

Non-Contact  
**Infrared Thermometer**  
Handheld Models

**NEW** IT-545 Series  
IT-550 Series



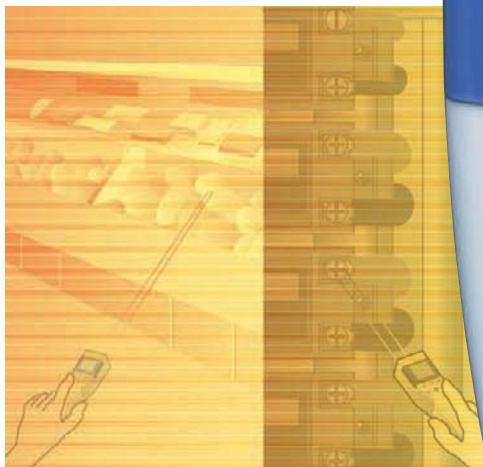
CE marking compliant



IT-550 (Actual size)



IT-545 (Actual size)



# Quick, Accurate and Easy

## A full lineup of hand-held infrared thermometers covering a wide range of measurement needs

Every unit offers reliable functionality, narrow focus, splash resistance and low cost with exceptional performance. HORIBA has the ideal model to meet your specific temperature measurement needs.

Non-Contact

### Infrared Thermometer Handheld Models

#### Narrow-focus model

##### IT-550F

-50°C ~ 500°C

AC adaptor, tripod

Twin beam marker

Digital output  
(Option)

Printer output  
(Option)

Splash-resistant

Memory function

##### IT-550L

-50°C ~ 500°C

AC adaptor, tripod

Twin beam marker

Digital output  
(Option)

Analog output  
(Option)

Splash-resistant

Display resolution switch

##### NEW IT-545N

-50°C ~ 500°C

Twin beam marker

Upper/Lower temp alarm

Measurement-hold function

##### NEW IT-545NH

-50°C ~ 1000°C

Twin beam marker

Upper/Lower temp alarm

Measurement-hold function

#### Spot focus model

##### IT-550S

-50°C ~ 500°C

AC adaptor, tripod

Twin beam marker

Digital output  
(Option)

Analog output  
(Option)

