

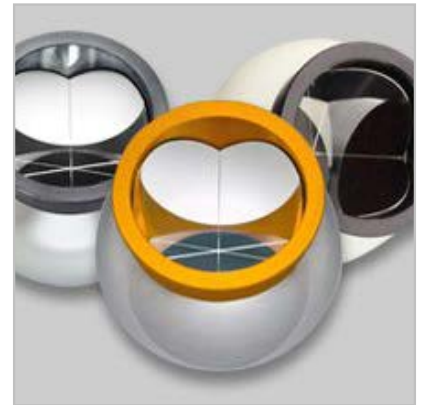
## Ball Mounted Hollow Retroreflectors (BMR™)

### Description

Ball Mounted Hollow Retroreflectors (BMRs) are used for laser tracking in the industry.

### Features / Characteristics

They are manufactured in three different diameters: 1 1/2", 7/8" and 1/2". All sizes are available in 2 centering accuracies: 0.0005" and 0.0001". BMRs are compatible with all manufacturers laser tracking systems. Should the optical elements of your BMR ever become damaged, our partner can replace them with units of comparable accuracy and alignment to the original at a modest cost.



### Applications

All Ball Mounted Retroreflectors are equipped with our standard protected silver coating for the highest durability, reflectance and distance.

#### **BMR:**

Stainless steel Ball Mounted Hollow Retroreflectors™ (BMRs) can significantly improve the performance of all laser-tracking systems.

#### **DBMR:**

All metal Durable Ball Mounted Retroreflectors (DBMRs) offer increased durability and are designed to work in demanding environment. They have been successfully drop-tested on a concrete floor from a height of 6 feet.

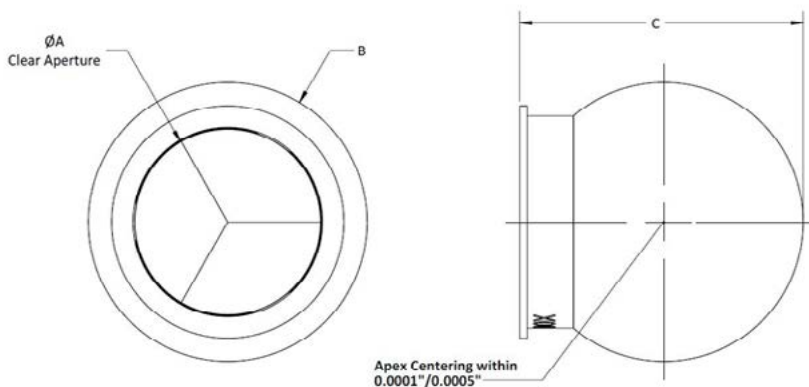
#### **BMRNM:**

Ceramic Ball Mounted Hollow Retroreflectors™ (BMRNMs) are designed for applications requiring non-magnetic components. They are lighter, smoother, corrosion and electrically resistant, with low thermal conductivity.

## Specifications

Substrate	Pyrex/Aluminum
Housing material	Steel/Ceramic
Surface quality	80-50 Scratch-Dig
Coating	Protected Silver
Wavelength (nm)	450 – 10000
Reflectance	96% (AOI 55° per surface reflectance average)
Centering (in)	within 0.0001 or 0.0005

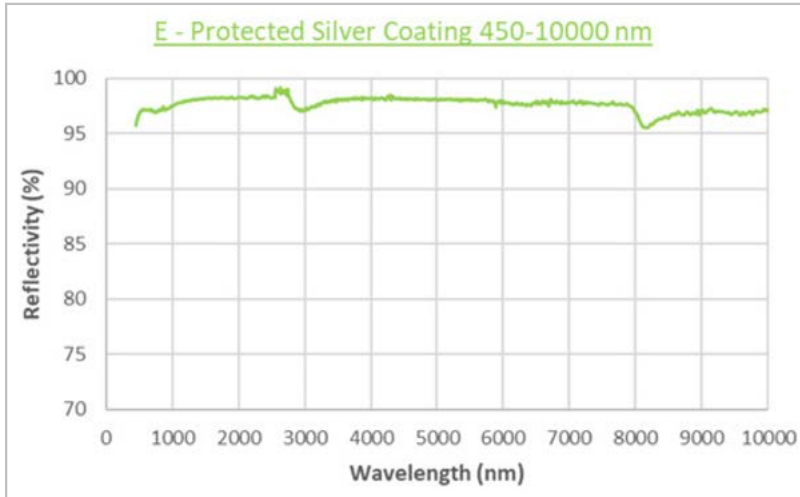
Item	ØA (in/mm)	B (in/mm)	C (in/mm)
BMR-1.5 DBMR-1.5 BMRNM-1.5	1.00/25.40	1.50/38.10	1.52/38.74
BMR-0.875 BMRNM-0.875	0.50/12.70	0.88/22.23	0.84/21.34
BMR-0.5 BMRNM-0.5	0.31/7.87	0.50/12.70	0.49/12.45



## Simulations

### Coating types

- Protected Silver (450 – 10.000 nm) 96% (AOI 55° per surface reflectance average)



### Note:

Coatings meet Ravg requirement, but coating curves are for reference as  $R(\lambda)$  may vary  $\pm 2\%$ . Detailed drawings and detailed coating curves are available on request.

## Good to know

- BMRs are available in standard sizes of 0.31" (7.87 mm), 0.5" (12.7 mm) to 1.0" (25.4 mm) for the free aperture and with centering either 0.0001" or 0.0005".
- Retroreflector apex is positioned within either 0.0005" or 0.0001" of the center of the ball as specified.
- The standard is a protected silver coating. Custom coatings are available upon request.

### For inquiries we need to know:

- Which type of retroreflector
- CA
- Centering

## Product Code

**Type of retroreflector -**

**Ball Dia (inch) -**

**Centering (inch)**

For example:

**BMR-1.5-5, Ball Mounted Retroreflector, 1.5", 0.0005", prot. silver**

(Ball Mounted Hollow Retroreflector,  $\varnothing 1.5"$ , clear aperture  $\varnothing 1"$ , centering within 0.0005", with protected silver coating)