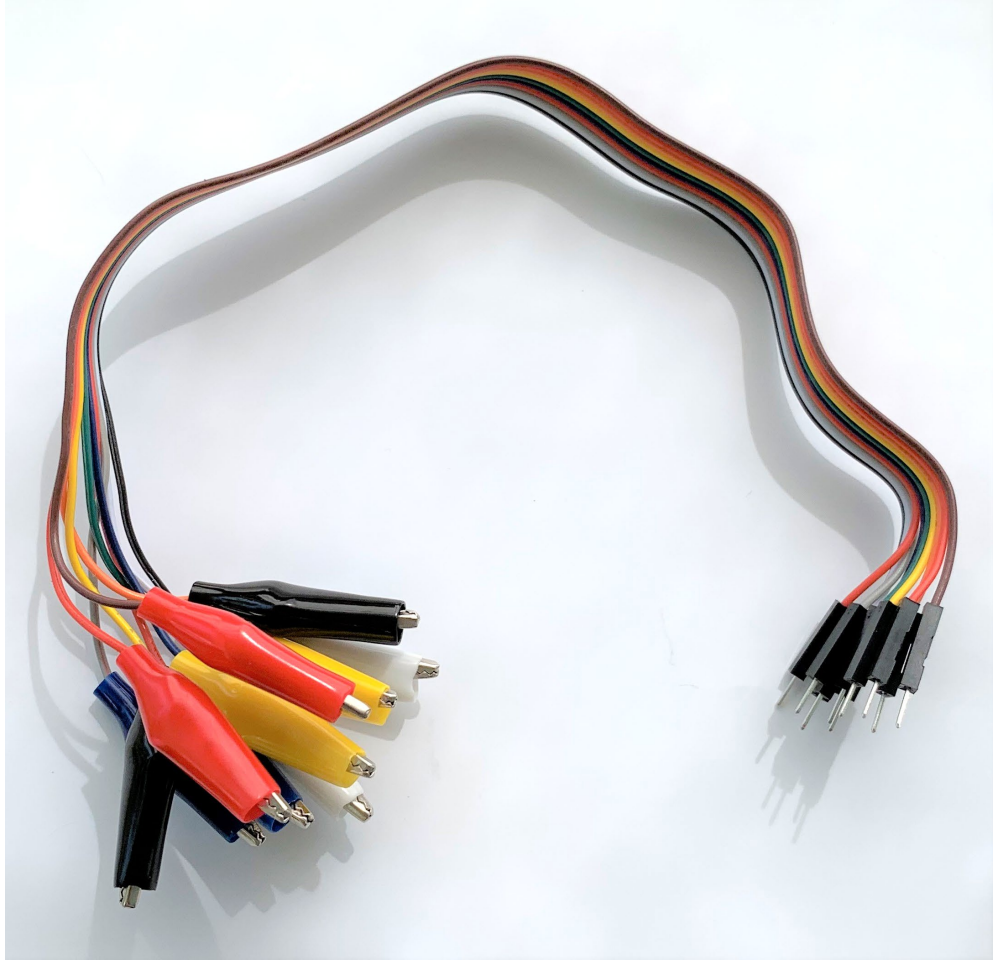
2 Polarizing
sheets

Unboxing videos are linked below:

(running time in parentheses)

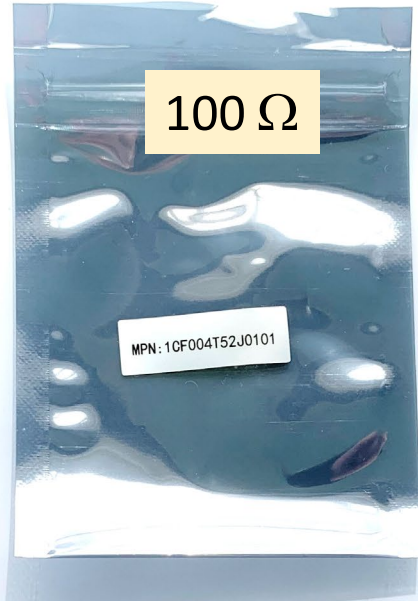
- [A First Look](#) (1:03)
- [The Wires](#) (0:52)
- [The Resistors](#) (2:07)
- [The Capacitors](#) (1:01)
- [The LED's and diodes](#) (0:59)
- [The Inductor](#) (0:19)
- [The Breadboard](#) (1:10)
- [The Magnet-Wire](#) (1:08)
- [The Magnet and Hook](#) (0:18)
- [The Polarizing Sheets](#) (0:40)

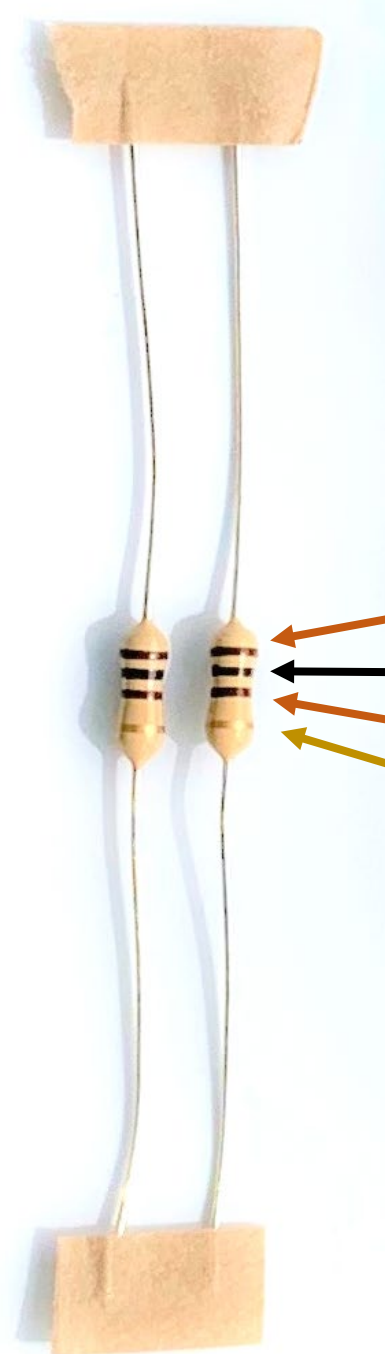
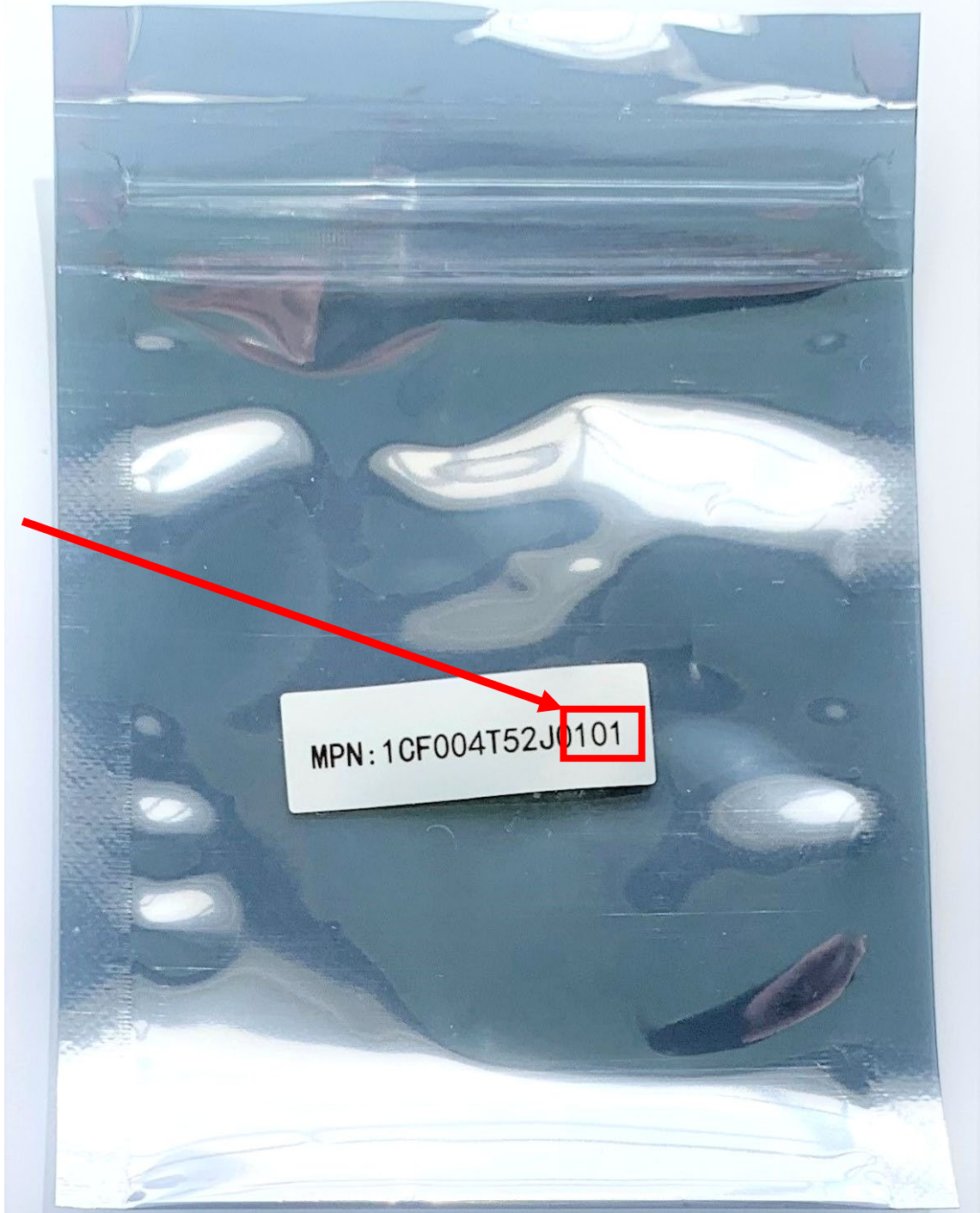
Wires