Splash-resistant

Display resolution switch

##### NEW IT-545S

-50°C ~ 500°C

LED target marker

Upper/Lower temp alarm

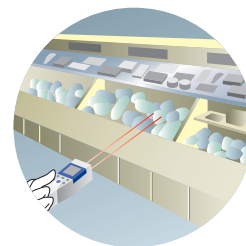
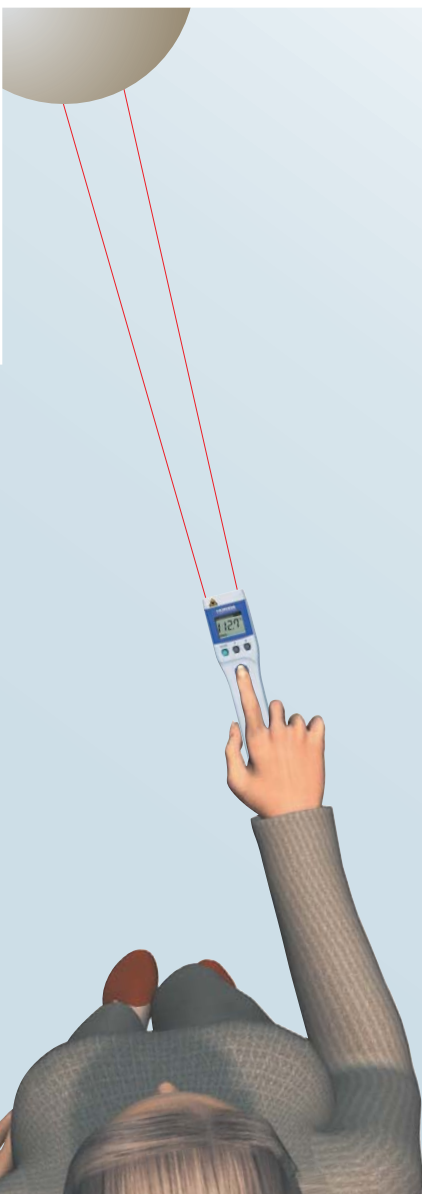
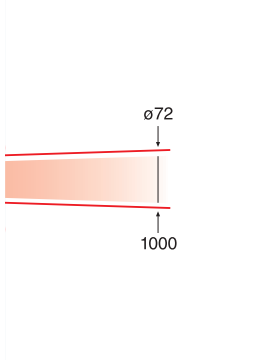
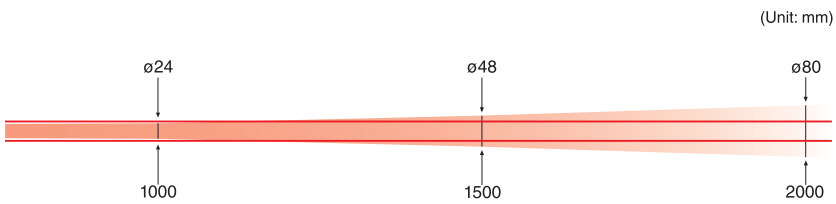
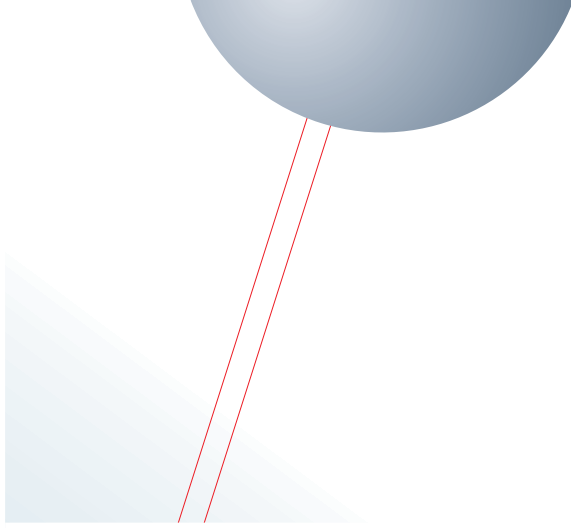
Measurement-hold function

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INSTRUMENTS

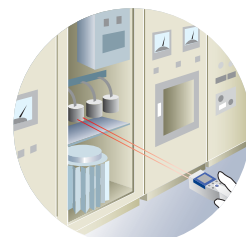
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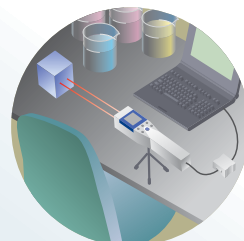




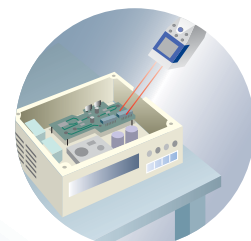
Food temperature management



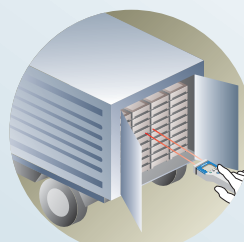
Non-contact testing of high-voltage equipment such as a power supply system



Temperature measurement as a part of lab tests



Surface temperature measurement of ICs and other minute surfaces



Refrigeration maintenance of foods



Temperature check when adding or removing food from storage

# CALRIGHT INSTRUMENTS

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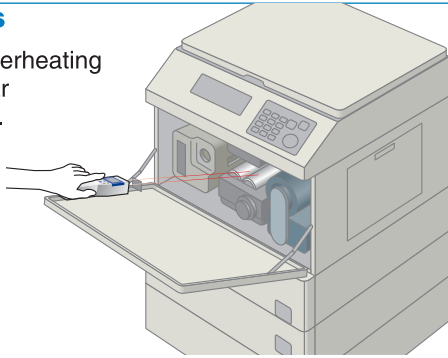
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# Infrared Thermometer Applications

