

Product

- Infrared Hand Held
- Gun Type
- Compact Pocket Size
- Ultra Compact Size
- Palm Type
- IR & Thermocouple Thermometer
- Digital Temperature Indicator
- Infrared Module
- Fixed Infrared Sensors
- Accessories
- Probe series

Professional Infrared Thermometer - TN410 Series(3 Key)



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Specification

Model No	TN410LA(E)	TN410LB(E)	TN410L9(E)
Description	IRT + Laser + Thermocouple socket, (E) with LED Flashlight (optional)		
Measurement range	-60~760°C(-76~1400°F)		
Full Range Accuracy (Tamb=23±3 °C)	Tobj=-60~0°C: +/- (2°C+0.05/ degree) , Tobj=0~760°C: +/-2% of reading or 2°C(4°F) whichever is greater	Tobj=-60~0°C: +/- (2°C+0.05/ degC)°C Tobj=0~760°C: +/-2% of reading or 2°C(4°F) whichever is greater	
Distance: Spot	20:1	30:1	12:1
Mode	Ave, Dif, Hi/Low Alarm, Real Time Max / Min, Lock		
Thermocouple Probe Measurement Range	Small Socket, K type, 12 minutes auto power off -60~1400°C (-83.2~1999°F)		
Probe Accuracy	±1% of reading or 1°C(1.8°F) whichever is greater (Test under Tamb=23±6°C)		
Model No	TN410LC(E)	TN410LD(E)	
Description	IRT + Laser + Thermocouple socket, (E) with LED Flashlight (optional)		
Measurement range	-60~500°C(-76~932°F)	-60~625°C(-76~1157°F)	
Full Range Accuracy (Tamb=23±3 °C)	Tobj=-33~500°C, +/-2% of reading or 2°C(4°F) whichever is greater	Tobj=0~625°C, +/-2% of reading or 2°C(4°F) whichever is greater, Tobj=-60~0°C,+/- (2°C+0.05/ degC)°C	
Distance: Spot	12:1	16:1	
Mode	Ave, Dif, Hi/Low Alarm, Real Time Max / Min, Lock		
Thermocouple Probe Measurement Range*	Small Socket, K type, 12 minutes auto power off -60~1400°C (-83.2~1999°F)		
Probe Accuracy	±1% of reading or 1°C(1.8°F) whichever is greater (Test under Tamb=23±6°C)		

*Actual temperature range depends on the TC probe selected.

Feature

National Lab Standard Traceable
 Certificate of Calibration Available (COC optional)
 IR-SoC technology (Infrared System on Chip) and Batch Calibration technology drive the dimensions

ZyTemp -- TN410LA(E)/ TN410LB(E)/...

and cost to the lowest limits

- ➔ New Low voltage technology, no more 9V battery
- ➔ Lowest cost
- ➔ Use the most affordable and available battery: AAA size, instead of the low capacity 9V battery
- ➔ Long Battery Life
 Note: with Laser and Backlight turned off
 For Alkaline Battery (1150mAh): Typical 8days.
- ➔ Large LCD Screen, with bright amber color Backlight
- ➔ User Friendly Interface
- ➔ High-end arithmetic: Max; Min and DIF; AVG mode
- ➔ Auto Power Off: 15sec
- ➔ Precise K type Thermocouple Thermometer available (optional)

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Available Packages

<p>TL1 (ToolBox)</p> 	<p>Packing List</p> <p>One set includes:</p> <ul style="list-style-type: none"> ➔ Infrared thermometer ➔ 2 AAA batteries ➔ 1 user manual ➔ Tool Box ➔ COC (optional) ➔ Bead (optional) <hr/> <p>14sets/master carton Master carton size: 497*420*340mm (2.5 cube ft) N.W:10.8kgs G.W:12.8kgs</p>
<p>TL2 (ToolBox)</p> 	<p>Packing List</p> <p>One set includes:</p> <ul style="list-style-type: none"> ➔ Infrared thermometer ➔ 2 AAA batteries ➔ 1 user manual ➔ Tool Box ➔ Thermocouple Probe ➔ COC (optional) <hr/> <p>10sets/master carton Master carton size: 630*560*420mm(5.23 cube ft) N.W:17.2kgs G.W:19.2kgs</p>
<p>BL1 (Blister)</p> 	<p>Packing List</p> <p>One set includes:</p> <ul style="list-style-type: none"> ➔ Infrared thermometer ➔ 2 AAA batteries ➔ 1 user manual ➔ Blister ➔ COC (optional) ➔ Pouch (optional) ➔ Bead (optional) <hr/> <p>30sets/master carton Master carton size: 595*460*615mm(5.94 cube ft) N.W: 8.6kgs G.W:13.6kgs</p>

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General Description

TN410LA(E)/TN410LB(E)/TN410LC(E)/TN410LD(E)/TN410L9(E) are the ultimate tools for temperature measurements.

It contains 2 most reliable temperature sensors:

- 1) Non-contact Micro Machineing Thermopile
- 2) K-type thermocouple socket

Such an arrangement can fulfill most of temperature measurement requirements:
Use the Non-contact for instant; not-reachable situation.
Use the thermocouple for high precision; non-surface situation.

Temporers also come with an ultra long battery life (8days for Alkaline battery), no 9V battery,
It use the most affordable and available AAA size battery.

Learn Emissivity with the Temporer:

Emissivity is a difficult concept for general user to catch.