Peel apart to use individual wires

Resistors

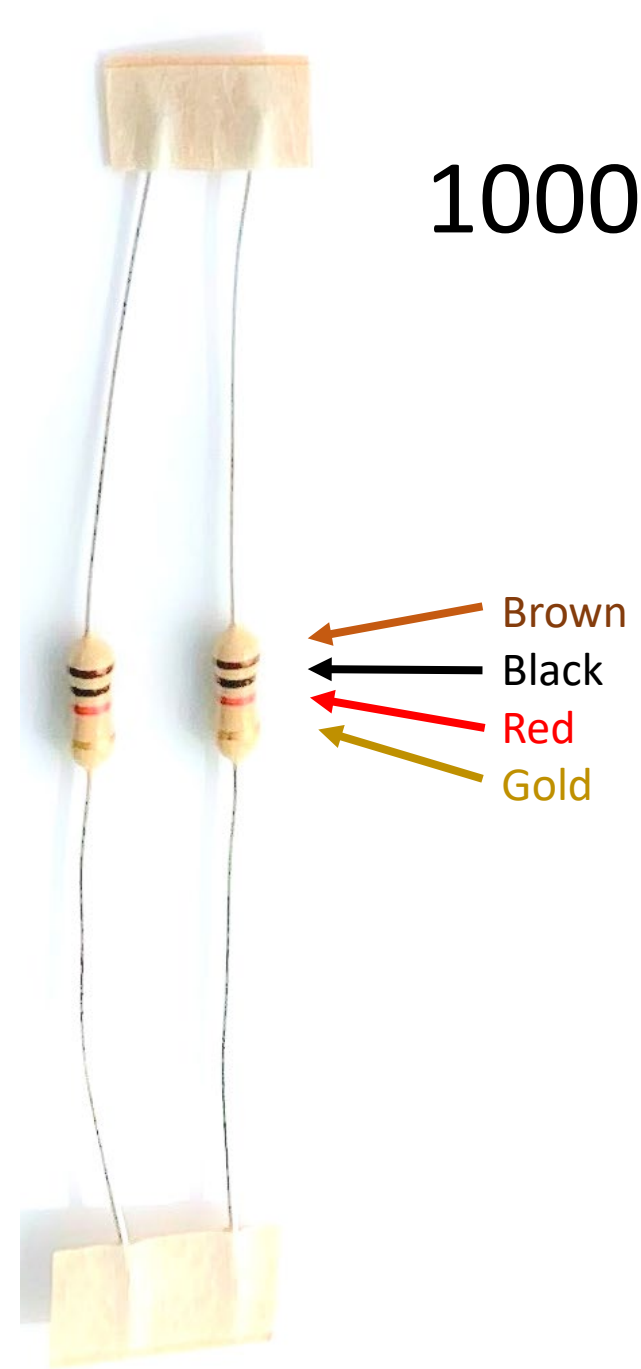




100 Ω

Brown
Black
Brown
Gold

	1st Band	2nd Band	Tolerance
Color	1st, 2nd Band Significant Figures	Multiplier	Tolerance
Black	0	$\times 1$	
Brown	1	$\times 10$	$\pm 1\%$ (F)
Red	2	$\times 100$	$\pm 2\%$ (G)
Orange	3	$\times 1K$	$\pm 0.05\%$ (W)
Yellow	4	$\times 10K$	$\pm 0.02\%$ (P)
Green	5	$\times 100K$	$\pm 0.5\%$ (D)
Blue	6	$\times 1M$	$\pm 0.25\%$ (C)
Violet	7	$\times 10M$	$\pm 0.1\%$ (B)
Grey	8	$\times 100M$	$\pm 0.01\%$ (L)
White	9	$\times 1G$	
Gold		$\times 0.1$	$\pm 5\%$ (J)
Silver		$\times 0.01$	$\pm 10\%$ (K)



1000 Ω

	1st Band	2nd Band	Tolerance
Color	1st, 2nd Band Significant Figures	Multiplier	Tolerance
Black	0	$\times 1$	
Brown	1	$\times 10$	$\pm 1\%$ (F)
Red	2	$\times 100$	$\pm 2\%$ (G)
Orange	3	$\times 1K$	$\pm 0.05\%$ (W)
Yellow	4	$\times 10K$	$\pm 0.02\%$ (P)
Green	5	$\times 100K$	$\pm 0.5\%$ (D)
Blue	6	$\times 1M$	$\pm 0.25\%$ (C)
Violet	7	$\times 10M$	$\pm 0.1\%$ (B)
Grey	8	$\times 100M$	$\pm 0.01\%$ (L)
White	9	$\times 1G$	
Gold		$\times 0.1$	$\pm 5\%$ (J)
Silver		$\times 0.01$	$\pm 10\%$ (K)



