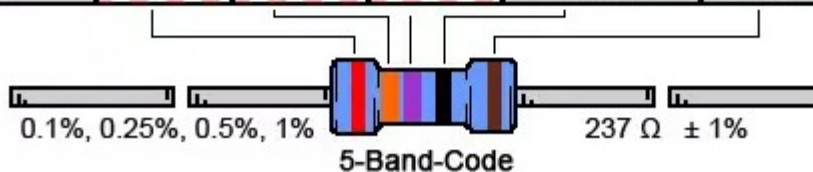




COLOR	1 ST BAND	2 ND BAND	3 RD BAND	MULTIPLIER	TOLERANCE
Black	0	0	0	1Ω	
Brown	1	1	1	10Ω	± 1% (F)
Red	2	2	2	100Ω	± 2% (G)
Orange	3	3	3	1KΩ	
Yellow	4	4	4	10KΩ	
Green	5	5	5	100KΩ	± 0.5% (D)
Blue	6	6	6	1MΩ	± 0.25% (C)
Violet	7	7	7	10MΩ	± 0.10% (B)
Grey	8	8	8		± 0.05%
White	9	9	9		
Gold				0.1Ω	± 5% (J)
Silver				0.01Ω	± 10% (K)



FAQs

I have a 6-band resistor. How can I calculate its value?

Enter the first five colors. Resistors with 6 bands are basically 5-band resistors with an additional ring indicating the *reliability* or the *temperature coefficient*.

The resistor has only 3 bands

You don't have to enter the 4th band, as 20% resistors don't have a tolerance ring. They will be calculated using the 4 band rule (digit, digit, multiplier).

Examples:

Red, red, brown is a 220 ohm, 20% resistor

Brown, black, orange is a 10k, 20% resistor

Which band is the first?

The short answer: you'll know that from experience! But there are some rules you can follow:

- 1.) Some resistors have the **color bands grouped together** and/or close to one end. Hold the resistor with the closely grouped bands to your left and **read the resistor from the left to the right**.
- 2.) With 5% and 10% resistors the procedure is simple: hold the resistor with the **silver or gold band to the right** and **read the resistor from the left to the right**.
- 3.) **The first band can't be silver or gold**, so if you hold such a resistor you'll know instantly where to start. Also, the 3rd color for 4-band resistors will be blue (10^6) or less and the 4th color for 5 band resistors will be green (10^5) or less, as basic resistor values range from 0.1 Ohm to 10 Mohms.

What happens, if I start reading from the wrong end?

You should always attempt to work out the value, then **check your result against a resistor value chart** to see if it's listed there. If it isn't, then try reading it again starting from the other end and check again. This is a necessary step especially with five and six banded metal film resistors.

BACK