

# OFHC/OFE Copper

## 1. General

OFHC/OFE copper is a metal with high heat capacity and ideally suited for high-power laser applications.

OFHC = Oxygen-Free High Conductivity

OFE = Oxygen-Free Electrical

## 2. Material Properties

Symbol:	Cu
Atomic number:	29
Atomic weight:	63.546
Density:	8.89-8,94 g/cm <sup>3</sup>
Melting point:	1083 °C
Heat capacity:	385 J kg <sup>-1</sup> K <sup>-1</sup>
Thermal conductivity:	386-394 W m <sup>-1</sup> K <sup>-1</sup>
Young Modulus:	115 GPa

## 3. Standard Tolerances:

Diameter:	+/- 0,1 mm
Thickness:	+/- 0,1 mm
Wedge:	< 3 arc min

## 4. Surface Quality:

Figure: up to 1/10  $\lambda$

## 5. Surface Forms

- plano
- spherical / aspherical
- toroidal
- cylindrical

## 6. Options

- internal cooling
- drilling pattern as desired

## 7. Coatings

- a) Metallic
  - Gold for IR allications
  - Silver / Aluminium for VIS - IR
- b) Laserline coatings
  - CO<sub>2</sub>-Laser Mirrors
  - CO<sub>2</sub>-Laser Resonators
  - YAG/Faser/Diode Laser Mirror

Free Apertur: 90 % of diameter