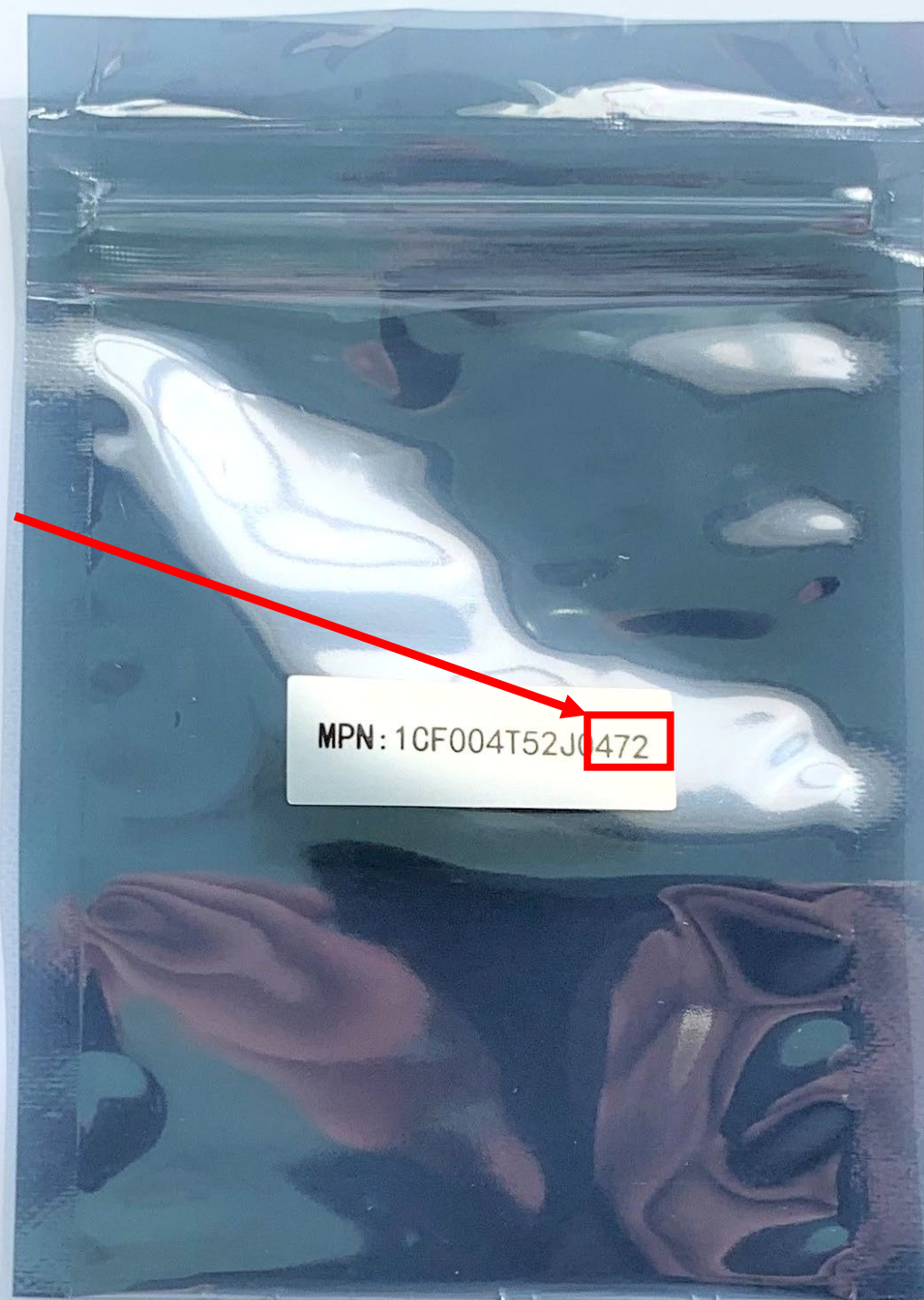
MPN: 1CF004T52J0202



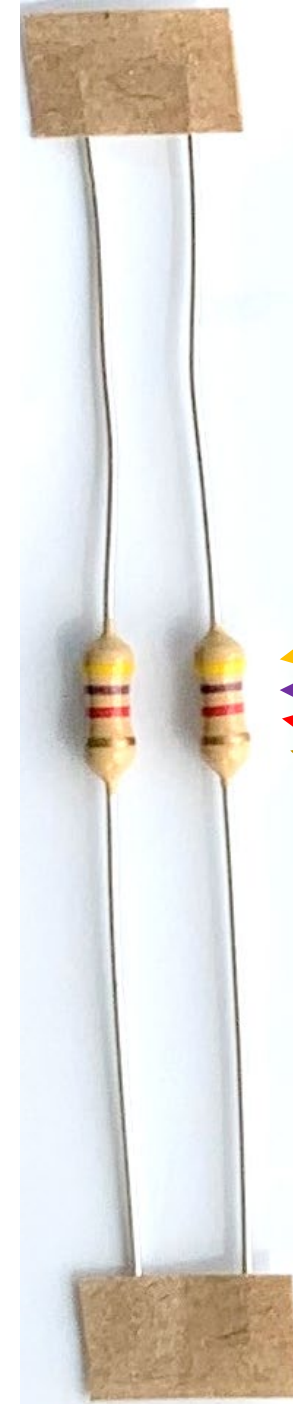
2000 Ω

Red
Black
Red
Gold

Color	1 st , 2 nd Band Significant Figures	Multiplier	Tolerance
Black	0	$\times 1$	
Brown	1	$\times 10$	$\pm 1\%$ (F)
Red	2	$\times 100$	$\pm 2\%$ (G)
Orange	3	$\times 1K$	$\pm 0.05\%$ (W)
Yellow	4	$\times 10K$	$\pm 0.02\%$ (P)
Green	5	$\times 100K$	$\pm 0.5\%$ (D)
Blue	6	$\times 1M$	$\pm 0.25\%$ (C)
Violet	7	$\times 10M$	$\pm 0.1\%$ (B)
Grey	8	$\times 100M$	$\pm 0.01\%$ (L)
White	9	$\times 1G$	
Gold		$\times 0.1$	$\pm 5\%$ (J)
Silver		$\times 0.01$	$\pm 10\%$ (K)



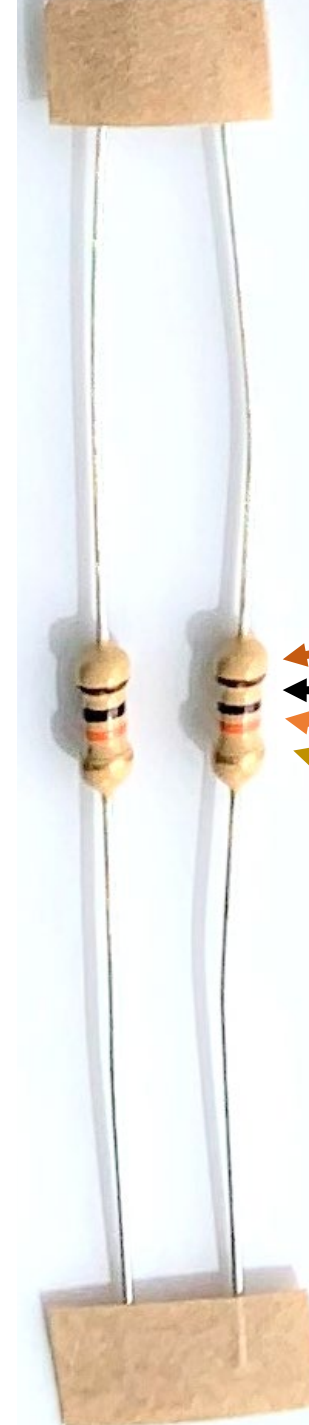
MPN: 1CF004T52J0472



4700 Ω

Yellow
Purple
Red
Gold

Color	1 st , 2 nd Band Significant Figures	Multiplier	Tolerance
Black	0	$\times 1$	
Brown	1	$\times 10$	$\pm 1\%$ (F)
Red	2	$\times 100$	$\pm 2\%$ (G)
Orange	3	$\times 1K$	$\pm 0.05\%$ (W)
Yellow	4	$\times 10K$	$\pm 0.02\%$ (P)
Green	5	$\times 100K$	$\pm 0.5\%$ (D)
Blue	6	$\times 1M$	$\pm 0.25\%$ (C)
Violet	7	$\times 10M$	$\pm 0.1\%$ (B)
Grey	8	$\times 100M$	$\pm 0.01\%$ (L)
White	9	$\times 1G$	
Gold		$\times 0.1$	$\pm 5\%$ (J)
Silver		$\times 0.01$	$\pm 10\%$ (K)



10000 Ω

Brown
Black
Orange
Gold

Color	1 st , 2 nd Band Significant Figures	Multiplier	Tolerance
Black	0	$\times 1$	
Brown	1	$\times 10$	$\pm 1\%$ (F)
Red	2	$\times 100$	$\pm 2\%$ (G)
Orange	3	$\times 1K$	$\pm 0.05\%$ (W)
Yellow	4	$\times 10K$	$\pm 0.02\%$ (P)
Green	5	$\times 100K$	$\pm 0.5\%$ (D)
Blue	6	$\times 1M$	$\pm 0.25\%$ (C)
Violet	7	$\times 10M$	$\pm 0.1\%$ (B)
Grey	8	$\times 100M$	$\pm 0.01\%$ (L)
White	9	$\times 1G$	
Gold		$\times 0.1$	$\pm 5\%$ (J)
Silver		$\times 0.01$	$\pm 10\%$ (K)

