

TECHNICAL DATA

Fluke 9132/9133 Portable Infrared Calibrator with Blackbody Source



Key features

- Accurate, reliable performance from $-15\text{ }^{\circ}\text{C}$ to $500\text{ }^{\circ}\text{C}$
- Small, compact design in a blackbody calibrator
- These blackbody calibrator units feature a temperature controlled measurement surface with a diameter of 2.25 in (57 mm).
- Intuitive, easy-to-read display that indicates when temperature is stable.

Product overview: Fluke 9132/9133 Portable Infrared Calibrator with Blackbody Source

Reliable, Portable Blackbody Calibration for IR Thermometers and Imagers

Fluke's 9132 and 9133 infrared calibrators are designed to meet the precise needs of infrared thermometer and thermal imager users. These portable blackbody sources offer fast heating and cooling, stable temperatures, and radiometric accuracy—making them ideal for field and lab environments alike.

Fluke 9132 – High-Temperature Blackbody Source (Up to $500\text{ }^{\circ}\text{C}$)

- Designed for IR calibrations above ambient

- Provides a stable blackbody surface up to 500 °C (932 °F)
- Short heating and cooling times keep workflows efficient
- Radiometric calibration ensures measurement confidence across its entire range

Fluke 9133 – Low-Temperature Blackbody Source (–30 °C to 150 °C)

- Ideal for calibrating IR thermometers at low temperatures
- Reaches –30 °C (22 °F) in typical ambient conditions using solid-state cooling
- Convenient dry gas fitting on front bezel prevents ice buildup on the target
- Offers stable temperature control up to 160 °C (320 °F)
- Heats or cools from ambient to either extreme in approximately 15 minutes

What is a Blackbody Calibrator?

A **blackbody calibrator** (or blackbody source) is a device that emits thermal radiation with **high emissivity**, typically near 1.0. This makes it behave closely to an ideal blackbody, emitting radiation according to Planck's law.

Blackbody calibrators are essential tools for ensuring the accuracy of:

- Infrared thermometers
- Thermal imagers
- Non-contact temperature measurement devices

By aiming a device under test at the precisely controlled blackbody target, users can **verify and adjust readings** to ensure accuracy and compliance with calibration standards.

Summary: Why Choose the 9132 or 9133?

Model	Temperature Range	Ideal For
9132	Up to 500 °C (932 °F)	High-temperature IR calibration
9133	–30 °C to 160 °C (–22 °F to 320 °F)	Low-temperature IR calibration with fast transitions

Both units provide:

- Portable, stable blackbody sources
- Quick heating and cooling times
- High emissivity targets for accurate infrared calibration
- Confidence backed by Fluke's precision and reliability

Specifications: Fluke 9132/9133 Portable Infrared Calibrator with Blackbody Source

Specifications	9132	9133
Temperature range	50°C to 500°C (122°F to 932°F)	–30°C to 150°C at 23°C ambient (–22°F to 302°F at 73°F ambient)
Accuracy	±0.5°C at 100°C (±0.9°F at 212°F) ±0.8°C at 500°C (±1.4°F at 932°F)	±0.4°C (±0.72°F)

Stability	±0.1°C at 100°C (±0.18°F at 212°F) ±0.3°C at 500°C (±0.54°F at 932°F)	±0.1°C (±0.18°F)
Target size	57 mm (2.25 in)	57 mm (2.25 in)
Target emissivity	0.95 (±0.02 from 8 to 14 mm)	0.95 (±0.02 from 8 to 14 mm)
Resolution	0.1°	0.1°
Heating time	30 minutes (50°C to 500°C)	15 minutes (25°C to 150°C)
Cooling time	30 minutes (500°C to 100°C)	15 minutes (25°C to -20°C)
Computer interface	RS-232 I/O included	
Power	115 V AC (±10%), 3 A or 230 V AC (±10%), 1.5 A, switchable, 50/60 Hz, 340 W	115 V AC (±10%), 1.5 A, or 230 V AC (±10%), 1.0 A, switchable, 50/60 Hz, 200 W
Size (H x W x D)	102 x 152 x 178 mm (4 x 6 x 7 in)	152 x 286 x 267 mm (6 x 11.25 x 10.5 in)
Weight	1.8 kg (4 lb)	4.6 kg (10 lb)
Radiometric calibration on the 9132	Data at 50°C, 100°C, 200°C, 250°C, 300°C, 400°C, and 500°C	Data at -30°C, 0°C, 25°C, 75°C, 100°C, 125°C, and 150°C

Ordering information



9132

Fluke 9132 Portable Infrared Calibrator
50°C to 500°C

Part#: 1658205

UPC#: 095969128865

9133

Fluke 9133 Portable Infrared Calibrator
-30°C to 150°C at 23°C ambient

Part#: 1658222

UPC#: 095969128889

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