MIKRON M360
M360: 50°C to 1100°C
M360A: 50°C to 750°C
The M360 blackbody calibration source uniquely combines portability with wide temperature range, high emissivity and remarkable resolution. A built-in precision machined aperture wheel assembly allows different sizes of aperture diameter for applications requiring specific radiating aperture or for verifying field of view of radiometers or infrared thermometers. The source and the controller are housed in separate modules which allows the source to be positioned in a location remote from the controller such as in an environmental test chamber, or to be used in tests which involve long path lengths. Each module is fitted with a carrying handle and can be comfortably carried to manufacturing plant or field research locations.

The M360A model differs from the M360 only in its higher accuracy, resolution and stability specification. The enhanced performance of the M360A is achieved through the use of a special controller with output characterization capability.

Specifications:
- Temperature Range: Model M360: 50°C to 1100°C or 200°C to 2000°F; Model M360A: 50°C to 750°C or 120° to 1400°F
- Accuracy: Model M360: ±0.2% of reading ±1°C; Model M360A: ±0.05% of reading ±0.1°C
- Temperature Resolution: Model M360: 1°degree; Model M360A: 0.1°degree
- Stability: Model M360: 0.5°C per 8 hour period; Model M360A: 0.05°C per 8 hour period

MIKRON M335
300°C to 1500°C
The M335 Blackbody Calibration Source is a general purpose high temperature source which provides a very quick heat-up time of only 20 minutes to reach 1400°C. A self-tuning digital PID Controller with adjustable set point holds the temperature to within 1°C. An independent over temperature alarm and control system prevents heating element burnout; an internal fan keeps the cabinet surface at safe, comfortable temperature.

Specifications:
- Temperature Range: 300°C to 1500°C (570° to 2730°F)
- Accuracy: ±0.4% of reading ±1°digit
- Temperature Resolution: 1°degree
- Stability: 1°C per 8 hour period
- Aperture Diameter: 19mm (0.75”)
- Heated Cavity Shape: Closed end tube 19mm (0.75”) dia x 150 mm (5.90”) long with 75 mm (2.95”) heated length
- Emissivity: 0.99 ±0.003 - 0.000

† Accuracy calibration performed radiometrically, the uncertainty of emissivity and transfer standard are already included.
**Sensor:** Precision platinum thermocouple  
**Method of Control:** Digital self-tuning PID controller  
**Warm-up Time:** 30 minutes from ambient to 1200°C  
**Operating Ambient Temperature:** 0° to 44°C (32° to 110°F)  
**Cooling:** Fan cooled, air inlet on back panel  
**Power Requirements:** 115VAC ±10% 50/60Hz  
3.0kw max. (220VAC optional)  
**Dimensions:** 29cm H x 49.5cm W x 55cm D  
**Weight:** 28kgs (62 lbs.)

**Optional Features:**  
- RS422/485 serial communication output  
- Water cooled aperture wheel assembly  
- Universal mounting flange

**Specifications:**
- **Temperature Range:** 300° to 1700°C or 572° to 3100°F  
- **Accuracy:** ±0.25% of reading ±1 digit (for temperatures above 600°C)  
- **Temperature Resolution:** 1degree  
- **Stability:** 1°C per 4 hour period  
- **Aperture Diameter:** 25mm (1.0")  
- **Aperture Solid Angle:** 12.5°  
- **Emissivity:** 0.99 + 0.005 – 0.000  
- **Cavity:** Closed end tube 50mm ID x 300mm long with 125mm heated length  
- **Sensor:** Precision platinum thermocouple – type B

**Mikron M330**  
300°C to 1700°C

The M330 blackbody calibration source can deliver any temperature between 300°C and 1700°C. A closed end tube with a 25mm aperture diameter is heated by specially manufactured elements which provide excellent uniformity and a heat-up time of 80 minutes to reach 1600°C. A self-tuning digital PID controller with adjustable set point holds the temperature to within 1°C at 1600°C, assuring high †Accuracy calibration. An independent over temperature alarm and cutout system prevents heating element burnout. An internal fan keeps the cabinet surface at a safe, comfortable temperature.

**Specifications:**
- **Temperature Range:** 300° to 1700°C or 572° to 3100°F  
- **Accuracy:** ±0.25% of reading ±1 digit (for temperatures above 600°C)  
- **Temperature Resolution:** 1degree  
- **Stability:** 1°C per 8 hour period  
- **Aperture Diameter:** 25mm (1.0")  
- **Aperture Solid Angle:** 12.5°  
- **Emissivity:** 0.99 + 0.005 – 0.000  
- **Cavity:** Closed end tube 50mm ID x 300mm long with 125mm heated length  
- **Sensor:** Precision platinum thermocouple – type B

**Mikron M370**  
800°C to 2300°C

The M370 tungsten lamp calibration source features an NIST traceable quartz enveloped strip lamp and precision DC current source with rate of change limiting controller to protect filament life. This source will deliver any temperature from 800°C to 2300°C in 1°C steps. Pre-aligned apertures provide effortless aiming at the 3 x 3mm active filament area. A micro-processor based electronic module has memorized the relationship between current and temperature. The emitted radiance intensity of the filament is compensated for the emissivity of the tungsten filament and lamp envelope at 650nm wavelength. This feature eliminates the need for a conversion table. A digital display indicates the lamp absolute temperature.

This convenient source is useful for calibrating two-color infrared thermometers and other single-color thermometers or pyrometers that require small target sizes and high temperatures. The lamp is replaceable in minutes. An internal fan keeps the cabinet surfaces at a safe, comfortable temperature.

**Specifications:**
- **Temperature Range:** 800° to 2300°C or 1420° to 4170°F  
- **Accuracy at 650nm:** ±4°C at 2300°C, ±2°C at 800°C  
- **Temperature Resolution:** 1degree  
- **Stability:** 1°C per 8 hour period  
- **Source Type:** Tungsten filament approximately 33mm long and 3mm wide with small notch in side of filament  
- **Method of Control:** 4 1/2 digit PID controller  
- **Operating Ambient Temperature:** 0° to 44°C (32° to 110°F)  
- **Power Requirements:** 220VAC ±10% 50/60Hz 2.0kw max. (115VAC optional)  
- **Dimensions:** 64cm H x 50cm W x 55cm D  
- **Weight:** 80kg (175 lbs.)

† Accuracy calibration performed radiometrically, the uncertainty of emissivity and transfer standard are already included.