MPN: 1CF004T52J0109

1 Ω

Brown
Black
Gold
Gold

Color	1 st , 2 nd Band Significant Figures	Multiplier	Tolerance
Black	0	$\times 1$	
Brown	1	$\times 10$	$\pm 1\%$ (F)
Red	2	$\times 100$	$\pm 2\%$ (G)
Orange	3	$\times 1K$	$\pm 0.05\%$ (W)
Yellow	4	$\times 10K$	$\pm 0.02\%$ (P)
Green	5	$\times 100K$	$\pm 0.5\%$ (D)
Blue	6	$\times 1M$	$\pm 0.25\%$ (C)
Violet	7	$\times 10M$	$\pm 0.1\%$ (B)
Grey	8	$\times 100M$	$\pm 0.01\%$ (L)
White	9	$\times 1G$	
Gold		$\times 0.1$	$\pm 5\%$ (J)
Silver		$\times 0.01$	$\pm 10\%$ (K)

Capacitors

22 μf

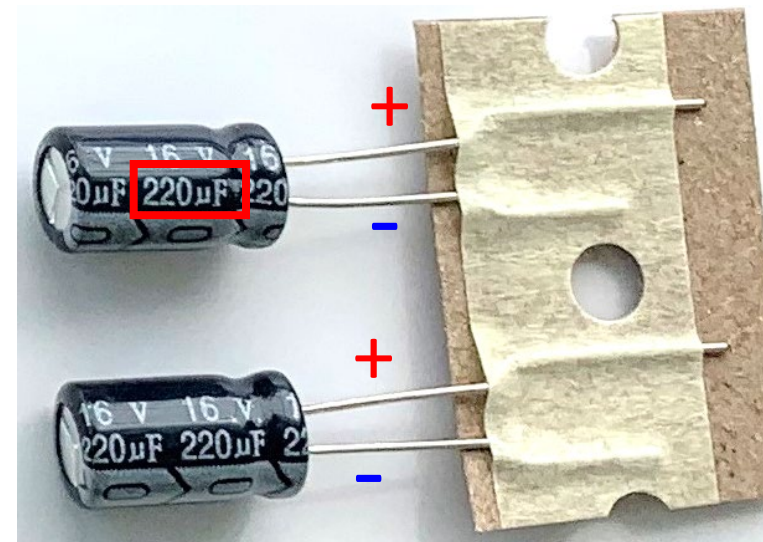
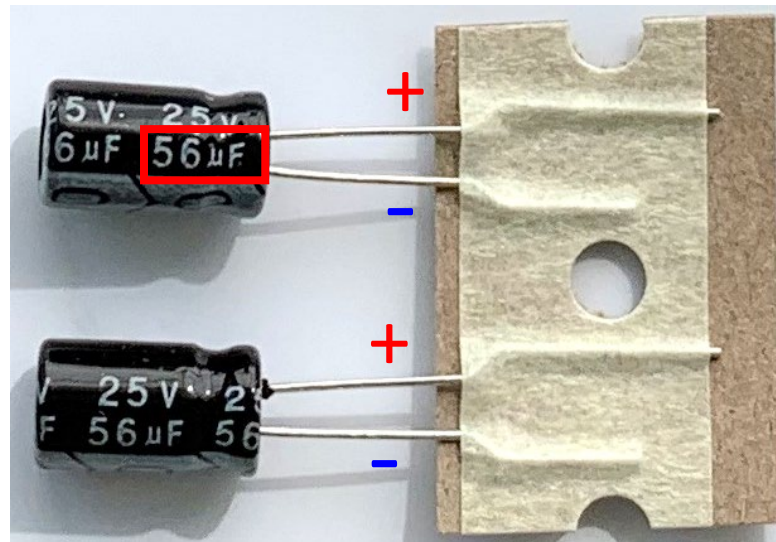
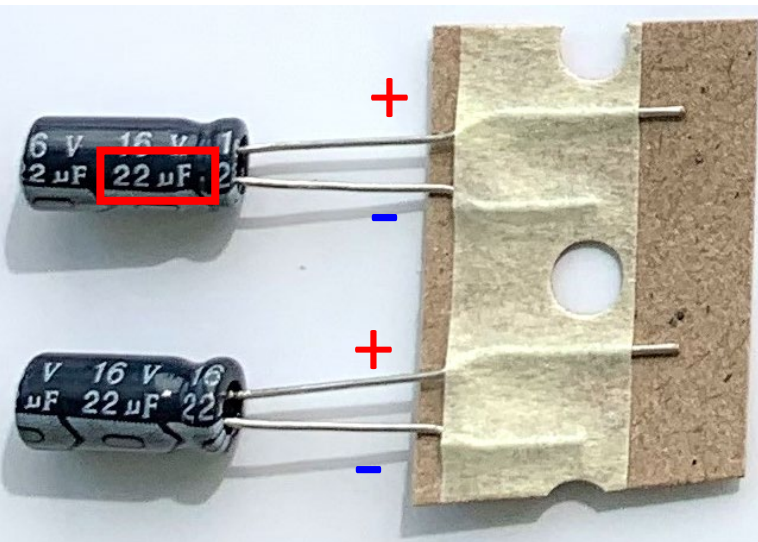
MPN: RA102201-TSD11WP00