## ELECTRIC / ELECTRONIC

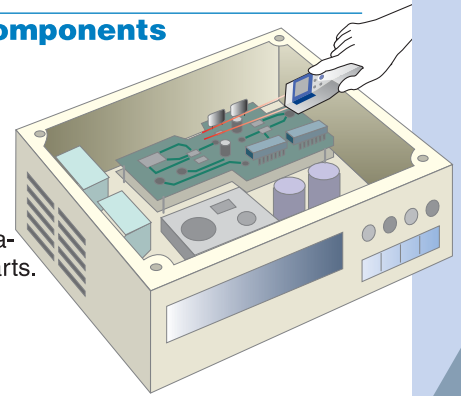
### • Copiers

To identify overheating during regular maintenance.



### • Electronic components

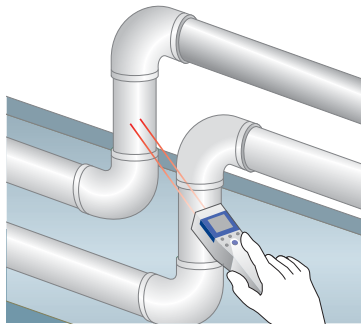
Check for abnormal heating while an object is in use. Spot infrared thermometers (IT-545S/IT-550S) can measure temperatures of very small parts.



## SAFETY / MAINTENANCE

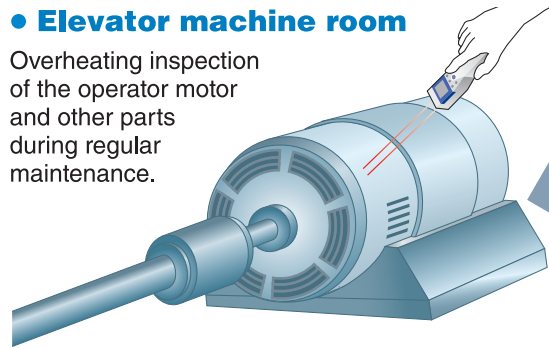
### • Piping

Check for overheating or freezing. Infrared thermometers can inspect different points easily and quickly.



### • Elevator machine room

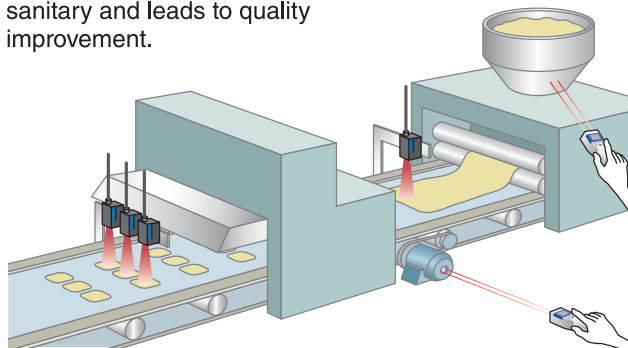
Overheating inspection of the operator motor and other parts during regular maintenance.



## FOODS

### • Ovens and dryers

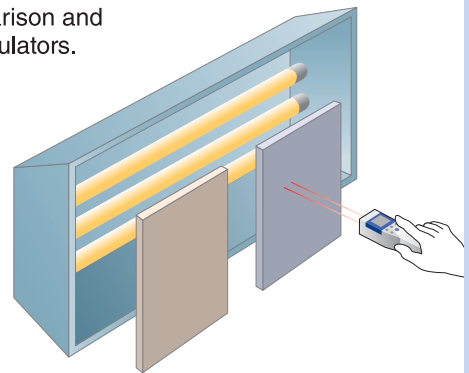
Temperature control in baking and other process is crucial. Non-contact measurement is sanitary and leads to quality improvement.



