

4 Band Color Coding Scheme

4 Band Resistor:





When using the 4-band scheme, the bands are always read from the end that has the band closest to it.

- A: The 1st and 2nd band represent the first and second digit, respectively
- B: The 3rd band represents the power-of-ten multiplier for the first 2 digits
- C: The 4th band is the resistors tolerance (*how close the resistor is to the stamped value*)
[If no 4th band is present, the tolerance is assumed to be $\pm 20\%$]

Number – Color Correlation:

Number	Color
0	Black
1	Brown
2	Red
3	Orange
4	Yellow
5	Green
6	Blue
7	Violet
8	Gray
9	White

$\pm 5\%$ (0.1 multiplier if 3rd band)		Gold
$\pm 10\%$ (0.01 multiplier if 3rd band)		Silver

→ The following colors when used as a 4th band indicate very small tolerance values.

Violet = $\pm 0.1\%$

Blue = $\pm 0.25\%$

Green = $\pm 0.5\%$

Brown = $\pm 1\%$

Red = $\pm 2\%$

Example Find the resistance of the following resistor.



$$12 \times 10^3 \Omega \pm 5\% \rightarrow 12,000 \Omega \text{ or } 12 \text{ k}\Omega \pm 5\%$$

5 % of 12,000 Ω is 600 Ω .

The actual value of the resistor is somewhere in the range:

11.4 k Ω to 12.6 k Ω

5 and 6 Band Color Resistors:

Five and six band resistors contain an extra digit of accuracy (5 & 6) and additional information about the resistor (6).

