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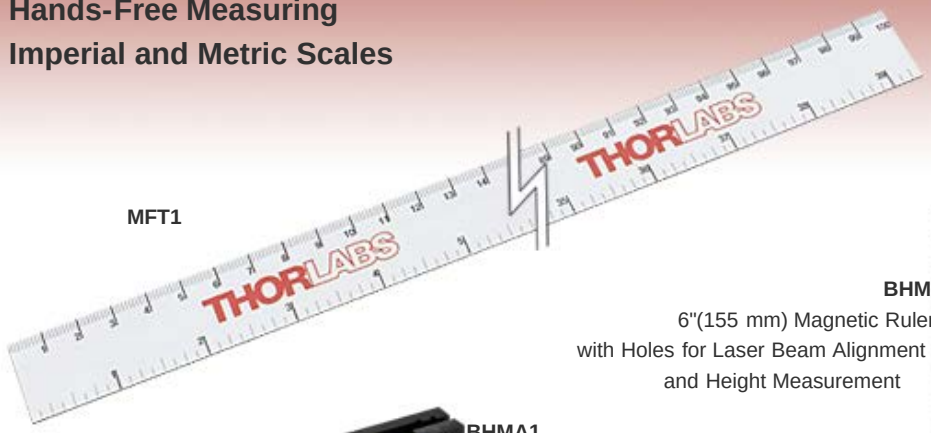
BHM1 - October 21, 2020

Item # BHM1 was discontinued on October 21, 2020. For informational purposes, this is a copy of the website content at that time and is valid only for the stated product.

MAGNETIC MEASURING TAPE AND BEAM HEIGHT RULER

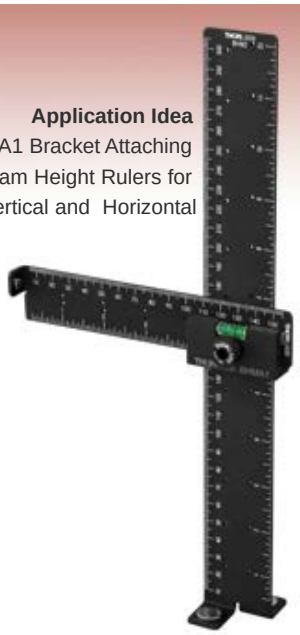
- Hands-Free Measuring
- Imperial and Metric Scales



MFT1

BHMA1
Mounting Bracket for
Beam Height Rulers

BHM1
6"(155 mm) Magnetic Ruler
with Holes for Laser Beam Alignment
and Height Measurement



Application Idea
BHMA1 Bracket Attaching
Two Beam Height Rulers for
Vertical and Horizontal

Hide Overview

OVERVIEW

Thorlabs offers two solutions for hands-free measuring on an optical table or breadboard. First, our MFT1 Magnetic Measuring Tape lays flat on any magnetic surface to provide a reference for the position of components. Second, our BHM1 and BHM2 Magnetic Beam Height Rulers features holes at 25 mm and 1" intervals to allow a laser beam to pass through. The rulers are laser engraved with both imperial and metric scales and are held onto any magnetic surface by two magnets in their bases.

Mounting Brackets are also available that allow two beam height rulers (Item # BHM1 and BHM2) to be attached at a 90° angle. This allows for alignment of a laser beam horizontally in addition to measuring its height off the table.

Hide Magnetic Measuring Tape

Magnetic Measuring Tape

- Magnetic Over Entire Backside of Ruler
- Attaches to Optical Table or Breadboard for Hands-Free Measurement Guide
- Flexible Material for Easy Rolling and Storing
- Numeric Marks Every 1" and 1 cm, Tick Marks Every 1/8" and 1 mm
- L x W x Thickness: 1 m x 1" (25.4 mm) x 0.03" (0.8 mm)

Click to Enlarge
MFT1 Measuring Tape Covering One Row of Holes on an Optical Table

This vinyl magnetic measuring tape provides a convenient solution for determining approximate distances hands free on an optical table or breadboard. With a magnetic back that extends over the full length and width of the ruler, this

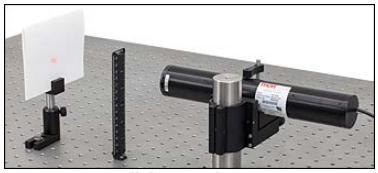
measuring tape lays flat on any magnetic surface and features both imperial and metric scales, with numeric marks every 1" and 1 cm and tick marks every 1/8" and 1 mm. Only 0.03" (0.8 mm) thick, the ruler maintains a low-profile on the table. If a shorter length is desired, the ruler can be cut into segments. Please note that vinyl can stretch; consequently, this measuring tape should be used as an alignment aid and not as a precision measurement tool.

