

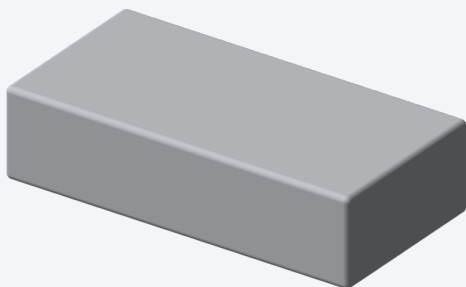
# Bar Magnet

**1/2 x 1/4 x 1/8 Inch** (12.70 x 6.35 x 3.18 mm)

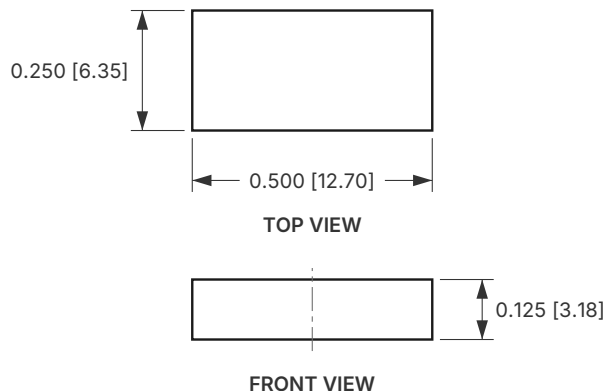
Width x Length x Thickness

ISOMETRIC VIEW

Not to scale

**SPECIFICATIONS**

|               |                            |
|---------------|----------------------------|
| WIDTH         | 0.500 Inch [12.70 mm]      |
| LENGTH        | 0.250 Inch [6.35 mm]       |
| THICKNESS     | 0.125 Inch [3.18 mm]       |
| TOLERANCE     | ±0.004 Inch [±0.10 mm]     |
| MATERIAL      | Sintered Neodymium (NdFeB) |
| GRADE         | N42                        |
| COATING       | Black Epoxy                |
| MAGNETIZATION | Through the thickness      |
| PULL FORCE    | 4.8 lbs (2.2 kg)           |
| SURFACE FIELD | 3,723 Gauss (372 mT)       |
| WEIGHT (EACH) | 1.9 g (0.067 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/m <sup>3</sup> | 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.

**totalElement**

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