Portable non-contact thermometer
Waterproof, shock-resistant type (high-resolution)

Measurement range

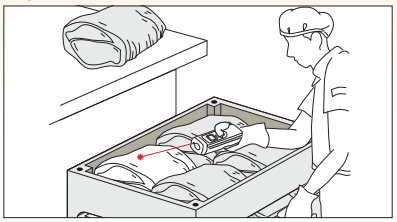
–30 ... 200°C (–22 ... 392°F)

THERMO-HUNTER®

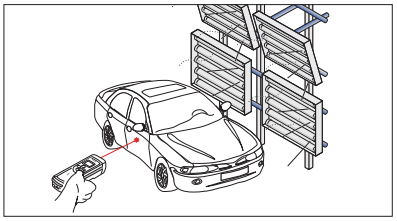
PT-7LD(E)



Temperature control of delivered ingredients for food



Temperature control for painted surfaces of cars



CE PSC

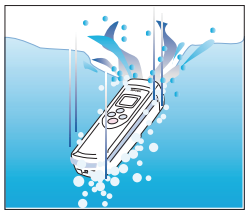
Waterproof/ dustproof IP67 | Shock-resistant structure | Continuous measurement | Data memory | Upper/lower limit alarm | Built-in laser pointer | Backlight | Antibacterial resin body

Features

±1°C (1.8°F) high-accuracy measurement at room temperature

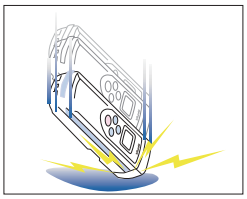
Between 0.1 and 100.0°C (32.2 and 212°F), the product is capable of an accuracy of ±1.0°C (1.8°F).
This is extremely beneficial in situations where accuracy is required.

Washable waterproof/dustproof body



This product is designed to solve the problem of equipment breaking down after water or dust gets inside. The PT-7LD(E) offers IP67 protection for a waterproof and dustproof design. The product can be used with wet hands and washed without problem.

Excellent shock-resistant structure



The product construction is designed to withstand drops from a height of 1 m. This provides protection from accidental drops. For users, this gives the added benefit of peace of mind.

99-entry data memory function

This product is equipped with a memory function capable of recording up to 99 data entries. This eliminates the need for a PC or a data logger. This function is ideal for HACCP, which is considered an important factor for controlling and recording food temperatures.

Antibacterial resin body with no need for disinfecting

The PT-7LD(E) is a non-contact thermometer, so temperatures can be checked without having to touch the target, which is especially helpful in the food industry where cleaning instruments to prevent secondary infection can be troublesome. In addition, the product is made with the world's first antimicrobial resin, making it ideal for sanitary equipment management. This is an HACCP-recommended product.

HACCP Recommended Product

What is HACCP?

Hazard Analysis and Critical Control Points (HACCP) is a safety management method adopted in Japan that uses constant management and recording of records to analyze the causes of harm caused by microorganism throughout the manufacturing process for foods with a focus on specific items determined to be of importance. In each analysis process, one of the most important aspects of management is the measurement and recording of temperatures.

Continuous measurement function

Measurement can be initiated even without pressing the button. Linking this function with the alarm function allows for even greater improvements.

Silicone filter resistant to radiant heat

Ever run into a situation where bringing the thermometer close to a measurement target causes the lens to become distorted due to radiant heat, thus preventing accurate measurement of temperatures? This product adopts a heat-resistant silicone filter to prevent such problems.

Upper/lower limit alarm function with audio and visual notifications

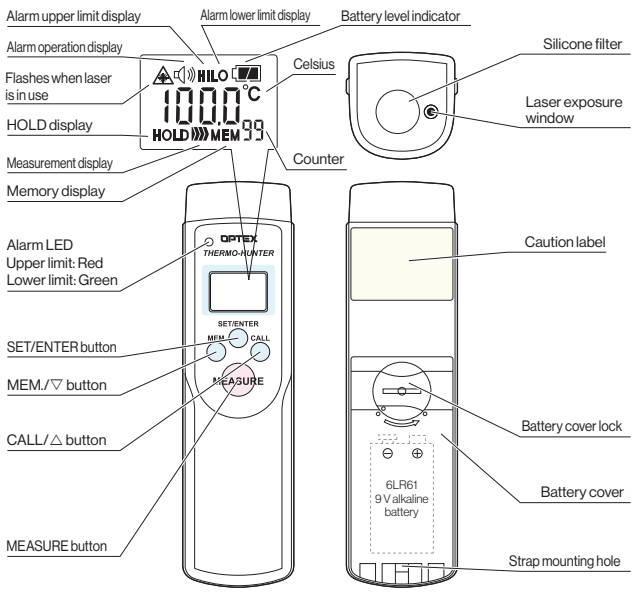
Exceeding the set temperature causes the buzzer to sound and one of two LED colors to be shown (red for upper limit, and green for lower limit). This allows users to immediately detect temperature errors even without looking at the display screen, greatly improving work efficiency.