## CONSTRUCTION / CIVIL ENGINEERING

### • Thermal insulation

For R&D, comparison and inspection of insulators.



## OTHERS

- Inspection of household appliances.
- Inspection of air conditioners.
- Temperature monitoring of electric motors.
- Thermal insulation tests for pots and steamers.
- Inspection of ironing surface.
- Periodic maintenance of HVACR.
- Periodic maintenance of furnace outer wall.
- Periodic maintenance of boiler outer wall.

- Temperature inspection of refrigerated / frozen foods.
- Cooking temperature inspection.
- Deep fryer oil temperature inspection.
- Detecting overheating parts of automobile.
- Inspection of automobile air conditioners.
- Temperature measurement of automobile headlights.

**NEW IT-545 Series**

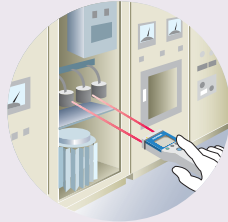


Easy-to-carry, compact & lightweight design

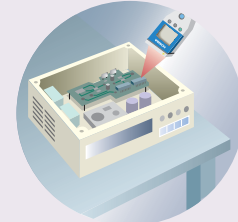
Simple, advanced design



- Quick, accurate readings, even under rapidly changing ambient temperatures minimizing "temperature drift."
  - Wide measurement area
  - Abnormal temperature warning by audio alarm and flashing marker\*.
- \* Only for models designated NH and N.



For routine maintenance work  
**Narrow-focus model (Twin beam model)**



For measuring electronic components  
**Spot focus model**

**Narrow-focus model**

**Spot focus model**

**IT-545NH**



**IT-545N**



**IT-545S**



Spectral response	8 to 14μm	
Measurement temp. range**	-50 to 1000°C	-50 to 500°C
Display temp. range	-55 to 1010°C	
Display resolution	0.1°C for 0.0 to 199.9°C 1°C for other than above	
Accuracy*2	-50 to -0°C	±(10% of reading -1.5)°C
	0.0 to 199.9°C	±1.0°C
	200 to 500°C	±(0.5% of reading +0.5)°C
	501 to 1000°C	±(0.5% of reading +0.5)°C (Only for IT-545NH)
Repeatability	-50 to -0°C	±1°C
	0.0 to 199.9°C	±0.3°C
	200 to 500°C	±1°C
	501 to 1000°C	±1°C (Only for IT-545NH)
Response time	Within 0.8sec (95%)	
Target size	ø40/500 mm (DS*3 12.5:1)	ø2.5/30 mm
Emissivity setting	0.10 to 1.00 in 0.01 increments	
Sight	Twin beam laser marker (Class 2)	LED spot marker
Operating temp. & humidity	0 to 50°C, 35 to 85% RH, no condensation	
Power	AAA batteries X 4	
Battery life	Approx. 8 hrs (continuous use under standard condition using manganese battery)	Approx. 25 hrs (continuous use under standard condition using manganese battery)
Dimensions / Mass	40(W) X 170(L) X 36(H) mm / Approx.140g (batteries included)	
Other functions	Upper/Lower temp alarm (between -55 and 1010°C) Max/Min values Measurement-hold Auto power off	Upper/Lower temp alarm (between -55 and 505°C) Max/Min values Measurement-hold Auto power off
Accessories	AAA batteries X 4, carrying case, manual	

\*1: Fahrenheit and Celsius displays are available for the Americas.

\*2: Temp. 18°C to 28°C, Humidity 55%RH, Emissivity (ε)=1.00

\*3: DS = Distance to spot size



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Non-Contact Infrared Thermometer

# IT-550 Series



Narrow Focus, Splash-Resistance & Digital Output  
The Twin-Laser Sight Makes Measurements A Snap!