56 μf

MPN: RK15601-TSE11WP00

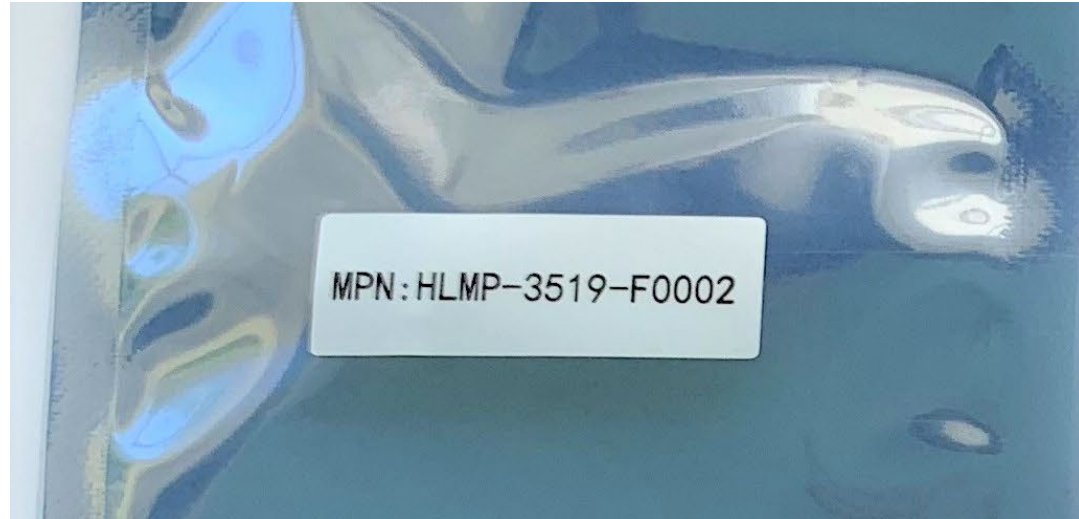
220 μf

MPN: RA102211-TSE11WP00

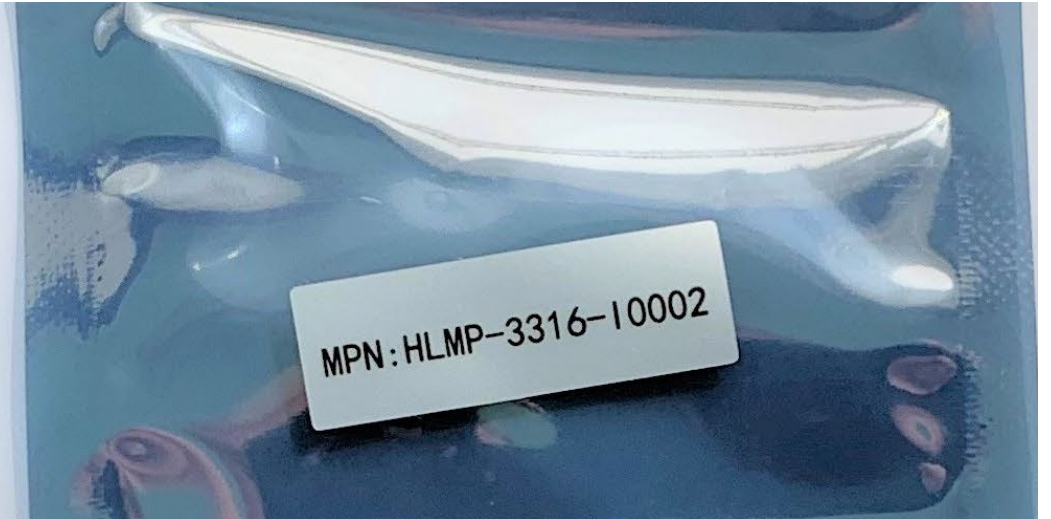


Light Emitting Diodes (LED's)

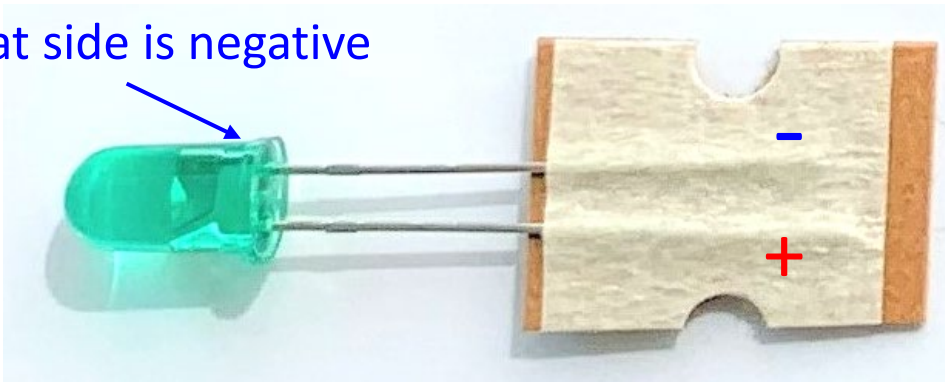
Green



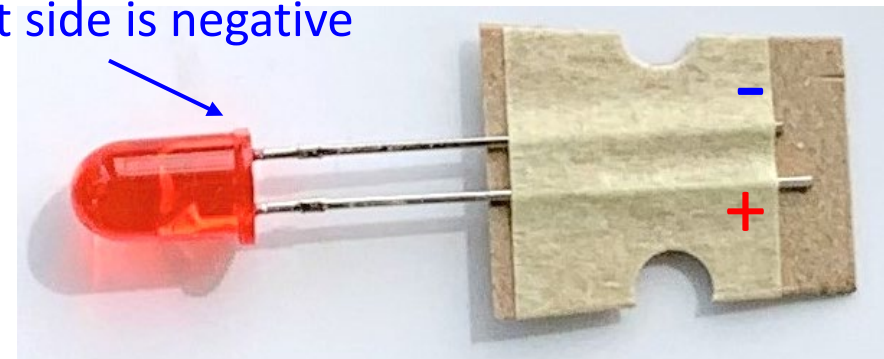
Red



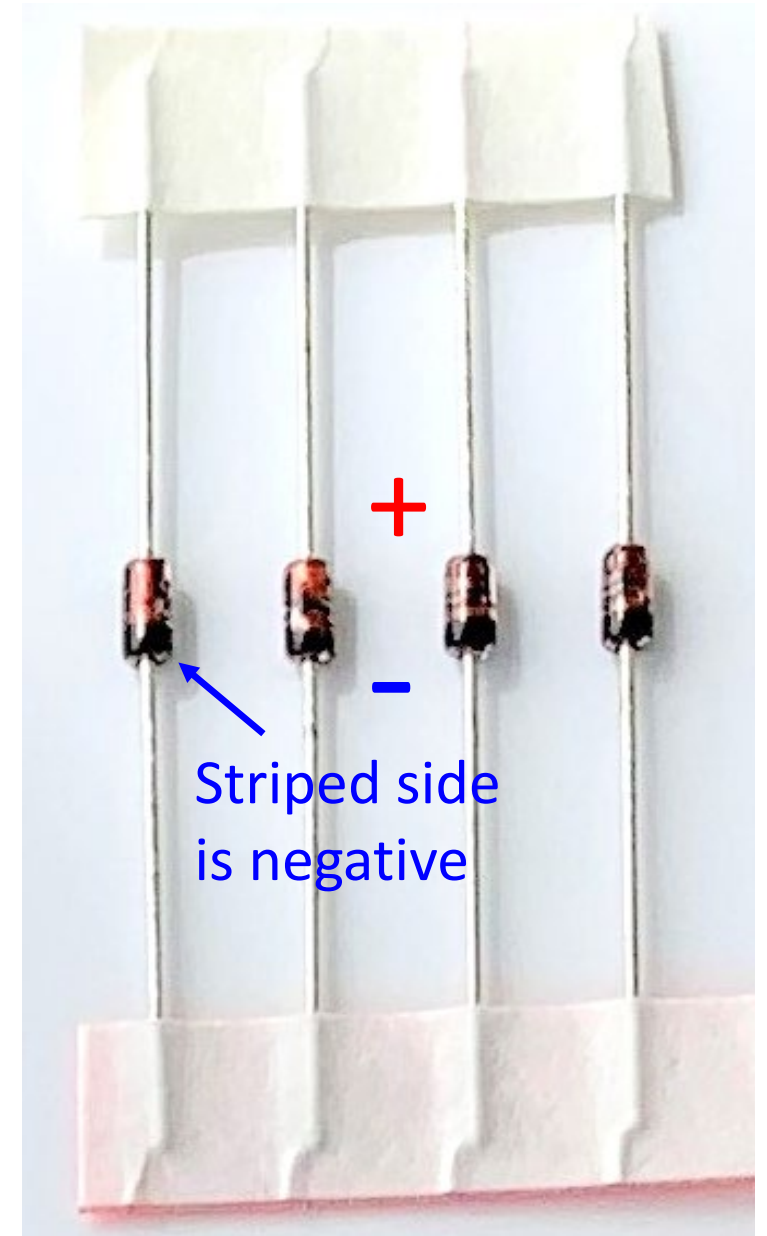
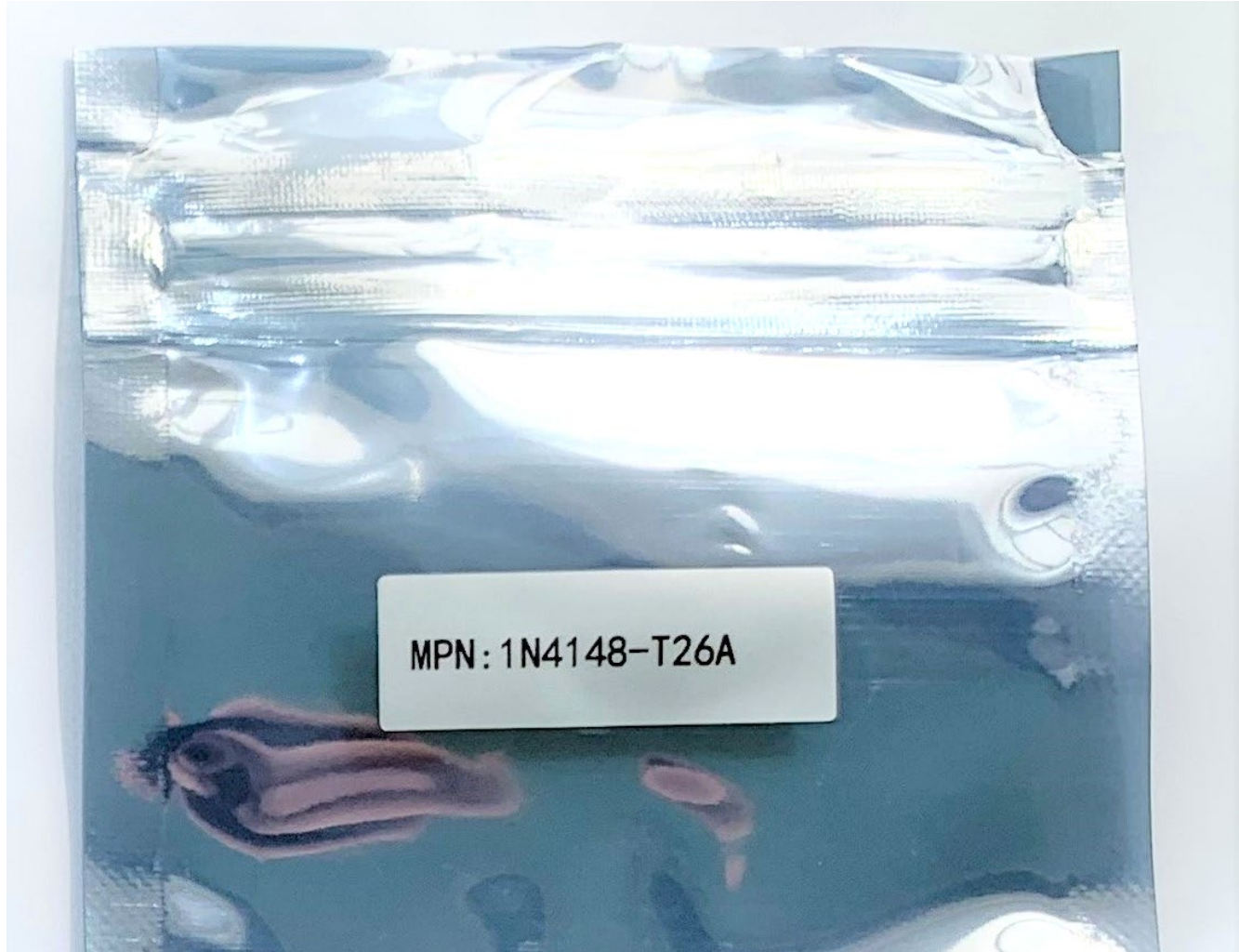
Flat side is negative



