



CODE GT2998
 MODEL GT-OF
 EXTERNAL DIMENSIONS... 1100x280x420 mm
 POWER 1500 Watt
 VOLTAGE 220 V - 50 Hz single phase
 WEIGHT 60 kg

OPTICAL FLEXIMETER GT-OF

DESCRIPTION

The high range fleximeter was designed to study bending phenomena that occur in materials during a thermal cycle without the application of an external force. The main application of the optical fleximeter is the measurement of pyroplastic deformation and its rate on samples of unfired ceramic bodies. The sample is subjected to a thermal cycle similar to the industrial one in order to assess its deformation tendency. The specimen is supported by two alumina rods and is completely unrestrained. The high range fleximeter frames the bottom of the sample and records its movement relative to the optics. It can record up to 6 mm of downward pyroplastic deformation with 3.5 μm of resolution. It is ideal for the study of large deformations. The magnitude of deformation makes calibration negligible and unnecessary. For the measurement of pyroplastic deformation, a test specimen of raw material with a length of 85 mm and a thickness of 5 mm is required. The width of the specimen can vary from 4 to 7 mm.

APPLICATIONS

- Pyroplastic behavior (bending under its own weight) during firing.
- Bending due to differences in thermal expansion/sintering between two layers in multilayers materials.
- Speed and onset of pyroplastic deformation
- Viscosity determination from pyroplasticity curve

TECHNICAL SPECIFICATIONS

- Sample Shape: parallelepiped
- Sample Length: 83-85 mm
- Sample Width: 4-7 mm
- Sample Thickness: 2-7 mm
- Simultaneous sample testing: 1
- Dimensional Variation Resolution: 3.5 μm
- Sensor resolution: Total 60 Megapixel
- Light source: 480 nm ; 3 W ; Blue led
- Filter: Interferential
- Frame acquisition rate: 1-15 frames per second, user selectable
- Temperature Range the sample RT-1400/1600°C depending on the heating element type
- Temperature Range the furnace RT-1450/1650°C depending on the heating element type
- Heating rate: 1 to 80°C/min
- Temperature Resolution: 0.1°C
- Atmosphere control: Air, protective atmosphere on demand

THERMAL CYCLE

- Unlimited number of heating/cooling/isothermal segments
- Simulation of industrial thermal cycles
- Maximum heating rate: 80 °C/min

EMBEDDED COMPUTER

- Intel Core i7 Processor
- RAM 16 GB
- Linux Operating System
- Automatic data backup

EQUIPMENT

- Platform, Control and Measurement Software Suite.
- Horizontal Furnace, Platinum Heating Element 1400 °C, Pt/Rh heating element 1600°C
- Optical Fleximeter Module, Dedicated Optical Fleximeter Software.
- Possible predispositions to be requested at the time of the offer: Heating Microscope, Optical Dilatometer.

