

Aluminum Variable Radius Mirrors

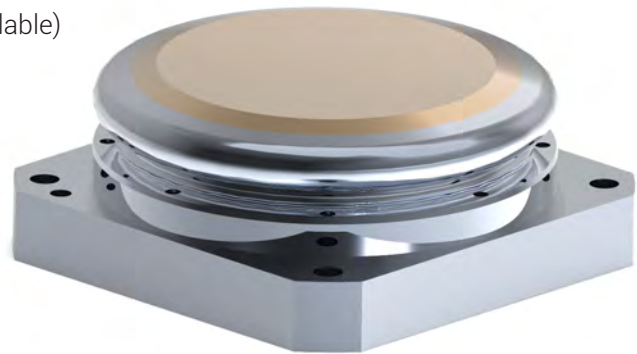
II-VI introduces new, light-weight aluminum variable radius mirrors (VRMs) for high-power industrial lasers. At as low as 18 % of the weight of comparable copper versions, the aluminum VRM line provides OEMs with faster cutting/welding head movement and increased cyclic lifetime. With low-roughness, polished surfaces available in custom designs for use in 1 μm applications, II-VI's aluminum VRMs can accommodate applications up to 20 kW of laser power.

Aluminum Variable Radius Mirrors

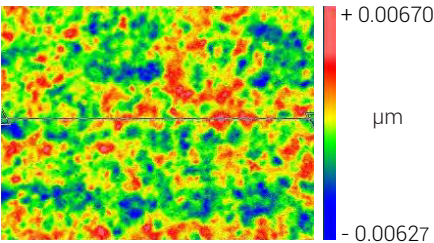
Features

- Pressure Ranges: 0 - 11 bar
- Radii: As short as 3 MCC - 3 MCX*
- Angle of Incidence: 0° - 45°
- Standard Usable Clear Apertures: 20 - 40 mm
- Roughness: < 30 Å (lower roughness, polished surface available)
- Irregularity: < 3 fr at maximum/minimum radius
- Weight: Up to 82 % reduction in weight compared to similar copper designs
- Lifetime: Up to 500 million cycles
- Air and water actuation and cooling*
- Up to 20 kW of laser power*
- Oxide coatings available*
- Light-weighted designs*
- Face cooling options*
- Reduction in galvanic corrosion potential

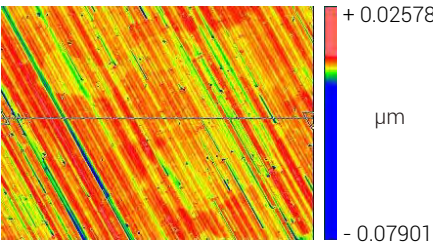
* Custom designs available upon request



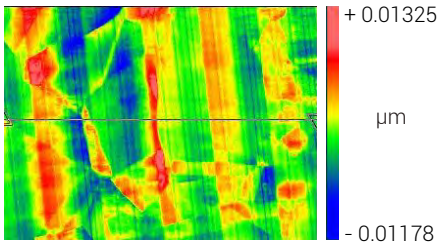
Roughness



Polished Aluminum
≤ 30 Å RMS





Standard Aluminum
≤ 70 Å RMS



Flycut Copper
≤ 80 Å RMS

Material Comparison

	Aluminum	Copper
		
Galvanic Potential to AL-5083	0.04 V	0.59 V
Roughness	< 30 Å available upon request, < 70 Å with Standard Aluminum	< 80 Å
Weight Reduction	~ 82 % versus Copper	Nominal