

# PT-3LF

Portable Non-contact Thermometer

## Specifications

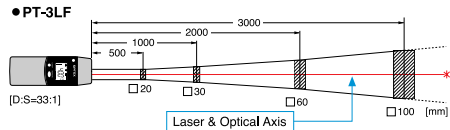
Model	PT-3LF
Measuring Range	-20 to 400° C (Display -30 to 430° C)
Field of View	□30/1000mm
Optics	Silicon Lens
Sensing element/Wavelength	Thermopile/8 to 14 μm
Response time	1.5sec/90%
Accuracy (ε=0.95, at 25°C ±3°C)	±1% of reading value or ±2°C ±1 digit, whichever is greater
Repeatability	±1°C of reading value
Display resolution	1°C/F
Sighting method	Coaxial laser marker (Class 2)
Emissivity ratio (ε) Adjustment	DARK (ε=0.95)/BRIGHT (ε=0.70) Switchable
Back-light function	Auto ON/OFF
Temperature unit	°C/F Switchable
Measuring mode	NORMAL/MAX Switchable
Power supply	AA (Alkaline battery) x 2pcs.
Battery life (with alkaline battery)	Approx. 100 hours with back-light and laser marker OFF
Ambient temperature	0 to 50° C
Ambient humidity	35 to 85%RH (Without dew condensation)
Storage temperature	-20 to 60° C
Dimensions	162(H) x 52(W) x 32(D) mm
Weight (incl. batteries)	200g

Standard Accessory: "AA" (Alkaline Battery) x 2pcs.

Optional Accessory: Black tape, Protective pouch

\* Design and specifications may change for product improvement without prior notice.

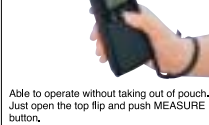
## Field of View



※ The optical resolution values stated in "Field of View" are at 90% energy.

※ The size of the target object should be sufficiently larger than the Field of View (spot size) shown in the above illustration.

[Option]  
PH-3



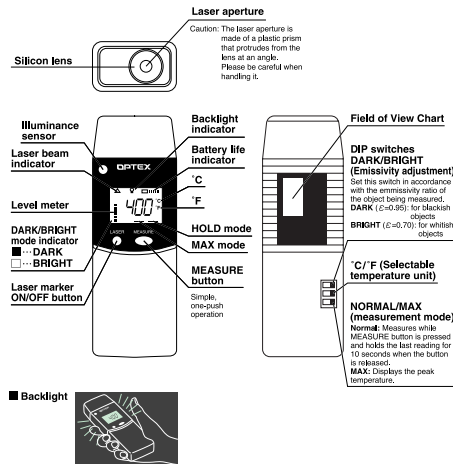
Able to operate without taking out of pouch. Just open the top flip and push MEASURE button.

Protective Pouch for PT-3LF with tear window & belt clip.



Easy to carry with detachable belt clip.

## Display and Functions



## Safe Usage

- WARNING** Do not look into the laser beam, nor point it directly at eyes. Even the reflection is harmful. This laser may cause eye injury or damage to your health.
- CAUTION** This product is not a clinical thermometer; therefore, cannot be used for medical purposes.

## Environmental Warnings

- AVOID GETTING THE THERMOMETER WET. DO NOT USE IN WATER.** This thermometer is not waterproof.
- KEEP THE THERMOMETER AWAY FROM STRONG ELECTROMAGNETIC SOURCES OR LARGE ELECTROMAGNETIC FIELDS.** Usage in such environments may cause irreparable damage or incorrect measurement.
- KEEP THE THERMOMETER AWAY FROM DIRECT SUNLIGHT, DUST, HIGH TEMPERATURES AND HIGH HUMIDITY DURING USE AND STORAGE.** This may cause irreparable damage or incorrect measurement.
- DO NOT EXPOSE THE THERMOMETER TO SUDDEN TEMPERATURE CHANGES.** Sudden temperature change of the environment may cause incorrect measurement. In such cases, wait until the thermometer reaches steady temperature before taking measurement.