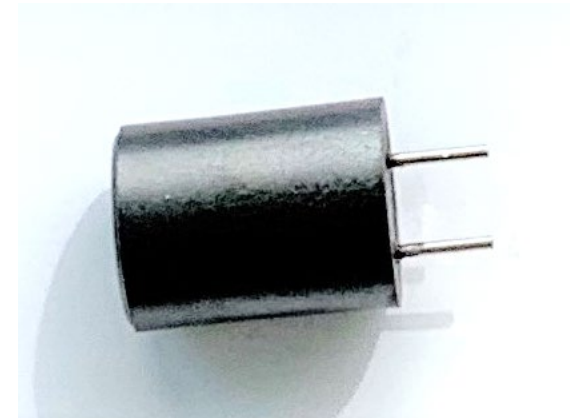
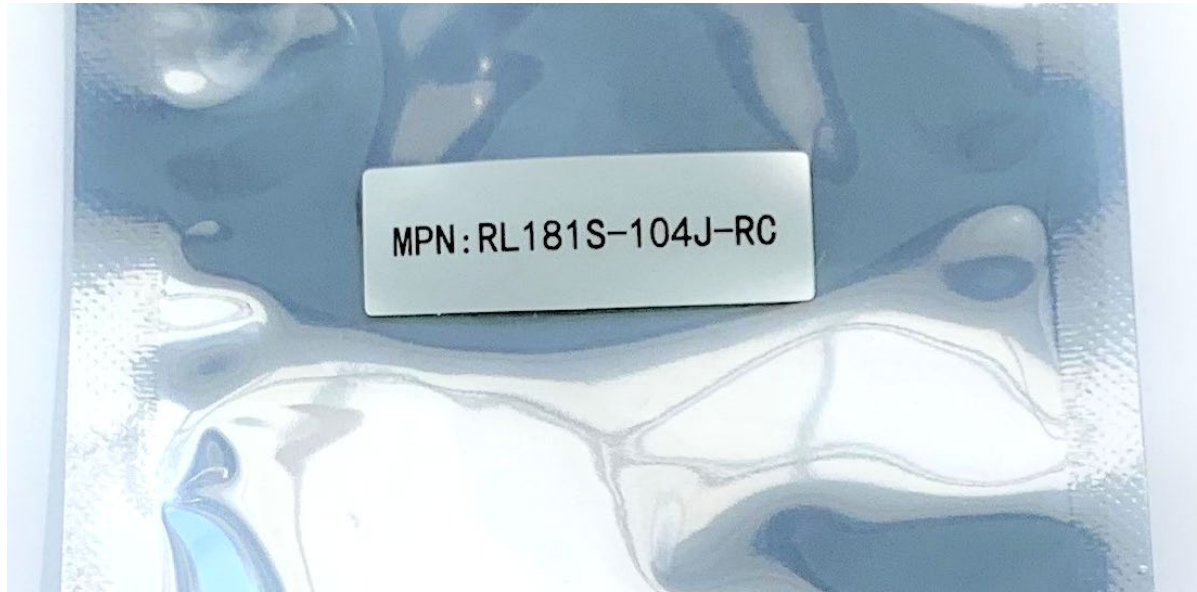
Flat side is negative