Specifications

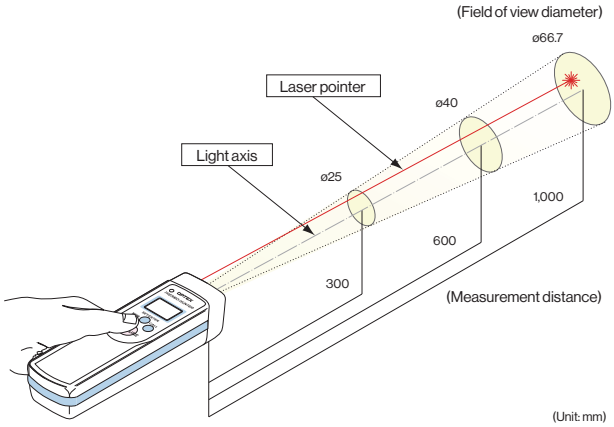
Model		PT-7LD(E)
Measurement range		−30.0 ... 200.0°C (−22 ... 392°F) (Display: −40 ... 220.0°C (−40 ... 428°F))
Field of view		ø66.7 mm/1,000 mm (Refer to field of view)
Optics		Mirror type/Silicone filter
Sensing element/ spectral response		Thermopile/8 ... 14 µm
Response time		0.7 sec./90% response
Accuracy*1 (ε≈0.95)		Up to 0.0°C (32°F): ±3.0°C (5.4°F), 0.1 ... 100.0°C (32.2 ... 212°F): ±1.0°C (1.8°F), 100.1 ... 200.0°C (212.2 ... 392°F): ±2.0°C (3.6°F)
Repeatability		±1.0°C (1.8°F)
Display resolution		0.1°C (0.1°F)
Emissivity (ε) adjustment		0.95/0.85, switchable (display switching)
Sighting function		Coaxial laser pointer Class 2 (IEC / JIS / FDA*2)
Functions		Continuous measurement function (ON/OFF switchable) Upper/lower temperature limit alarm function (ON/OFF switchable LED and buzzer) Data memory function (99 entries) Backlight Automatic power off function
Power supply		9 V alkaline battery ×1
Battery life		Approx. 12 hours (when using alkaline batteries at max. load)
Ambient temperature		0 ... 50°C (32 ... 122°F)
Ambient humidity		35 ... 85% RH (no condensation)
Storage temperature		−10 ... 60°C (14 ... 140°F)
Degree of protection		IP67 (IEC 60529)
Material		ABS (anti-bacterial specification)
Dimensions		H × W × D = 160 mm × 44 mm × 42 mm
Applicable regulations	EMC	EMC Directive (2014 / 30 / EU)
	Environment	RoHS Directive (2011 / 65 / EU), China RoHS (MIIT Order No. 32)
	Safety	FDA Regulations (21 CFR 1040.10 and 1040.11) (except for deviations pursuant to Laser Notice No. 56)
Applicable standards		EN IEC 61326-1, IEC 60825-1
Weight		Approx. 200 g (including batteries)
Standard included accessories		Quick manual

*1 The measurement accuracy in the specification is limited to the calibration conditions of our factory.
*2 This product is classified as Class 2 by IEC 60825-1: 2014 according to Laser Notice No. 56, FDA Guidance Document.
• Note that specifications are subject to change without prior notice for product improvement purposes.

Names of components



Field of view

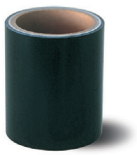


• How to read the diagram
At 300 mm from a measurement target, the product measures the average temperature of a 25 mm diameter surface area (surface area within the circle).
• The laser pointer is located 13 mm to the left of the light axis.
• The measurement fields of view stated above are measurement diameters with an optical response of 90%. The size of the measurement target must be sufficiently larger than the figures shown in the above diagram.

Options/Accessories

Black tape for glossy objects

HB-250



When attached to the surface of an object with unknown emissivity or a glossy object, this tape provides an emissivity of 0.95, enabling accurate non-contact temperature measurement. Emissivity on the PT-7LD(E) can be switched between two levels. Set the emissivity to 0.95 (HOT) for use. The tape is built with material resistant to heat up to 250°C (482°F).
Total area: 60 mm × 2,000 mm

Correct use

■ Situations where measurement may be difficult

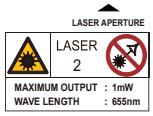
• When measuring a mirror-like surface such as shiny metal.
  • (Measure after attaching optional accessory HB-250 or after creating a matte finish using paint or the like.)
• When measuring through glass.

■ Correct use

• Be sure to read the instruction manual thoroughly before using the product.
• This instrument is not a thermometer for taking body temperatures. It is not intended for use in medical practices.
• Although this product is waterproof, it cannot be used for underwater measurements. Moreover, any droplets adhering to the filter or around the filter can cause measurement errors. Be sure to wipe well before use.
• Sudden changes in ambient temperature can cause measurement errors. Please ensure the product is not subject to sudden temperature changes during use.
• Avoid using the product near objects that generate strong electromagnetic waves.

■ Precautions for laser use

This product emits a Class 2 visible laser beam that is compliant with JIS C6802/IEC 60825-1/FDA laser safety standards. Labels for applicable standards are affixed and attached to the sides of the sensor.



Caution label

Type of laser used in this product

Type	Red semiconductor laser
Wavelength	655 nm
Output	1 mW

● Export to the United States
If this product is to be exported to the United States, it is necessary to follow laser standards as stipulated by the US Food and Drug Administration (FDA). This product has already been submitted to the CDRH (Center for Devices and Radiological Health).