## Usage Warnings

- AVOID MEASURING SHINY OBJECTS.** Shiny objects, of which emissivity value is low, reflect surrounding temperatures. As this thermometer's sensitivity to emissivity is fixed at 0.95/0.70, the displayed temperature could differ from the actual temperature of the object, which has the different emissivity value. When you wish to measure shiny objects like metals, put a piece of optional black tape or apply black paint/marker on the surface and measure the masked area using emissivity setting of 0.95.
- DO NOT LET THE THERMOMETER TOUCH THE OBJECT THAT IS BEING MEASURED.** This is a non-contact thermometer. Touching or getting too close to the objects with high temperatures may cause irreparable damage or incorrect measurement.

Products mentioned in this catalogue are equipped with Class 2 laser. In case of re-export to foreign countries, please confirm the relevant regulation for laser products in the destination country.



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# Best Seller

## Portable Non-Contact Thermometers



### Features

- Measuring temperature range: -20 to 400° C
- Adjustable Emissivity (DARK/BRIGHT mode)
- Auto backlight ON/OFF display

**C**oaxial laser marker pinpoints the center of the measuring area.

**P**recise measurement with high optical resolution: □30mm at 1m distance

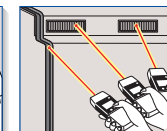
## Applications



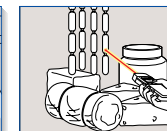
Electric Wiring



Motor/Machine



HVACR



Freezer/Refrigerator



**CAUTION**  
DO NOT STARE INTO BEAM  
LASER RADIATION  
DO NOT STARE INTO BEAM  
WAVE LENGTH: 780nm  
CLASS II LASER PRODUCT

**CAUTION**  
LASER RADIATION  
DO NOT STARE INTO BEAM  
CLASS II LASER PRODUCT  
THIS PRODUCT COMPLIES WITH  
21 CFR 1040.10 AND 1040.31

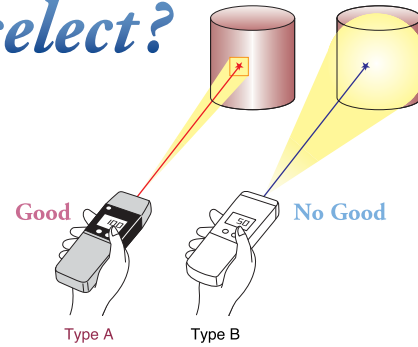


Portable  
Non-contact  
Thermometer

THERMO-HUNTER  
PT-3LF

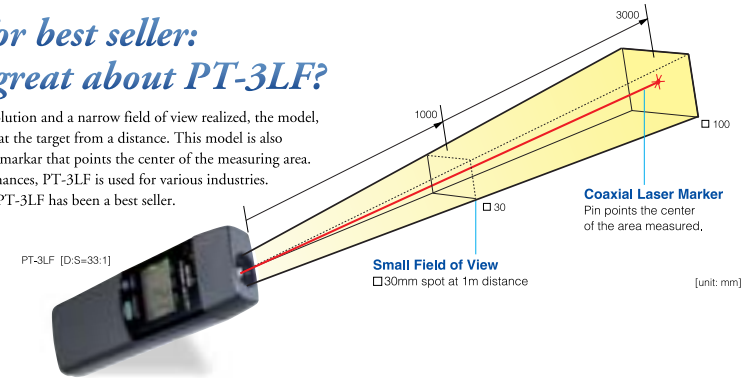
# Which do you select?

If you are going to get Portable Non-contact Thermometer, you had better choose the one which can measure small target from a distance. As the type A has narrow field of view, only the object can be measured. If you need precise measurement, you will select Type A.



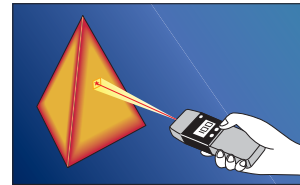
## Reason for best seller: What is great about PT-3LF?

