Intermediate
[10+2]

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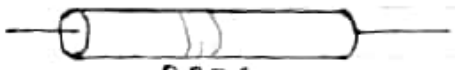
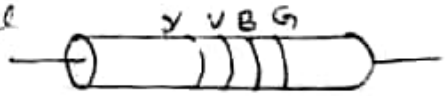
Colour Code for Carbon Resistor.

Most of electrical measurements involve the use of standard resistances (either for comparison purposes or for regulating the flow of current) which are generally made of wires with a very low temperature coefficient. A standard resistance should be permanent and have a definite value so that it shows only small variation with change in conditions. A set of standard resistances usually of manganen or Constantan wire, are often mounted in a box, called a resistance box. There are several forms of variable resistors, called rheostats, which are used for regulating or varying the current in a circuit. A sliding rheostat usually consists of ~~a~~ oxidised nichrome wire ~~is~~ wound on an insulating cylinder.

Resistors in the higher range are made mostly from carbon. Carbon resistors are compact, inexpensive and thus find extensive use in electronic circuits. Carbon resistors are small in size and hence their values are given using a colour code. The resistors have a set of coloured rings on them whose significance are listed.

The first two bands from the end indicate the first two significant figures of the resistance in ohms. The third the decimal multiplier. The last stands for tolerance or possible variation in percentage about the indicated value.





Colour	Number	Multiplier	Tolerance %
Black	0	1	
Brown	1	10^1	
Red	2	10^2	
Orange	3	10^3	
Yellow	4	10^4	
Green	5	10^5	
Blue	6	10^6	
Violet	7	10^7	
Gray	8	10^8	
White	9	10^9	
Gold		10^{-1}	5
Silver		10^{-2}	10
No Colour			20