

Color	1 st Digit	2 nd Digit	3 rd Digit or Multiplier		Tolerance (%)	Temp. Coefficient (ppm/K)
Black	0	0	0	10^0		250
Brown	1	1	1	10^1	±1	100
Red	2	2	2	10^2	±2	50
Orange	3	3	3	10^3		15
Yellow	4	4	4	10^4		25
Green	5	5	5	10^5	±0.5	20
Blue	6	6	6	10^6	±0.25	10
Violet	7	7	7	10^7	±0.1	5
Gray	8	8	8		±0.05	1
White	9	9	9			
Gold				10^{-1}	±5	
Silver				10^{-2}	±10	
none					±20	


3 bands: first and second digits and multiplier are specified, tolerance is supposed to be ±20%.

Example:  22 Ω 20% (Red-Red-Black)


4 bands: first and second digits, multiplier and tolerance are specified.

Example:  5.6k Ω 5% (Green-Blue-Red-Gold)

5 bands: first, second and third digits, multiplier and tolerance are specified.

Example:  909 Ω 1% (White-Black-White-Black-Brown)

6 bands: first, second and third digits, multiplier, tolerance and temp coefficient are specified.

Example:  23.7 kΩ 2% 20 ppm/K (Red-Orange-Violet-Red-Red-Green)

Notes for correct color reading direction:

A gold or a silver band cannot be at the beginning; If some bands are grouped together (like in the previous images), keep this group on the left and start with it; only some colors represent tolerance, so look at the possible tolerance band (4th if bands are 4 or 5th if bands are 5 or 6) first; if bands are 6 consider that also the 6th band can have only some colors; look at the result and check if it is a standard IEC-60062 standard, if not try reading the colors in the opposite direction.

A resistor with a single black band has 0Ω resistance.



www.freshcircuits.com/app/calc/resistorColorTable.php