

HORIBA

Process & Environmental

Industry-leading accuracy

Non-Contact

Infrared Thermometer Series

HORIBA

high-accuracy temperature measurements

Repeatability $\pm 0.3^{\circ}\text{C}$

Handheld

Non-Contact

Infrared Thermometer

IT-545



CE marking compliant

INFRARED
THERMOMETER
IT-545

Accuracy $\pm 1^{\circ}\text{C}$

Stationary

Non-Contact

Infrared Thermometer

IT-480



CE marking compliant

HORIBA INFRARED THERMOMETER
Process & Environmental IT-480

Industry-leading

HORIBA's exclusive high-accuracy measurement

■ Wavelength optimization for high sensitivity

Infrared Multi-Layer Film Filter

Years of successful development of infrared multi-layer filters are leveraged to identify the best wavelength regions and filter designs matched to sensor performance to ensure high accuracy temperature measurements.

New model

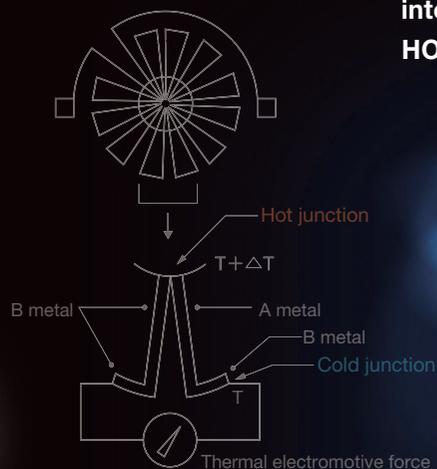


■ Unique structure for high stability

Thermopile Sensor

Adoption of a new sensor structure provides enhanced resistance to fluctuations in ambient temperature for very stable measurement with minimal drift.

Patent No. JP 5658059



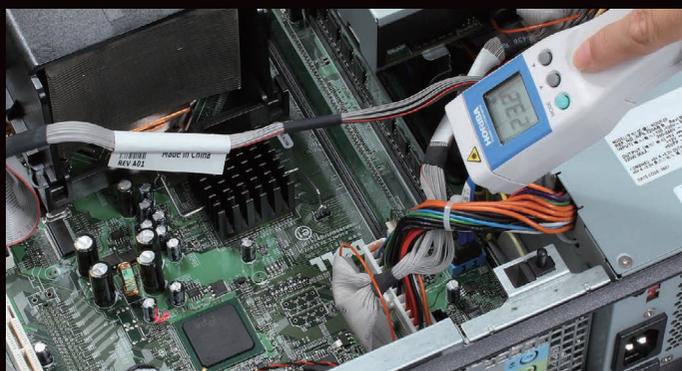
HORIBA incorporates unique technology into non-contact infrared handheld thermometers. HORIBA's IT product line offers improved accuracy.

by years of know-how in infrared technology and a track record of success.



Adaptable to a wide range of challenging

■ For measurement of heating temperature of parts on circuit boards



Handheld

Non-Contact

Infrared Thermometer

IT-545

- ▶ Industry-leading accuracy ($\pm 1^{\circ}\text{C}$)
- ▶ Measurement repeatability realized at $\pm 0.1^{\circ}\text{C}$ (actual value from 0 to 200°C)
- ▶ Reduced temperature drift

Main applications

- Measurement of heating temperature of electronic circuit boards
- Temperature control of foods, etc.



ing accuracy

ve Infrared-based y temperature : technologies

e, home-grown technologies
d thermometers and fixed sensors.
dustry leading accuracy supported
red sensor development and
ss across many fields.



■ Unique calibration equipment ensures extreme accuracy

Stabilized Black Body Furnace

Exclusive in-house black body furnace technology produces superior uniform temperature conditions to deliver industry-leading characterization and calibration.

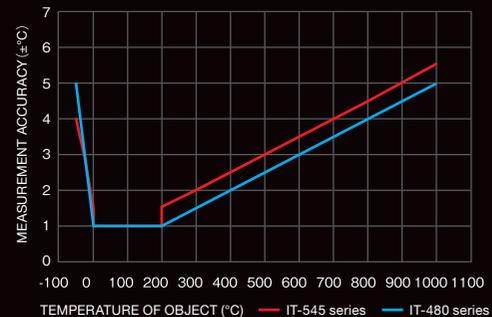


■ Twin beams define measurement area for high precision

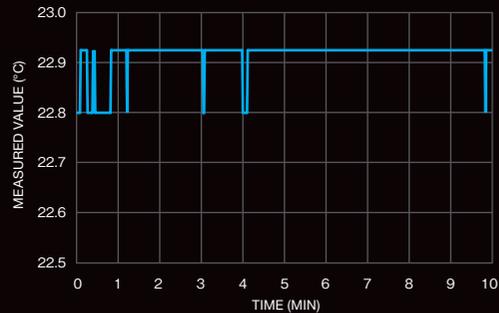
Laser Guide Marker

Two bright laser spots define the circular measurement area for precise and accurate temperature measurements.

