

# CO2 LASER MIRROR

## 1. General

Pleiger Laseroptik's precision mirrors are used in resonators, deflection units, and for beam bending. Our product range includes flat mirrors and spherical optics of silicon, copper, silicon carbide, and fused silica. Combined with our gold-based high-power coatings, we offer precisely the suitable optics for any application with a wavelength of 10.6  $\mu\text{m}$ . We also offer scanner mirrors for laser marking, plane mirrors for laser cutting, and bending mirrors for medical instruments.

## 2. Materials

CO2 laser mirrors may be made of

- Silicon
- OFHC-Copper
- Aluminium (AlMgSi1)
- Beryllium
- Silicon Carbide

## 3. Surfaces

- Plano
- Spherical
- Aspherical
- Toroidal

## 4. Coatings

- Protected Gold  
Broadband coating for low power applications only.
- Molybdenum  
Very hard coating for CO2 laser welding
- PICO HR  
High power coating for laser marking, cutting, drilling
- PICO HR DB  
High power coating with extended reflection for alignment lasers
- PICO HR Resonator  
High power coating optimized for CO2 laser resonators. High UV stability.

	R @ 10,6 $\mu\text{m}$ AOI 45° s-pol	R @ 10,6 $\mu\text{m}$ AOI 45° p-pol	R @ 10,6 $\mu\text{m}$ AOI 0°	Phase Shift AOI 45°	R @ 633 nm AOI 45°
Protected Gold	99,1 %	98,4 %	99,0 %	< 2°	> 90 %
Molybdenum	98,4 %	96,6 %	97,5 %	< 2°	> 50 %
PICO HR	99,9 %	99,8 %	99,8 %	0 +/- 3°	> 45 %
PICO HR DB	99,8 %	99,6 %	99,7 %	0 +/- 5 %	> 75 %
PICO HR Resonator	Not designed for AOI 45°	Not designed for AOI 45	99,9 %	Not designed for AOI 45	> 45%