

# COPPER MIRROR

## 1. General

OFHC (Oxygen-Free High Conductivity) Copper, also referred to as Oxygen-free Copper (OFC) is an electrolytically refined Copper. It's of high purity with a level of oxygen as low as 0.001 % or below. It is more ductile and has a higher thermal and electrical conductivity.

Our mirrors are coated for maximum reflectivity. PLEIGER's manufacturing capability covers optics for CO<sub>2</sub>-lasers and optical instruments.

Copper mirrors are available plano, spherical, aspherical, toroidal, and with internal cooling.

## 2. Material Properties

Density:	8,9 g/cm <sup>3</sup>
Melting point:	1083 °C
Thermal conductivity:	395 W/mK
Electrical resistivity:	1,70 μΩ cm
Temperature coefficient:	0,0038 K <sup>-1</sup>

## 3. Standard Dimensional tolerances:

Diameter:	+/- 0,1 mm
Thickness:	+/- 0,2 mm
Parallelism:	< 3 arc min
Clear aperture:	90 % of diameter

## 4. Surface Quality:

Figure: 1/40 wave @  
10,6 μm

## 5. Surface form

- plano
- spherical / aspherical / toroidal

## 6. Options

- internal cooling

## 7. Coatings

### a) Broadband coatings

- Protected Gold
- Protected Silver
- Protected Aluminium
- Molybdenum

### b) Enhanced coatings

- Enhanced Gold
- Enhanced Silver
- Enhanced Aluminium

### c) High power laser coatings

- CO<sub>2</sub> laser
- YAG/fiber laser
- fs laser