■ IT-545/IT-480 Measurement accuracy



■ IT-480N Measurement stability



g temperature measurement conditions

■ For detection of temperature changes in durability inspections



Stationary

Non-Contact
Infrared Thermometer

IT-480

- ▶ Industry-leading accuracy ($\pm 1^{\circ}\text{C}$)
- ▶ Measurement repeatability realized at $\pm 0.3^{\circ}\text{C}$ (actual value from 0 to 500°C)
- ▶ Application software provided for free of cost

Main applications

- Temperature control in production lines such as food, pharmaceutical etc.
- Accurate temperature control in vulcanization process
- Precise temperature control of semiconductor manufacturing equipments



Specifications [Handheld Models]

Lineup	Narrow focus type		Spot focus type
	IT-545NH	IT-545N	IT-545S
Spectral Response	8 to 14 μm		
Measurement Temp. Range	-50 to 1000°C		-50 to 500°C
Accuracy*	±(5% of absolute value of reading +1.5)°C [-50 to -0°C] ±1.0°C [0.0 to 199.9°C] ±(0.5% of reading +0.5)°C [200 to 1000°C]		±(5% of absolute value of reading +1.5)°C [-50 to -0°C] ±1.0°C [0.0 to 199.9°C] ±(0.5% of reading +0.5)°C [200 to 500°C]
Repeatability	±1°C [-50 to -0°C] ±0.3°C [0.0 to 199.9°C] ±1°C [200 to 1000°C]		±1°C [-50 to -0°C] ±0.3°C [0.0 to 199.9°C] ±1°C [200 to 500°C]
Response Time	Within 0.8 sec (95%)		
Measurement Diameter	ø40 mm / 500 mm (Distance to spot size 12.5:1)		ø2.5 mm / Distance 30 mm
Ambient Temp. & Humidity	Temperature: 0 to 50°C Humidity: 35 to 85% RH (No condensation)		
Power	AAA batteries × 4		
Dimensions/Mass	40(W) × 170(L) × 36(H) mm / Approx.140g (Batteries included)		

*Temp. 18 to 28°C, Humidity 35~75% RH, Emissivity (ε)=1.00

Specifications [Stationary Models]

Lineup	Micro-spot type	Spot type	General purpose type	Narrow view type
	IT-480S	IT-480L	IT-480N (with laser pointer) IT-480W (without laser pointer)	IT-480F (with laser pointer) IT-480P (without laser pointer)
Spectral Response	8 to 14μm			
Measurement Temp. Range	-50 to 500°C			-50 to 1000°C
Accuracy	[USB Output] ±(-8% of reading+1)°C [-50 to 0°C] ±1°C [0 to 200°C] ±(0.5% of reading)°C [200 to 500°C] [Current Output] Difference from USB data is ±(0.1% output range)°C			[USB Output] ±(-8% of reading+1)°C [-50 to 0°C] ±1°C [0 to 200°C] ±(0.5% of reading)°C [200 to 1000°C] [Current Output] Difference from USB data is ±(0.1% output range)°C
Repeatability	0.5°C			1°C [-50 to 0°C] 0.5°C [0 to 500°C] 1°C [500 to 1000°C]
Response Time	[Current output] Within 0.14 sec. (95% response, moving average count is 1)			
Measurement Diameter	ø3 mm / Distance 30 mm	ø8 mm / Distance 100 mm	ø72 mm / Distance 1000 mm	ø35 mm / Distance 1000 mm
Ambient Temp.& Humidity	Temperature: 0 to 55°C Humidity: 35 to 85% RH (No condensation)			
Power	USB bus power /12 V DC to 24 V DC			
Dimensions / Mass	32(W) × 58(L) × 40(H)mm / Approx. 95 g (Body only. Excluding cable and metal brackets)			32(W) × 90.3(L) × 40(H) mm / Approx. 115 g (Body only. Excluding cable and metal brackets)



The HORIBA Group adopts IMS (Integrated Management System) which integrates Quality Management System ISO9001, Environmental Management System ISO14001, and Occupational Health and Safety Management System ISO45001. We have now integrated Business Continuity Management System ISO22301 in order to provide our products and services in a stable manner, even in emergencies.



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Worldwide locations of HORIBA