Silicon Diodes

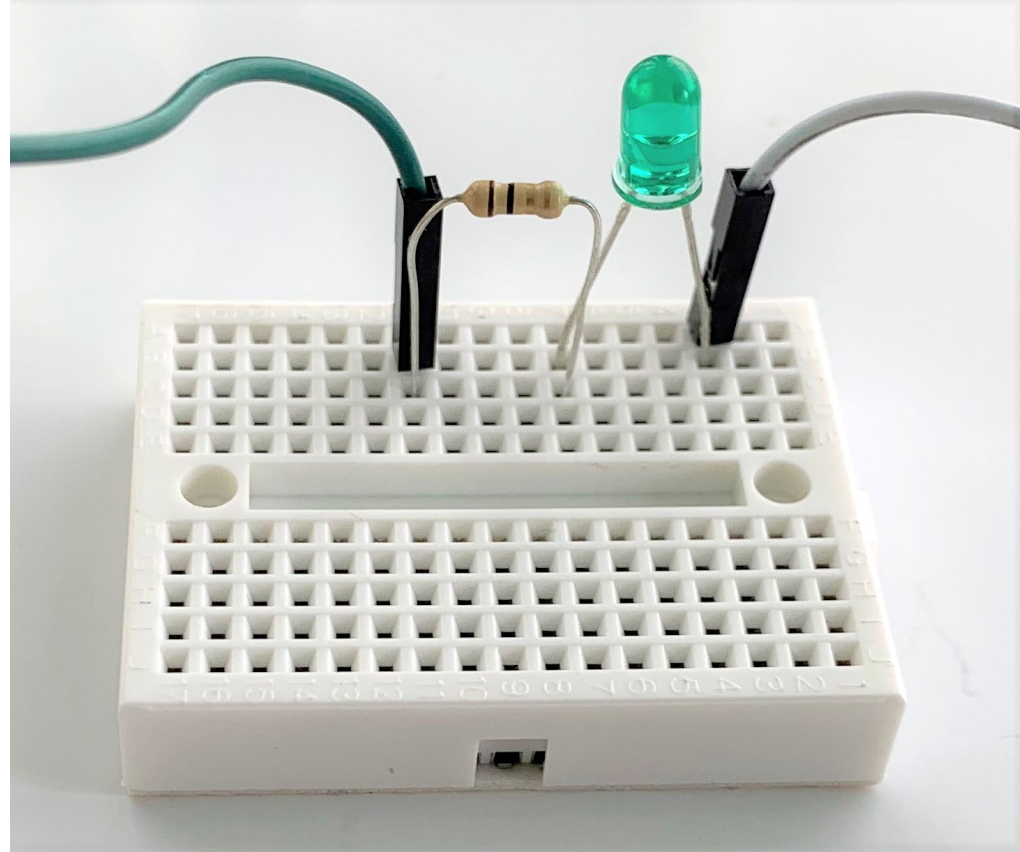
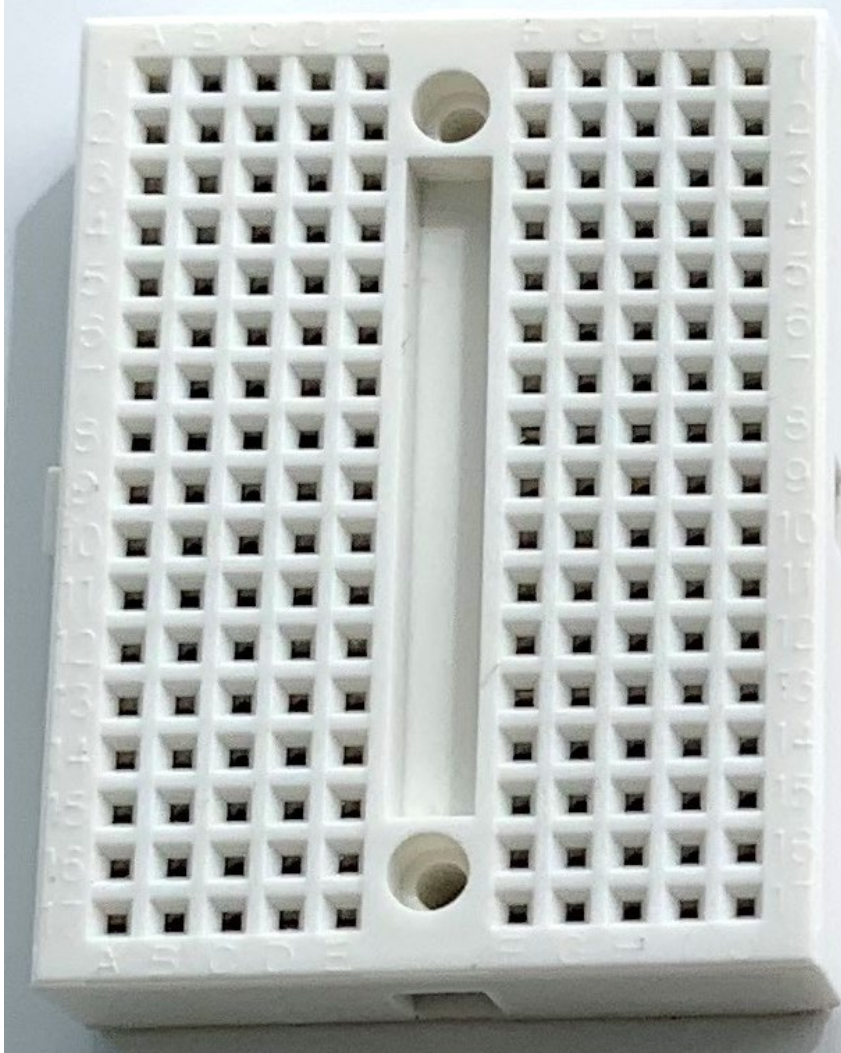


