

Infrared Calibrators

Single Black Bodies

SBB-1-DRL, SBB-2-DRL, SBB-3-DRL



Calibrators



EDL's Single Black Body (SBB) IR Calibrators were designed for easy and reliable testing of virtually any in line or handheld infrared pyrometer/gun. The Single Black Body (SBB) is used for applications requiring only one temperature range. Lightweight and compact, the SBB is ideal for use in the lab or in the field. Units are available to cover the most tested temperatures: SBB-1-DRL (low-range) accommodates temperatures from -30 °C up to 110 °C, SBB-2-DRL (mid-range) accommodates temperatures from ambient up to 350 °C, and SBB-3-DRL (high-range) accommodates temperatures from ambient up to 650 °C.

EDL's IR calibrators provide extremely uniform Black Body targets, with a high emissivity of 0.986 ϵ . The SBBs feature a large 2" diameter target area. All SBB calibrators are equipped with an advanced temperature controller that delivers high accuracy and reliability, and iTools (a program that allows the user full control over the available features). Data is easily collected and downloaded to your computer through the RS-232 interface, and the computer may be used to control set points for automatic testing. These calibrators are equipped with a control reference probe which is inserted into the Black Body; this sensor is easily removed for independent calibration. All SBB models are drilled to accommodate a 0.125" External Reference Sensor (sold separately). It is recommended to purchase a calibrated pyrometer (Part#: PDK) to accompany the reference sensor for initial calibration. A NIST traceable calibration report is included with your initial purchase. All EDL calibrators are made in the USA and tested for stability and uniformity before shipping.

- **Ideal for All IR Guns - Regardless of Their Class!**
- **Ultra High Stability**
- **Fast Heat Up & Cool Down Times**
- **Simple to Use**
- **Rugged & Lightweight**
- **Available in 120VAC or 240VAC - EDL Will Accommodate the Cord Configuration to Match the Home Country Power Requirement**
- **Includes Removable Control Sensor for Easy Recalibration**
- **Adjustable Bail Handle**
- **Optional Aperture Available**
- **NIST Traceable Calibration Certificate Included**
- **Available as Reference Version**
- **2" Units Drilled to Accommodate 0.125" External Reference Sensor (sold separately)**
- **12-Month Warranty**
- **May be purchased in 6" Black Body Version (SBB-2-6)**

SINGLE BLACK BODY SPECIFICATIONS			
Model Number	SBB-1-DRL Low-Range	SBB-2-DRL Mid-Range	SBB-3-DRL High-Range
Temperature Range	-30 °C to 110 °C	Ambient to 350 °C	Ambient to 650 °C
Black Body Size	5.08cm (2") Drilled to accommodate 0.125" External Reference Sensor (sold separately)		
Control Sensor	RTD Sensor	Thermocouple Sensor	
Optional External Reference Sensor	RTD Sensor** Part# BB-350 / 0.125" Diam.	Thermocouple Sensor** Part# BB-650 / 0.125" Diam.	
Dimensions	Height: 41.28cm (16.25") Width: 33.99cm (13.38")		
Weight	5.44kg (12lbs.)		
Stability	± 0.05 °C		
Emissivity	0.98 ± 0.02		
Accuracy	± 1 °C		
Uniformity	± 0.5 °C		
Resolution	0.1 °C		
Heat Up	14 °C / minute*		
Cool Down	2.2 °C / minute*		
Interface	RS-232 Interface and iTools		
Power	120VAC, 10amp, 50/60Hz *Available in 240VAC		

* ± 2 °C Depending on Environment. ** The 2" SBB is drilled to accommodate a 0.125" External Reference Sensor (sold separately). External Reference Sensor Sold Separately / Part#: BB-650. It is recommended to purchase a calibrated pyrometer (Part#: PDK) to accompany the reference sensor for initial calibration.



