

BL678A HIGH TEMPERATURE BLACK BODY FURNACE



The BL678A is a benchtop blackbody calibration source utilizing a digital indicating temperature ambient 100°C to 1200°C. A precision thermocouple N temperature sensor is embedded in the blackbody emitter, providing high accuracy and repeatability. The temperature controller uses the industry standard PID algorithms to control the emitter temperature to within 0.1°C of the set points.

The black body emitter mechanism uses a resistive heating device that provides a long life, short stabilization times, and stable temperature control.

FEATURE

- Temperature range 100°C to 1200°C
- Emissivity is better than 0.995
- Temperature uniformity is up to 0.15°C
- 50 mm aperture diameter is compliance with most of D:S
- Build-in temperature correction function

TYPICAL APPLICATION

- Infrared temperature sensors
- Infrared thermal imaging systems
- Spectrographic analyzers
- Spectral radiometers
- Heat flux meter

SPECIFICATION

| | |
|---------------------------|---------------------------------------|
| Temperature range | 100°C to 1200°C |
| Aperture Diameter | 50 mm (1.97 inch) |
| Heated Emitter Shape | Closed end tube |
| Emissivity | better than 0.995 |
| Display Resolution | 0.1°C |
| Control stability (10min) | 0.1°C or 0.1%RD (whichever is great) |
| Uniformity | 0.15°C or 0.15RD (whichever is great) |
| Tube depth | 290mm |
| Control Method | Digital PID |
| Temperature Sensor | Precision N thermocouple |
| Power Supply | 220V AC / 2000WA |
| Interface | RS232 |
| Heat up time | 90 minutes from ambient to 1200°C |
| Calibration Method | Pyrometric standard calibration |
| Dimension w/o holder | 300mm(W) x 370mm(H) x 570mm(D) |
| Net Weight | 20 kg approx. |

REFERENCE STANDARD

- ✓ IEC/TS 62492-1-2008: Industrial process control devices - Radiation thermometers. Part 1: Technical data for radiation thermometers
- ✓ ASTM E2847-2013: Standard practice for calibration and accuracy verification of wideband infrared thermometers
- ✓ ASTM E1256-2011a: Standard Test Methods for radiation thermometers (Single waveband type)
- ✓ OIML D24 (1996): Total radiation pyrometers
- ✓ JJG 856-2015: Verification regulation of radiation thermometers

SCOPE OF DELIVERY

- BL678A Blackbody calibration source
- Power cord (need to confirm power plug type in advance)
- Factory calibration report

OPTIONAL ACCESSORIES

- ISO17025 calibration certificate (P/N: 9000-678)

ORDERING MODEL NUMBER

- BL678A-110V
- BL678A-220V