Part Number	Description	Price	Availability
MFT1	**Magnetic Measuring Tape, 1 m Long**	**$5.52**	**Today**

Hide Magnetic Beam Height Rulers

Magnetic Beam Height Rulers

- Imperial and Metric Laser Engraved Scales
  - 1.0 mm Metric Graduations
  - 1/16" Imperial Graduations
- Facilitate Laser Beam Alignment Using Holes Spaced at 1" and 25 mm Intervals
- Measure Beam Height on Magnetic Optical Tables or Breadboards
- Two Neodymium Magnets Provide Holding Force
- Homogeneously Diffusive Anodized Coating



Click to Enlarge
Light from a HeNe Laser Passing Through a Hole in a BHM1 Ruler

Our BHM1 and BHM2 Magnetic Rulers measure beam heights up to 6" (155 mm) or 12" (305 mm), respectively. The front of the screen is laser engraved with 1.0 mm and 1/16" graduations for beam height measurement. Twelve Ø2.0 mm (Ø0.08") holes positioned next to the engraved numbers at 25.0 mm and 1.00" intervals allow the laser beam to pass through the ruler.

The base of each ruler is fitted with a pair of neodymium magnets that hold the ruler to magnetic work surfaces and provide flexibility of movement when compared to an option that is bolted to the table. They are constructed from bead-blasted aluminum to remove any sharp edges and then anodized to create a homogeneously diffusive surface. The compact size allows the tool to fit into small gaps between components, enabling easy integration into a setup.

We also offer the BHMA1 bracket below for attaching two beam height rulers, allowing for the alignment of a laser beam horizontally in addition to measuring its height off the table.

Please note: Due to the presence of magnets, this ruler should not be used in the vicinity of pacemakers, credit cards, or other devices affected by magnetic fields.

Item #	Dimensions (W x H)	Footprint (L x W)	Numbered Graduations	Graduations	Hole Spacing	Hole Diameter	Damage Threshold
BHM1	30 mm x 160 mm (1.18" x 6.30")	30 mm x 30 mm (1.18" x 1.18")	Every 1" and 10 mm	1/16" and 1.0 mm	1.00" and 25.0 mm	2.0 mm (0.08")	>350 J/cm^2 (1064 nm, 20 ns, 20 Hz, Ø1.14 mm)
BHM2	40 mm x 310 mm (1.57" x 12.20")	48 mm x 40 mm (1.89" x 1.57")					

Part Number	Description	Price	Availability
BHM1	**6" (155 mm) Magnetic Beam Height Measurement Tool**	**$22.72**	**Lead Time**
BHM2	**12" (305 mm) Magnetic Beam Height Measurement Tool**	**$44.64**	**Lead Time**

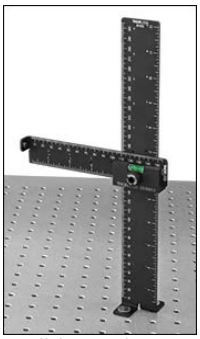
Hide 90° Mounting Bracket for Magnetic Beam Height Rulers

90° Mounting Bracket for Magnetic Beam Height Rulers

- Mount Two Beam Height Rulers Perpendicularly
- Ideal for Horizontal and Vertical Beam Measurements
- Mount a Laser Viewing Card to a Beam Height Ruler
- Built-In Spirit Level Simplifies Leveling of the Mounted Card or Ruler
- Laser Engraved with 1.0 mm Graduations
- Constructed From Black Delrin®*

Click to Enlarge
VRC4 on a

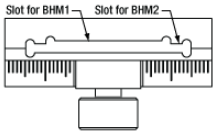
Thorlabs' BHMA1 Mounting Bracket allows two beam height rulers, sold above, to be attached at a 90° angle. This capability allows for alignment of a laser beam horizontally in addition to measuring its height off the table. As shown



Click to Enlarge
BHM1 Mounted at 90° on a BHM2 Using the BHMA1 Bracket

in the image to the right, the bracket can also be used to attach Laser Viewing Cards to a ruler, allowing for the viewing of UV, NIR, or MIR beams.

BHM1



Click for Details
BHMA1 Mechanical Drawing

Constructed from durable black Delrin, this bracket contains a built-in spirit level (bubble level) for consistent leveling of the mounted part. When the bubble is centered between the two graduations the bracket is level. When the center of the bubble is under one of the graduations then the bracket is rotated by 31 arcminutes.

Laser engraved 1.0 mm spaced graduations are also included on three sides of the bracket. These markings can be used to indicate how far the mounted part has been translated horizontally or to repeatably add a ruler or viewing card into the setup.

Two through slots, shown in the drawing to the left, in the bracket are spaced to fit over the top of a BHM1 or BHM2 ruler. Once fitted the bracket is free to translate vertically across the ruler. From here a second ruler or a viewing card is placed in the space between the first ruler and the front of the bracket. Everything is held in place by applying pressure using the thumbscrew on the front of the bracket.

Please Note: These brackets are created from Delrin and are not rated for laser safety.

*Delrin® is a registered trademark of DuPont Polymers, Inc.

Part Number	Description	Price	Availability
BHMA1	**90° Mounting Bracket for Magnetic Beam Height Rulers**	**$41.12**	**Lead Time**


THORLABS
BHM1
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