

UHT

Ultra High Temperature Blackbody



Fig. 1. Photo of the UHT-38D-1500 blackbody

BASIC INFORMATION:

The UHT Series blackbodies are ultra high temperature, cavity blackbodies of temperature range up to 1600°C. The blackbodies are characterized by a relatively large aperture of 38 mm of the emitting cavity. Blackbody emitters are built using a concept of cavity of closed end cylinder. The blackbodies offer high emissivity in ultra wide spectral band from 0.2 μm to over 200 μm . This ultra wide spectral band makes possible to use UHT blackbodies as standard radiation sources in both UV, visible, infrared and THz band. The UHT blackbodies can be controlled directly from internal keyboard or remotely from PC using standard USB port.

SPECIFICATIONS

Parameter	UHT-38D-1500	UHT-38D-1600
Total temperature range	200-1500°C	200-1600°C
Recommended temperature range	500-1500°C	500-1600°C
Aperture	38 mm	38 mm
Emissivity	>0.99 at 0.2 μm to over 100 μm	>0.99 at 0.2 μm to over 100 μm
Temperature resolution	0.1°C – for <1000°C 1°C for >1000°C	0.1°C – for <1000°C 1°C for >1000°C
Temperature uncertainty	0.15%+1°C	0.15%+1°C
Temperature* stability	1 °C (short-term) 2°C (long term)	1 °C (short-term) 2°C (long term)
Temperature uniformity (at 800°C for $\Phi=30\text{mm}$)	$\pm 1.5^\circ\text{C}$	$\pm 1.5^\circ\text{C}$
Warm up time	<2.5 at 500 °C	<2.5 at 500 °C
Computer control (RS 232)	yes	yes
Power	230V	230V
Dimensions	About 109 x 39 x 47 cm (L x W x H)	About 109 x 39 x 47 cm (L x W x H)
Mass	About 67 kg	About 67 kg

*Modifications of these standard versions are possible. If the standard blackbodies listed above do not fit your needs, please [contact Inframet](#) with your requirements.

*specifications are subject to change without prior notice

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