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Infrared Calibrators Dual Black Bodies DBB-350-DRL, DBB-650-DRL



Calibrators



The compact Dual Black Body (DBB) Infrared Calibrator is easy to use, and makes calibration of infrared pyrometers with multiple temperature ranges more simple and faster than ever before by combining a hot and cold side in one unit. The calibrators are simple to set and control. Merely input the desired Black Body temperature on the convenient front panel control buttons, let the unit reach the set temperature, wait a few moments to ensure stability, aim the IR gun at the target at the gun's manufactured specified distance, pull the trigger and shoot. The radiated energy from the Black Body is measured by your IR thermometer. Compare the IR thermometer reading to the display on the controller and record the difference.

With the large 2" diameter target areas and high accuracy controller, the Dual Black Body (DBB) offers accuracies of $\pm 0.5^\circ\text{C}$ over the respective temperature range. The isothermal target is machined and coated to give a high emissivity of 0.986, and the target temperature is controlled in set-point increments of 0.1°C . Equipped with a Fast-Cool feature, you can quickly adjust temperatures allowing for easy and safe transportation from lab to production floor.

The low-side is equipped with an RTD control sensor, the high-side is outfitted with a thermocouple. The reference probes are inserted into the Black Body and are easily removed for independent calibration. Both Dual Black Body models are drilled to accommodate an independent 0.125" External Reference Sensor on each side (sold separately). It is recommended to purchase calibrated pyrometers (Part#: PDK) to accompany the reference sensors for initial calibration. A NIST traceable calibration report is included with your purchase. An optional universal Black Body aperture is available for size and source measurements of all IR pyrometers. The adjustable aperture helps find true spot sizes during calibration, Part# BB-APP. All EDL calibrators are made in the USA and tested for stability and uniformity before shipping.

- **Ideal for All IR Guns - Regardless of Their Class!**
- **Ultra High Stability**
- **Fast Heat Up & Cool Down Times**
- **Simple to Use**
- **Rugged & Lightweight**
- **Available in 120VAC or 240VAC - EDL Will Accommodate the Cord Configuration to Match the Home Country Power Requirement**
- **Includes Removable Control Sensor for Easy Recalibration**
- **Adjustable Bail Handle**
- **Optional Aperture Available**
- **NIST Traceable Calibration Certificate Included**
- **Available as a Reference Version**
- **Unit Comes Pre-drilled for 0.125" External Reference Sensors (sold separately)**
- **12-Month Warranty**

DUAL BLACK BODY SPECIFICATIONS		
Model Number	DBB-350-DRL Low-Range	DBB-650-DRL High-Range
Temperature Range	Low-Range: -30°C to 110°C High-Range: Ambient to 350°C	Low-Range: -30°C to 110°C High-Range: Ambient to 650°C
Black Body Sizes	5.08cm (2") Drilled to accommodate 0.125" External Reference Sensor (sold separately)	
Internal Sensor Input	Includes RTD (Low-Side) & Thermocouple (Hot-Side) Control Sensors {External Reference Sensors Sold Separately}	
Dimensions	Height: 41.28cm (16.25") Width: 33.99cm (13.38")	
Weight	9.07kg (20lbs.)	
Stability	$\pm 0.05^\circ\text{C}$	
Emissivity	0.98 ± 0.02	
Accuracy	$\pm 1^\circ\text{C}$	
Uniformity	$\pm 0.5^\circ\text{C}$	
Resolution	0.1°C	
Heat Up	$14^\circ\text{C} / \text{minute}^*$	
Cool Down	$2.2^\circ\text{C} / \text{minute}^*$	
Interface	RS-232 Interface and iTools	
Power	120VAC, 10amp, 50/60Hz *Available in 240VAC	

* $\pm 2^\circ\text{C}$ depending on environment.

* The DBB is drilled to accommodate 0.125" External Reference Sensors (sold separately) on both the hot and cold-sides. External Reference Sensors Sold Separately. Low-Side (RTD) External Reference Sensor: Part# BB-350 / High-Side (Thermocouple) External Reference Sensor: Part# BB-650. It is recommended to purchase calibrated pyrometers (Part#: PDK) to accompany the reference sensors for initial calibration.