## Narrow-focus type

**Target area of  $\varnothing 24/1000$  mm** (F and L models)

The twin laser sight makes it easy to focus on target. The F (Field) model, L (Lab) model and the S (Spot) model all have unique twin-laser sights optimized for your applications. The F and L models require only 1/3 of target area, when compared to older models, making it easier to measure temperature of small objects from a distance. The S model's target area is  $\varnothing 2.5/73$  mm.

## Splash-resistance

**The splash-resistant non-contact thermometer!**

IT-550 is splash-resistant. It can be safely used in kitchens and other type of spaces where thermometers may get wet. It can safely be operated with a wet hand, making it ideal for use in food industry.



\* A wet lens can cause errors in readings. Completely wipe off any water from the lens before use.

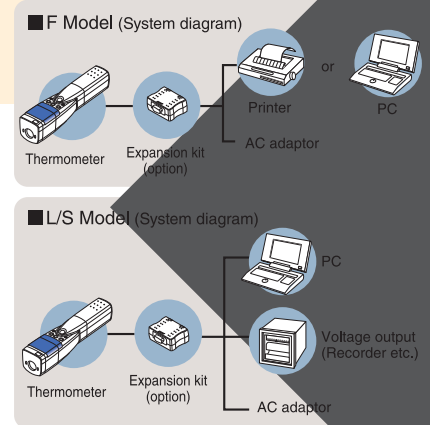


IT-550F  
IT-550L  
IT-550S

## Digital Output

**Memory function, Digital Output, Voltage Output, PC/Printer connection and more!  
Speedup data processing by collecting temperature measurements directly from the thermometer!**

The expansion kit (option) lets you connect the thermometer (F model) to printers and print data directly from its memory. The thermometers with digital/voltage output (L & S models) can easily hookup to a computer/recorder and export data for spreadsheets or word processors.

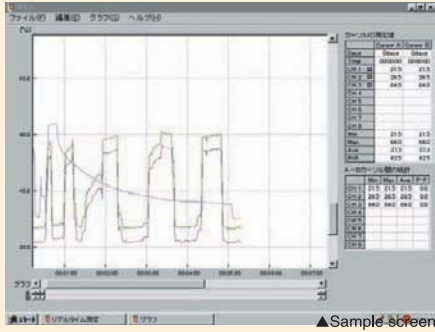


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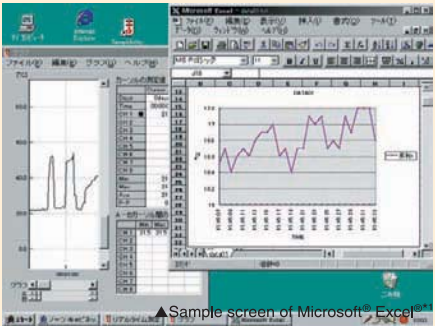
## Graphing made easy

- Using the accompanied software (L & S models)



- Exporting data to spreadsheets

(all models)



## Obtaining hardcopy

(F model)

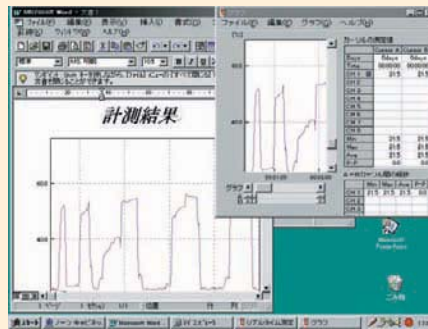


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▲Sample printout

(L & S models)

## Data manipulations



## Simplifying reports

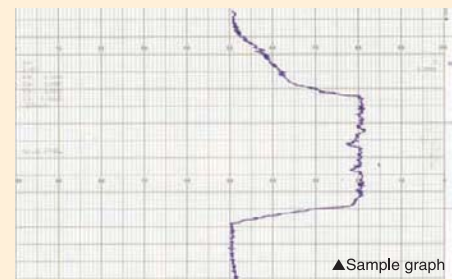
(F model)

Report content including measurement data, settings, and results in a structured format.

