Product name : 50 x 12,4 x 25 / N38 - NdFeB (neodymium) magnet

PERFORMANCE PARAMETERS

Length	50 [mm] +0,1/-0,1
Width	12,4 [mm] +0,1/-0,1
Height	25 [mm] +0,1/-0,1
magnetizing direction along dimension	25 [mm]
Grade	N38
Magnet type	Neodymium
Magnetic field in geometrical center of the magnetic pole surface	0,5 [T]
Coating	Nickel (NiCuNi)
Maximum working temperature	≤ 80 °[C]
For flat magnets and magnets mounted in the open magnetic circuit working temperature may be insignificantly lower. For high magnets and magnets mounted in the closed magnetic circuit working temperature equals max. working temperature for a given material. Curie's temperature is ~ 310°[C]. Temperature coefficient of remanence TK(Br: approx. ~0,12 %/°[C]. Temperature coefficient of coercivity TK(HcJ): approx. -0,6 %/°[C].	
Magnetic moment	19295
Weight	116,25 [g]
Sintered neodymium magnets are brittle (fragile). A neodymium magnet without housing could break after an impact with another strong magnet.	
All the numbers quoted were obtained as a result of tests with one specific item in a room temperature and are intended to serve for comparison of practical magnetic properties of magnets offered by the shop.	

MAGNETIC PROPERTIES OF MATERIAL GRADE N38

remanence B_r	1,21 - 1,25 [T]
coercivity H_cB	min. 899 [kA/m]
coercivity H_cJ	min. 955 [kA/m]
energy product $(BH)_{max}$	286 - 302 [kJ/m^3]
Magnetic properties of a particular material, together with its shape, volume, max. working temperature and direction of magnetization have influence on practical magnetic properties of a magnet.	
As an example, you will find attached a graph of a course of the II quadrant of magnetic hysteresis loop for a material grade N38.	

MAGNETIC PROPERTIES OF MATERIAL GRADE N38

density	~7,5 [g/cm3]

Vickers hardness (HV)	~600 [kg/mm2]
resistivity	~144 [uOhm x cm]

TECHNICAL DRAWING