

MIRROR FURNACE

VERY HIGH
TEMPERATURE
CRYSTAL GROWTH
FURNACE



The **Cyberstar Mirror Furnace** is a high temperature furnace from **ECM Lab Solutions** that can process materials up to 3000°C. It can be offered either in a MF2400 setup compatible with working temperature up to 2400°C or in a MF3000 setup up to 3000°C. Heating energy is obtained by focusing light on a small area of the processed rod using high efficiency reflective and concentrating mirrors. The furnace operates based on the floating zone technique, using one rod of the grown material or a seed and feeding rod to provide the melted drop. Both of these solutions are possible thanks to the independent vertical conversion between the upper and lower holders in the furnace.

The movement of the upper and lower rods is perfectly synchronized using the **Cyberstar** control software, which is delivered with the furnace. It can be used to obtain crystal rods or crystal fibers, and can be equipped with a 100 bar growth pressure chamber. The specific design of the furnace makes it ideal for laboratory use, universities, and R&D centers.

EFFECTIVE DIMENSIONS

Ø : 3 to 10 mm crystal rode
or fiber

- Crystal Growth
- Solid Lasers
- Sensors

AN ECM GROUP OFFER

ECM Lab Solutions helps laboratories to develop innovative products and processes by offering advanced furnace technologies under one ECM Group brand. This offer gathers all laboratory furnaces from the ECM Group. Its expertise includes the heat treatment of steels, ceramics and silicon. As well as crystal growth applications, coatings and melting processes for a wide range of research fields.



FEATURES

Temperature up to 3000°C

MF2400 is dedicated to working temperature up to 2400°C

MF3000 is dedicated to working temperature up to 3000°C

Precise and synchronized upper and lower translations

with a resolution up to 0.01 mm/h

Chamber capacities for primary and secondary vacuum

Water cooled

Working temperature in the reactor up to 3000°C

Equipped with quartz (or sapphire) window viewports

Operating security loop system

Atmospheres

Vacuum

Inert Gas

Reductive and oxidizing atmospheres

Sample

Volume : Approximately 5mm long for a diameter of 5mm

Temperature : High as 2400°C can be reached with two 2kW lamps

OPTIONS

- Maximum operating gas pressure chamber 100 bars
- High magnification camera for full monitoring and recording of the growth process
- Pyrometer for localized temperature measurement

INTEGRATION

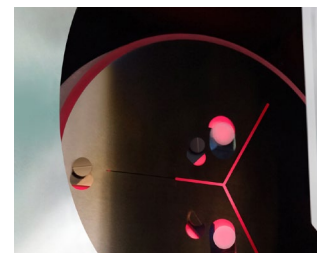
Flexibility to include monitoring and analysis equipment

MATERIAL

- Oxides
- Ceramics
- Semiconductors



Cyberstar



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