

Resistor Color Codes

| Color | Digit | Multiplier | Tolerance | General Purpose | Precision |
|--------|-------|------------|-----------|-----------------|-----------|
| none | | | ± 20% | | |
| silver | | 0.01 | ± 10% | | |
| gold | | 0.1 | ± 5% | | |
| black | 0 | 1 | ± 20% | | |
| brown | 1 | 10 | ± 1% | | |
| red | 2 | 100 | ± 2% | | |
| orange | 3 | 1 k | ± 3% | | |
| yellow | 4 | 10 k | ± 4% | | |
| green | 5 | 100 k | ± 0.50% | | |
| blue | 6 | 1 M | ± 0.25% | | |
| violet | 7 | 10 M | ± 0.10% | | |
| gray | 8 | | ± 0.05% | | |
| white | 9 | | | | |

1st Digit → brown
2nd Digit → black
Multiplier → red
Tolerance → yellow

$10 \times 100 = 1.0 \text{ k}\Omega, \pm 5\%$

1st Digit → green
2nd Digit → orange
3rd Digit → blue
Multiplier → red
Tolerance (1½ wide) → brown

$536 \times 100 = 53.6 \text{ k}\Omega, \pm 1\%$

5362
 $536 \times 10^2 = 53.6 \text{ k}\Omega$

49R9
49.9 Ω

103
 $10 \times 10^3 = 10.0 \text{ k}\Omega$

10R0
10.0 Ω