



Blackbody

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1. Introduction

Our Blackbody has a fixed emissivity of 0.97 and is specifically designed to calibrate infrared temperature sensors. It was calibrated with a transfer standard at time of manufacture, which eliminates the need for offset. The emitting area is 2.75 inches (70 mm) square and features high sensitivity, stability, and uniformity with an accuracy of $\pm 0.1^{\circ}\text{C}$. Use it on any horizontal surface or with an optional tripod.

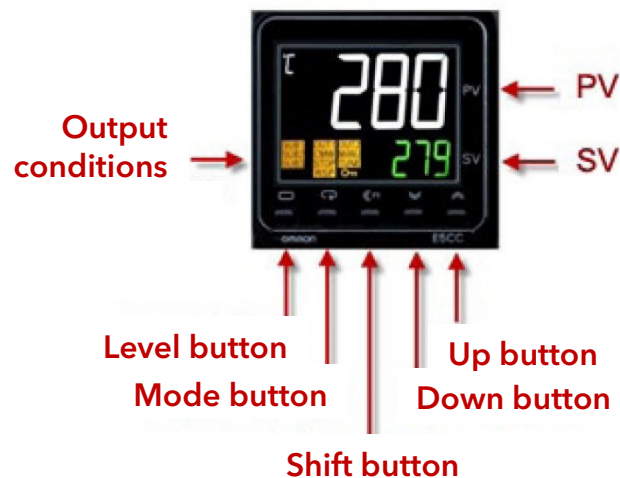
2. What's in the box

- Blackbody Source
- Power Adaptor

* International Power Adaptor type specified by Model Number suffix, with the following options: BB04-EU (Type-C), BB04-UK (Type-G) and BB04-AU (Type-I)

3. Blackbody controller display

PV:	Process Value = Actual blackbody temperature.
SV:	Set Value = Set to desired blackbody temperature value.
Up/Down button:	Used to increase or decrease the value of Set Value.
Shift button:	Select place-value (0.1, 1, 10) of temperature setting.



Unused controller features in normal ThermaCheck operation:

Outputs:	Activated outputs.
Level button:	Level setting selection.
Mode button:	Parameter selection.

4. Setup

a. Blackbody placement


Place blackbody on tripod or other suitable mounting option. The blackbody should be positioned in the field of view of the ThermaCheck camera, while not being obscured by subjects during the screening process. The blackbody should be placed (approximately) at the same distance from the camera as the screening subjects.

b. Set blackbody temperature

Press the up and down keys to directly adjust the set temperature "SV". For ThermaCheck screening, a Set Value of 95-97 °F (35-36 °C) is recommended. After pressing the up or down key, the "PV" value will flash, and it will take effect after flashing stops. The temperature value can be quickly set by using the shift key.



c. Use blackbody calibration mode in ThermaCheck program

Start an interactive procedure with calibration icon  found below main display of the ThermaCheck user interface. The interactive process will guide the user in finishing the blackbody calibration mode setup.

5. Specifications

Specifications	Temperature Range	Ambient to 60°C (140°F)
	Temperature Accuracy	±0.1°C
	Emissivity	0.95 ± 0.02 (Factory calibrated with emissivity of 0.97)
	Display Resolution	0.1°F or 0.1°C
	Controller	User Adjustable
	Aperture (Target Size)	2.75x 2.75 in (70 x 70 mm) Square Plate
	Spectrum	8 to 14 microns
	Calibration Method	Pyrometric
	Uniformity	± 0.1°C, within a central area diameter of 51mm (2")
	Stability	± 0.1°C
General	Ambient Temperature	0°C to 30°C (32°F - 86°F)
	Power Adaptor*	Input: 100-240V AC, Output: 24VDC/1.5A/40 Watts
	Dimensions	3.5 x 3.5 x 6.1 in (90x 90 x 155 mm)

6. Thank you

Thank you for your purchase of our Blackbody. We develop our products to deliver reliable, long lasting performance, and want to make sure you are satisfied with your purchase. For more product information visit www.planckvisionsystems.com, and feel free to get in touch with us at info@planckvisionsystems.com with questions, problems, and comments.