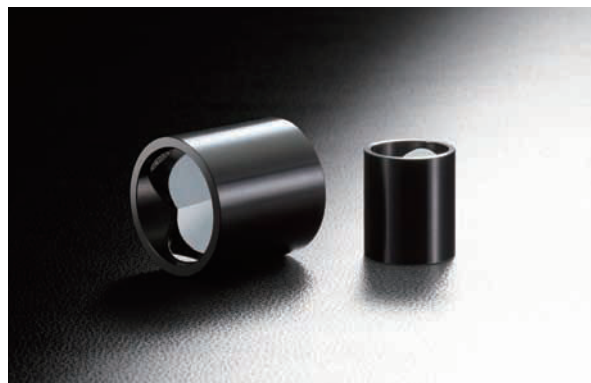


# Hollow Retro-reflectors | HRR



The hollow retro-reflector is similar to the corner cube; it reflects the incident light back to its original source. This is made of a high precision assembly of 3 flat mirrors; insensitive of chromatic dispersion of the refractive index of glass and the absorptive of glass.

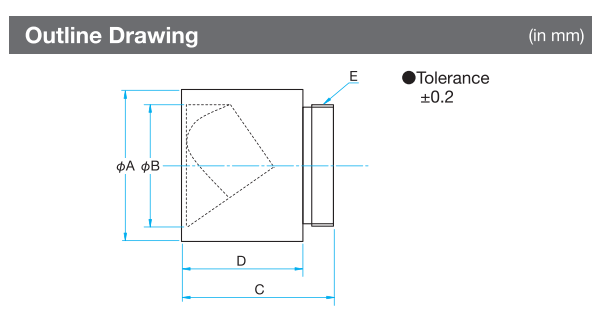
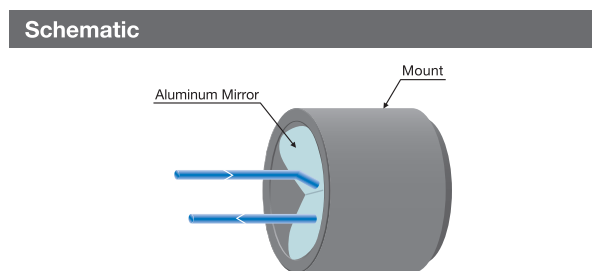
- The hollow is fabricated under high precision process; it can assure the reflection of high accuracy light.
- Can be used at broad wavelength range from UV to IR.
- Since there is no glass chromatic dispersion, the position of the back incident beam does not change in certain wavelength.
- With a small polarization effects, it is recommended to use in multiple interferometer optical path.



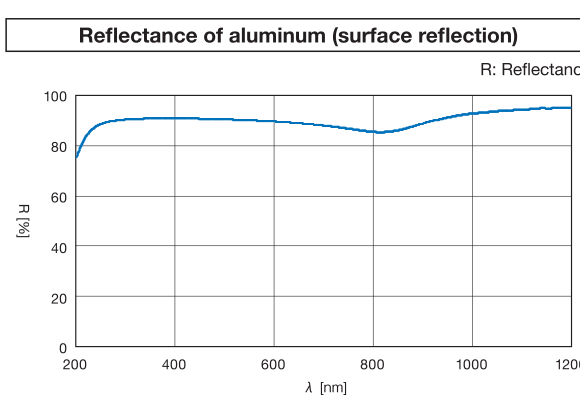
Specifications	
Material	BK7
Material of frame	Aluminum Finishing: Black anodized
Coating	Aluminum (No Protected Coating)
Laser Damage Threshold	0.25J/cm <sup>2</sup> (Laser pulse with 10ns, repetition frequency 20Hz)
Surface Quality (Scratch-Dig)	40-20

- Guide**
- ▶ We have specific holders designed for this hollow retro-reflector, please ask our International Sales Division.
  - ▶ For high reflective type, we are proposing the corner cube CCP .  
Reference C222

- Attention**
- ▶ The corner cube reflects light back to its source at high precision. If the incident light position is slide from the incident center; the reflected light will also be slide at the similar distance.
  - ▶ Reflection on aluminum mirror may have some polarization effects.
  - ▶ Avoid using optical cleaning tissue for the surface cleaning; there is no protection layer on the top of the aluminum coating. Please use air-blow type of cleaner.
  - ▶ The aluminum reflectance index is about 85% to 90%. The hollow reflect on 3 surfaces, therefore the back incident light reflectance performance is at 61% tp 73%.



Part Number	A [mm]	B [mm]	C [mm]	D [mm]	E
HRR-10	φ13	φ10	18	13	M10.85 P=0.75
HRR-20	φ25	φ20	25	20	M20.85 P=0.75
HRR-30	φ35	φ30	35	30	M30.85 P=0.75



Specifications			
Part Number	Clear aperture [mm]	Angular deviation of beam [°]	Wavefront Distortion
HRR-10-10	φ8	<10	1λ
HRR-10-30	φ8	<30	2λ
HRR-20-5	φ18	<5	1λ
HRR-20-30	φ18	<30	2λ
HRR-30-5	φ27	<5	1λ
HRR-30-30	φ27	<30	2λ

- Application Systems
- Machine Vision
- Manual Positions
- Motion Control Products
- Optical & Mirror Holder**
- F A Parts
- Measurement & Control
- FA Electrical Parts
- Tool & Measure
- Cleanroom & AntiStatic
- Index
- Mirrors
- Beamsplitters
- Filters
- Polarizers
- Lenses
- Multi-Element Optics
- Prisms**
- Substrates & Windows
- Holder & Vibration isolator