Laser Heating Process Material Characterization System

CRS-900X Series

This open-architecture, configurable research platform is specifically designed for advanced material studies, integrating:

Modular Unit:

1.Heating Unit

- Any Laser sources (Power/wavelength/ pulse characteristics)

2.Motion Control Unit

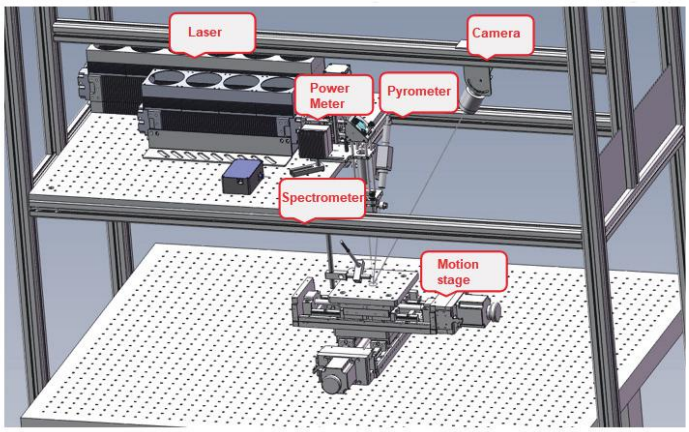
- Precision translation stages
- Beam steering galvanometers

3.Monitoring Unit

- Pyrometers (contactless temperature measurement)
- Visible/IR imaging systems

4.Analysis Unit

- High Temperature Raman spectroscopy



Customized laser heating system

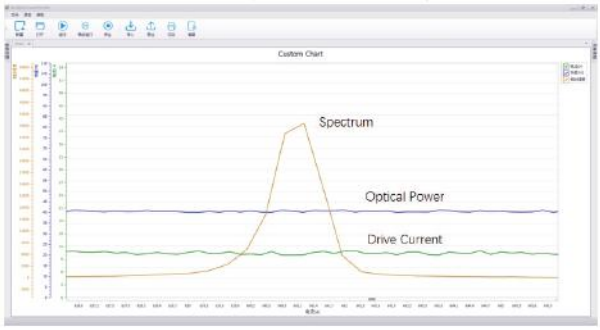
Key Capabilities

- Real-time monitoring of material property evolution during laser heating
- Multi-sensor data synchronization and analysis
- Closed-loop process optimization through parameter feedback

Research Applications

- Phase transition studies
- Thermal degradation analysis
- Laser-material interaction research
- Process-structure-property relationship investigation

Typical Spectrum



Specifications

Item	Specifications
Configurable Laser	CO_2 laser Solid-state laser Fiber laser
Configurable Position Stage	Single-axis/Multi-axis manual stage Single-axis/Multi-axis electrically controlled stage
Configurable cameras/videos	On-demand configuration
Configurable high-temperature meters	
Configurable spectrometer	
Configurable power meter	
Software	
Others	Other customized requirements