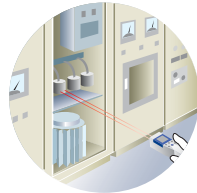
▲Sample report

(L & S models)

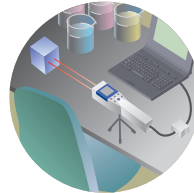
## Using a graphical recorder



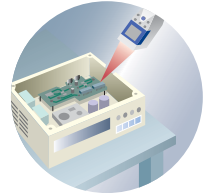
### Power supply maintenance



### Various temperature measurements in lab testing



### Surface temperature measurements of minute devices such as IC components



#### For Field Use IT-550F

- Twin beam marker
- Digital output (Option)
- Printer output (Option)
- Splash-resistant
- Memory function

#### For laboratory Use IT-550L

- Twin beam marker
- Digital output (Option)
- Analog output (Option)
- Splash-resistant
- Display resolution switch

#### For laboratory Use. Spot Focus Model IT-550S

- Twin beam marker
- Digital output (Option)
- Analog output (Option)
- Splash-resistant
- Display resolution switch

	For Field Use IT-550F	For laboratory Use IT-550L	For laboratory Use. Spot Focus Model IT-550S
	8 to 16μm		
	-50 to 500°C		
Spectral response			
Measurement temp. range*2	-55.0 to 505.0°C (0.1°C)	-55.0 to 505.0°C (1°C) or -55.0 to 505.0°C (0.1°C)	
Display temp. range (Display resolution)	±(10% of reading -2)°C (-50.0 to -0.1°C) ±2.0°C (0.0 to 200.0°C)	±(10% of reading -2)°C (-50. to -1°C) or (-50.0 to -0.1°C) ±2.0°C (0 to 200°C) or (0.0 to 200.0°C)	
Accuracy	±1% of reading (200.0 to 500.0°C) (Temp. 18 to 28°C Humidity 55%RH, =1.00)	±1% of reading (200 to 500°C) or (200.0 to 500.0°C) (Temp. 18 to 28°C Humidity 55%RH, =1.00)	
Repeatability	±1°C (-50.0 to -0.1°C) ±0.5°C (0.0 to 500°C)	[0.1°C resolution] ±1°C (-50.0 to -0.1°C), ±0.5°C (0.0 to 500°C) [1°C resolution] ±2°C (-50 to -1°C), ±2°C (-50 to -1°C)	
	Within 1.6 sec (95%)	0.7 sec or less (95%) at 1°C resolution: 1.6 sec or less (95%) at 0.1°C resolution	
	ø24/1000 mm (DS*3 41.6:1)		ø2.5/73 mm
Response time	0.10 to 1.00 in 0.01 increments		
Target size	Twin beam laser marker (Class 2)		
Emissivity setting	IP54 (IEC529)		
Sight	0 to 40°C, 35 to 85% RH, no condensation		
Splash & Dust resistance	9 V dry battery (6F22 or 6LR61) × 1, or AC adapter (requires the expansion kit)		
Operating temp. & humidity	Approx. 20 hrs (continuous use under standard condition using alkaline battery)		
Power	47(W) × 200(L) × 48(H) mm / Approx. 280g (battery included)		
Battery life	Date memory (Max.130point), Printer output, RS232C	Analog output (0 to 1v), Display resolution, Scaling, RS232C	
Dimensions / Mass	Max/Min values, Measurement-hold, Auto power off	Max/Min values, Measurement-hold, Auto power off	
Other functions	Manual, carrying case, hand strap, battery, battery lid opener		

Note: The expansion kit (option) is required for analog output, printer output, use of RS232C.

\*1: Microsoft and Excel are registered trademarks of Microsoft Corporation in the United States and other countries.

\*2: Fahrenheit and Celsius displays are available for the Americas.

\*3: DS = Distance to spot size

**HORIBA continues contributing to the preservation of the global environment through analysis and measuring technology.**



**Please read the operation manual before using this product to assure safe and proper handling of the product.**

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