totalElement

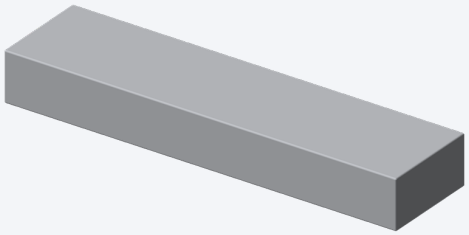
SPECIFICATION SHEET
Part no. B2X12X14N42

# Bar Magnet

## 2 x 1/2 x 1/4 Inch (50.80 x 12.70 x 6.35 mm)

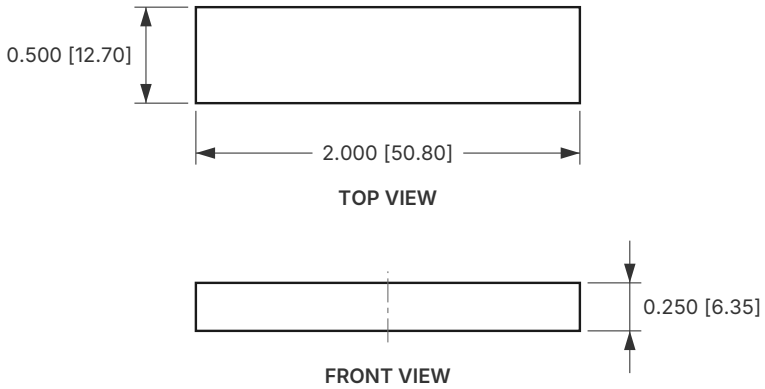
Width x Length x Thickness

ISOMETRIC VIEW — Not to scale



| SPECIFICATIONS | |
|---|---|
| WIDTH | 2.000 Inch [50.80 mm] |
| LENGTH | 0.500 Inch [12.70 mm] |
| THICKNESS | 0.250 Inch [6.35 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 | 30.5 lbs (13.8 kg) |
| SURFACE FIELD | 3,424 Gauss (342 mT) |
| WEIGHT (EACH) | 31.1 g (1.1 oz) |

DIMENSIONS — Inch [mm] · not to scale




MAGNETIZATION




Magnetized through the 0.250 [6.35] 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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