With a high optical resolution and a narrow field of view realized, the model, PT-3LF enables to aim at the target from a distance. This model is also equipped with the laser marker that points the center of the measuring area. Because of such performances, PT-3LF is used for various industries. That is the reason why PT-3LF has been a best seller.



### What is a non-contact infrared thermometer?

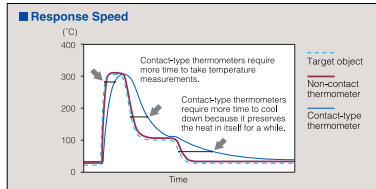
Every object emits invisible infrared (IR) energy from its surface. Non-contact thermometers instantly detect and convert the amount of infrared energy into a temperature value. The value indicated on LCD display is the average temperature within the area measured.



### The advantages of non-contact thermometer

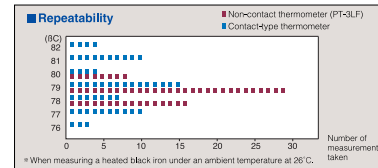
#### Quick

It's so quick and easy — just press a button, and get the temperature in about a second. It is an ideal tool to improve your work efficiency.



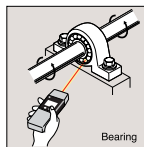
#### Reliable

Repeatability is one of the important factors to prove how reliable a thermometer is. Unlike contact-type thermometers, the same temperature reading can be repeatedly measured even when it is taken by another person.



#### Safe

Since it's non-contact, you can check the temperature of machinery in operation and equipments with high voltage or high temperatures from a safe distance.



#### Clean

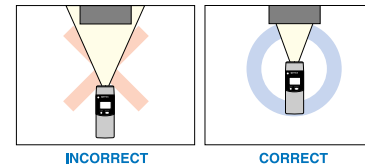
A non-contact thermometer enables you to detect temperatures of food and valuables without damaging them. It's absolutely non-contamination, hygienically clean.



### Questions & Answers

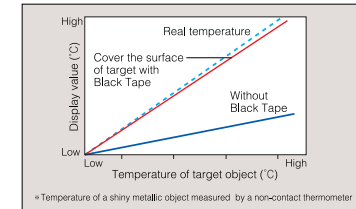
**Q1** How far can non-contact thermometer measure? Any difference in temperature according to the distance?

**A1** Non-contact thermometers can measure temperature from any distance. However, the farther the thermometer is to the object, the bigger the spot size. Please make sure the size of the target object should be sufficiently larger than the Field of View (spot size) shown in the illustration below.



**Q3** How to measure shiny metallic surfaces?

**A3** As shiny objects like metals reflect surrounding infrared energy, the thermometer detects both reflected and emitted energy of the shiny object itself. When you wish to measure temperature of shiny object correctly, put a piece of optional black tape [HB-250 ( $\epsilon=0.95$ )] on the surface; then measure the area covered by the black tape with emissivity setting at 0.95 (DARK mode).



**Q2** Can non-contact thermometers measure any object?

**A2** Non-contact thermometers can measure the surface temperatures of any objects, liquid or solid, except for the cases shown below.

Case 1	Case 2	Case 3
<b>Objects with Shiny Surfaces</b> Thermometer measures temperature of the target object as well as the reflection of the surroundings on the shiny surface.	<b>Through Glass</b> Thermometer measures temperature of the glass surface.	<b>Environmental problem (Through Steam, Dust, or Fire, etc.)</b> If a thermometer is operated in the place where lots of steam or dusts in the air, their temperatures are also measured besides the target object.

**[Option] Black Tape HB-250**

• Dimensions: 60 x 2000mm  
• Withstand heat up to 250°C

**Emissivity ( $\epsilon$ )**

Emissivity ratio is a value that indicates the infrared energy emitted from the surface of an object. Every object has its own emissivity value and it varies depending on the surface condition or the temperature of the object. Emissivity value ranges from 0.00 (shiny mirror) to 1.00 (black body), and the most common is 0.95. OPTEX non-contact thermometer PT-3LF is equipped with emissivity adjustment function of DARK ( $\epsilon=0.95$ ) and BRIGHT ( $\epsilon=0.70$ ) mode.