totalElement

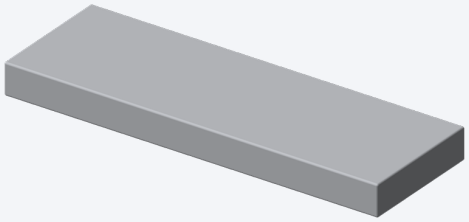
SPECIFICATION SHEET
Part no. B112X12X18N42

Bar Magnet

1 1/2 x 1/2 x 1/8 Inch (38.10 x 12.70 x 3.18 mm)

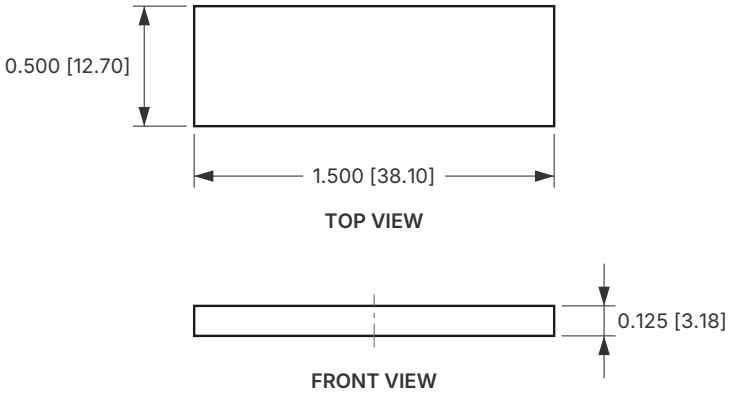
Width x Length x Thickness

ISOMETRIC VIEW — Not to scale



SPECIFICATIONS	
WIDTH	1.500 Inch [38.10 mm]
LENGTH	0.500 Inch [12.70 mm]
THICKNESS	0.125 Inch [3.18 mm]
TOLERANCE	±0.004 Inch [±0.10 mm]
MATERIAL	Sintered Neodymium (NdFeB)
GRADE	N42
COATING	Nickel-Copper-Nickel (Ni-Cu-Ni)
MAGNETIZATION	Through the thickness
PULL FORCE	12.4 lbs (5.6 kg)
SURFACE FIELD	2,059 Gauss (206 mT)
WEIGHT (EACH)	11.6 g (0.41 oz)

DIMENSIONS — Inch [mm] · not to scale



MAGNETIZATION



Magnetized through the 0.125 [3.18] dimension. Pole faces shown for illustration.

GRADE PROPERTIES · N42

PROPERTY	SI	CGS / IMPERIAL
Remanence (Br)	1.28–1.33 T	12.8–13.3 kG
Coercivity (Hcb)	≥ 915 kA/m	≥ 11.5 kOe
Intrinsic coercivity (Hcj)	≥ 955 kA/m	≥ 12 kOe
Max. energy product (BH)max	318–342 kJ/m³	40–43 MGOe
Max. operating temperature	80 °C	176 °F

Typical values for sintered NdFeB of grade N42 at room temperature, not measured on this part. The highest safe working temperature also depends on the magnet's shape and how it's used.

Handling: neodymium magnets are brittle and can chip, or pinch skin, if they snap together. Keep them away from pacemakers and magnetic media.

VIEW ONLINE

Scan to open this magnet on totalElement.com.

CAD FILES

The technical drawing and 3D model are on the product page.

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