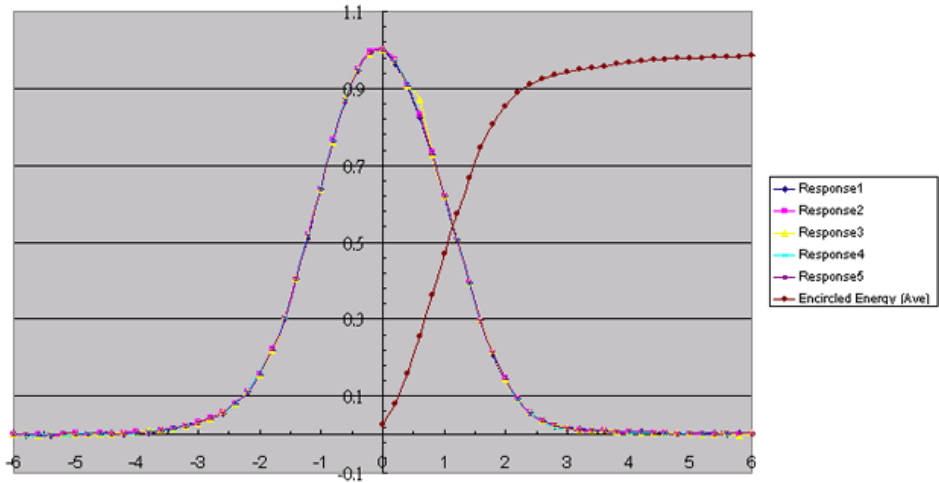
But, with Temporer, it's easy to get, just use the contact thermometer to get the true temperature,

Then use the Non-contact to get the surface temperature, Adjust the Emissivity until they are the same.

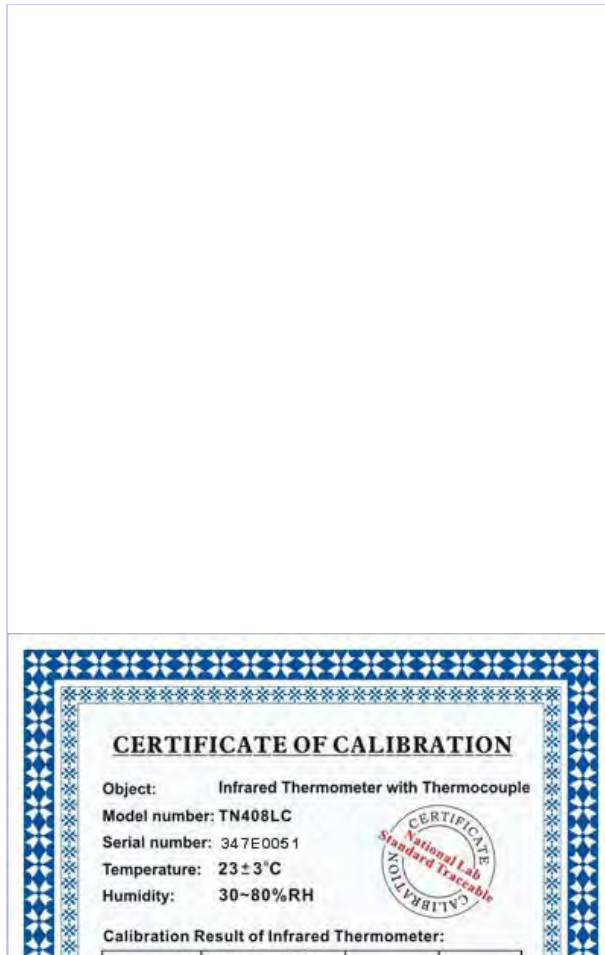
Next time, use the correct Emissivity for that object. No more guess work, no more looking up on Emissivity Table.

TN4 Infrared Thermometer (Laser Thermometer) FOV Test / D:S Test.

Test Name: Infrared Thermometer (Laser Thermometer) FOV Test / D:S Test. DUT:TN4 Module, Lens=SM Date: 2004/11/04 Test by:EricChen;AlanHuang
Graph based on: [Table:TN4, Lens=SM, 1000mm, Ave\(10times\)](#)
Test Method: [v]see TN_FOV_018.TSM.doc Test Equipment is also shown on www.ZyTemp.com/FOVQ
Test Objective: [v]to approve the FOV meet spec Reason of testing: []to approve new process [v]to approve new part SM
Test Criteria: D:S >= 11:1 @ 1000mm Test Conclusion:[v]Pass []Fail []Other
Test Result: FOVhalf[degree]= **2.33** D:S= **12.32** Y:Normalized Energy Response, X:Angle in degree



Certificate of Calibration




Target	Thermometer reading	Deviation	Accuracy
-30 °C	- 29	+1	+/- 2°C
0 °C	-0.2	-0.2	+/- 2°C
200 °C	200	0	+/- 2%
400 °C	400	0	+/- 2%

Ⓞ Emissivity of Blackbody: 0.995
 Ⓞ Calibrated Standard: BlackBody (No.: QACAR0064)
 Ⓞ Uncertainty of Blackbody: 0.2°C or 0.2%

Calibration Result of Thermocouple Thermometer:

Target	Ambient Temperature	Thermometer reading	Deviation	Accuracy
278.0°C	25.3 °C	278	0.0	+/- 1.0%

Ⓞ Note: The target temperature of thermocouple is simulated from a precision voltage reference: 10.288mV
 Ⓞ Calibrated Standard: Agilent Technologies 3458A Digital Multimeter (No.: QACAR0001)
 Ⓞ Uncertainty of Digital Multimeter: +/- 50ppm

Approved By:  **This is only a sample.**
 Date: _____

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Founded in July 2000, ZyTemp belongs to world-class Infrared Technology-oriented thermometer manufacturer - Radiant Innovation Inc. and become a premier provider of infrared temperature measurement devices. Originally started from a professional team of engineers specializing in infrared thermometry, this company is now emerging as worldwide well-known manufacturer of infrared thermometers (IRT).

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