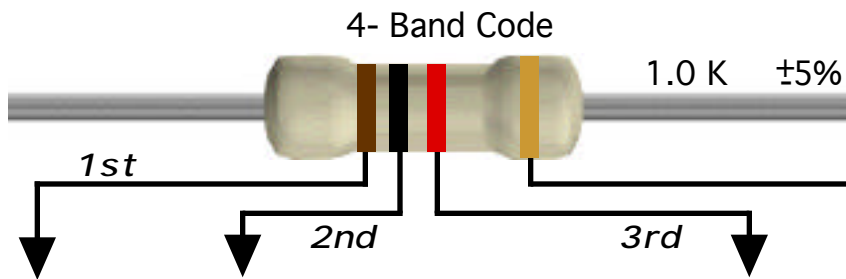
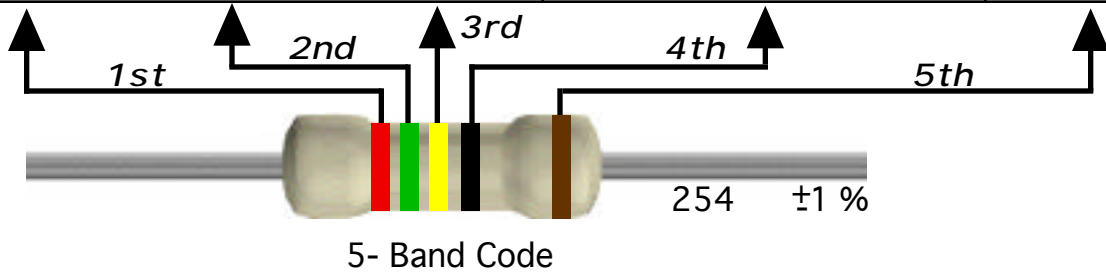


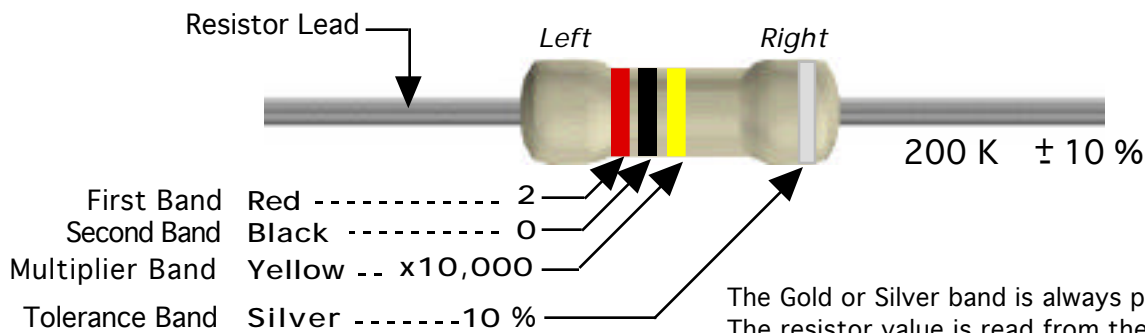
# RESISTOR COLOR CODE GUIDE



Color	1st Band	2nd Band	3rd Band	Decimal Multiplier		Tolerance
Black	0	0	0	1	1	
Brown	1	1	1	10	10	± 1 %
Red	2	2	2	100	100	± 2 %
Orange	3	3	3	1K	1,000	
Yellow	4	4	4	10K	10,000	
Green	5	5	5	100K	100,000	
Blue	6	6	6	1M	1,000,000	
Violet	7	7	7	10M	10,000,000	
Gray	8	8	8	100,000,000		
White	9	9	9	1,000,000,000		
Gold				0.1		± 5 %
Silver				0.01		± 10 %
None						± 20 %



## Calculation



First Band	Red	-----	2
Second Band	Black	-----	0
Multiplier Band	Yellow	-- x10,000	
Tolerance Band	Silver	-----	10 %

The Gold or Silver band is always placed to the right. The resistor value is read from the left to right.

If there is no tolerance band, then find the side that has a band closest to a lead and make that the first band.

### Equation

$$20 \times 10,000 = 200,000$$

$$1,000 = 1K$$

Resistor = 200 K  $\Omega$   
with a  $\pm 10\%$  Tolerance