Inductor

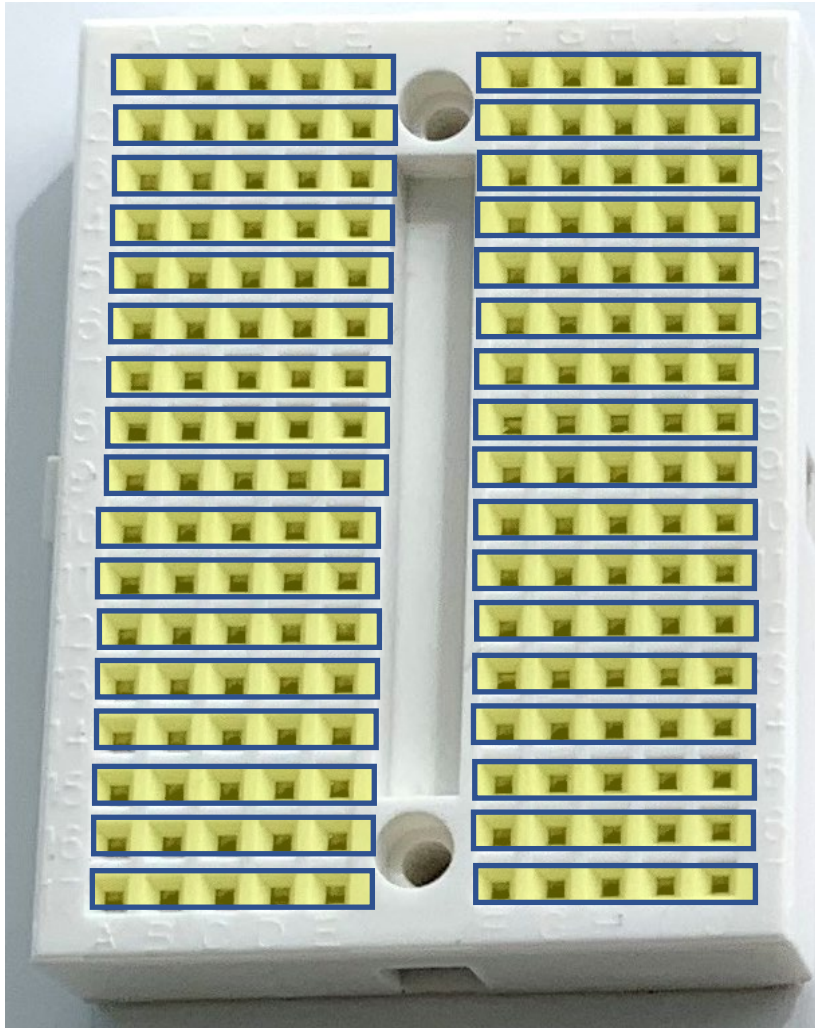


100 mH
82 Ω

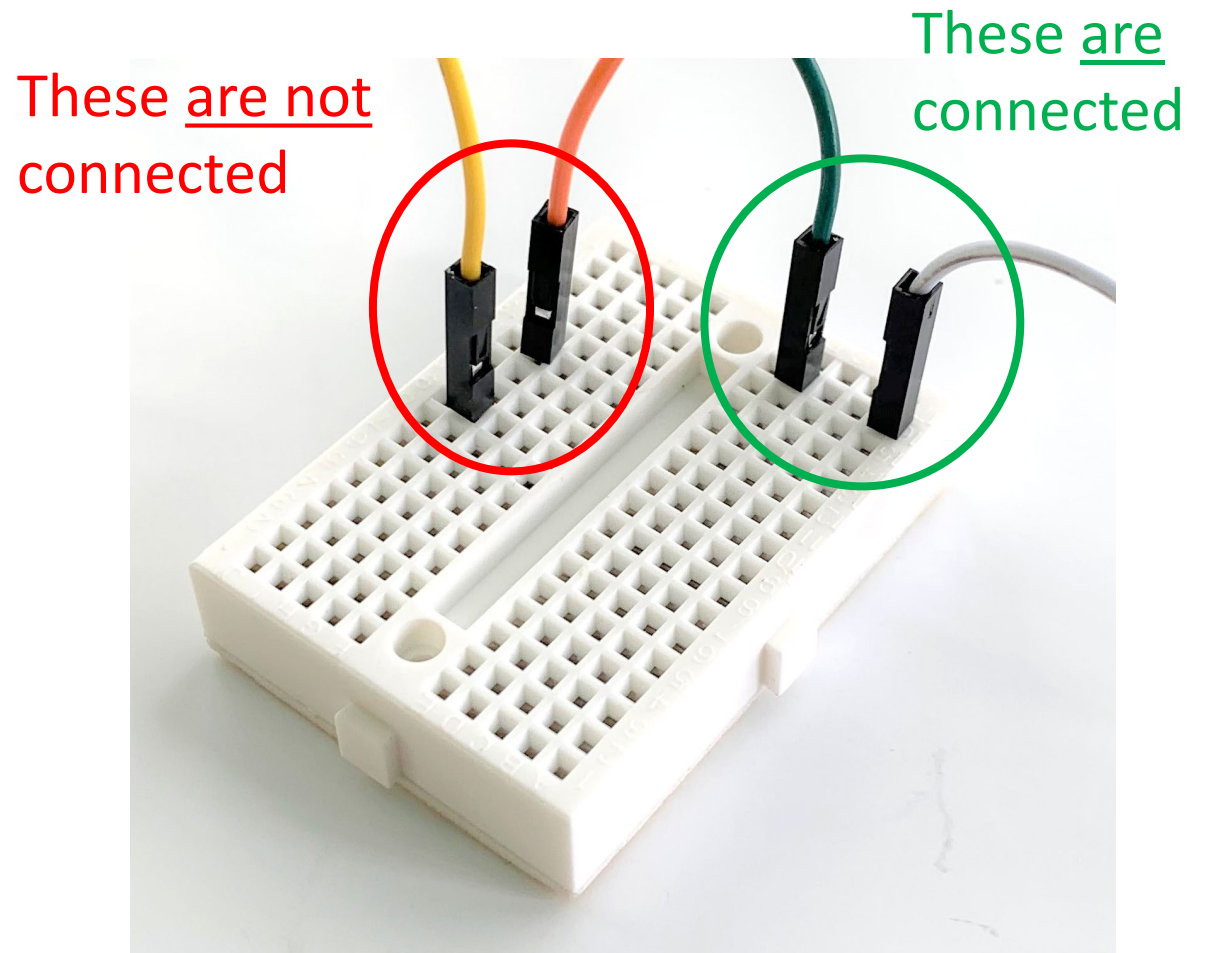
Breadboard



Used to make electrical connections between things pushed into the holes



The holes are electrically connected in groups of 5



Examples

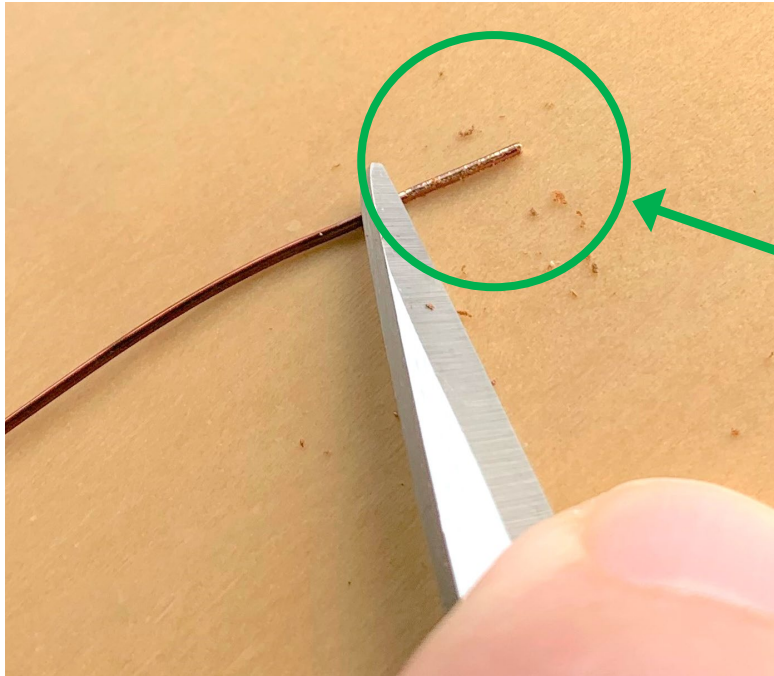
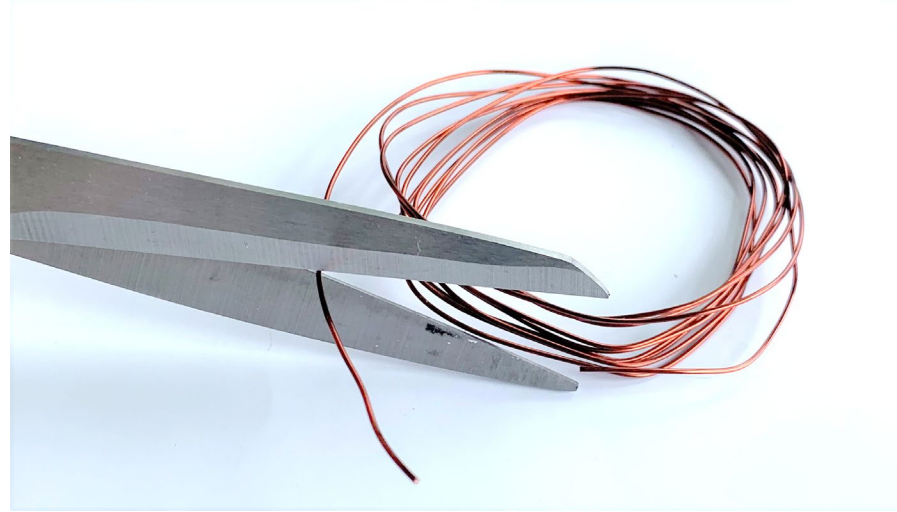
Magnet Wire

This is just a copper wire that has a thin insulating coating on its surface.

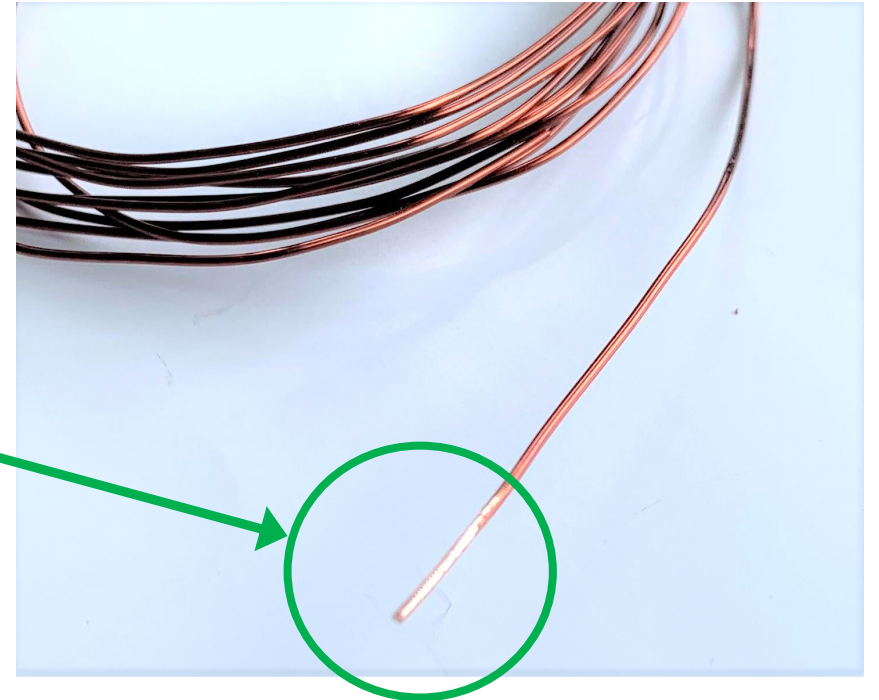


FYI: The wire is not magnetic. It has this name because it can be used to make electromagnets.

Magnet wire can be cut with nail clippers or scissors.



To make an electrical connection to the wire you need to scrape off the insulation.



Magnet & Hook

The name basically says it all.



Bonus: The hook unscrews from the magnet and can be screwed into the IOLab force probe



Polarizing Sheets

Each one has a protective covering on both sides that you can peel off.

