



Combo non-contact / contact thermometer 380a, 381Fa & 384a

TestProducts International, Inc.



- **Contact and non-contact thermometer**
- **Maintain reading on display**
- **Laser sighting** except 380a
- **Backlit display**
- **9:1 distance to spot ratio** (6:1 for 381Fa)
- **0.1 degree resolution**
- **095 emissivity**
- **3 Year Limited Warranty**

**Use standard K-type thermocouple probes with
sub mini input jack. Probes purchased separately**

Test the TPI Advantage

A. INTRODUCTION

1. Congratulations: Thank you for purchasing TPI products. The 380 series is easy to use and built to last. They are backed by a 3 year limited warranty.
2. Product Description: The 380 series are non-contact and contact temperature testers. They use industry standard K-type thermocouples with sub-mini connector for contact measurements.

B. SAFETY CONSIDERATIONS

1. Never point the laser beam at someone's eyes or look directly into the beam
2. Use caution when measuring a shiny surface so the laser does not reflect back into your or someone else's eyes.
3. Do not touch the lens to any foreign object.
4. Do not expose the unit to damp environments for extended periods of time.

C. TECHNICAL DATA

Distance to Spot Ratio		9 : 1 (6:1 for 381Fa)
Temperature Range	Non-contact:	380a: -4° to 572°F (-20° to 300°C) 381Fa: -31° to 572°F (-35° to 300°C) 384a: -4° to 1832°F (-20° to 1000°C)
	Contact:*	All models: -148° to 2192°F (-100° to 1200°C)
IR Accuracy @ 23°C and 0.95 emissivity	380a & 384a:	± 5°F (3°C) at <32°F (0°C) ± 2% of rdg or ± 3.5°F (2°C) at >32°F (0°C)
	381Fa:	+/-2°F or 1.5% of rdg at 32° to 158°F (0° to 70°C) +/-3.5°F or 2% of rdg at <32°F (<0°C) and >158°F (70°C)
Contact Accuracy	All models: ±(0.5% of reading + 3.5°F (2°C))	
Emissivity	0.95	
Laser Sighting	Output <1mW, Wavelength 645-660nm, Class II Laser (Except 380a which has no laser)	
°F or °C	Selectable (slide switch in handle)	
Contact or Non-contact	Selectable (slide switch in handle)	
Display Hold	Yes	
Response Time	500 millisecond	
Spectral Response	7 - 14 um	
Operating Temperature	32° to 120°F (0° to 150°C)	
Battery Type	9 Volt	

* Depends upon temperature probe selected

D. MEASUREMENT TECHNIQUES

Push Buttons

1. **TRIGGER:** Press and hold the trigger button on the 381a. The thermometer will power up and the laser will be visible (unless in contact "K" mode). After releasing the trigger, the thermometer will hold the last reading then automatically turn off after 10 seconds. For extended measurement time simply hold the trigger on and the thermometer will stay in scan mode.
2. **RECALL LAST READING:** To recall the last reading before the unit powered off, quickly press and release the trigger. The last reading will be displayed for an additional 10 seconds.
3. **IR/K** The selector switch is located inside the battery compartment in the handle. Simply swing open the two piece handle and position the slide switch. Set to IR for non-contact measurements or set to K for contact measurements. When set to K, a K-type probe must be connected to the K-type connector located at the bottom right side of the handle. If a probe is not connected the thermometer will display "open" when the trigger is pulled.
4. **°F/°C:** The selector switch is located inside the battery compartment in the handle. Simply swing open the two piece handle and position the slide switch.

Temperature Measurement (Infrared)

CAUTION: LASER RADIATION - DO NOT STARE INTO BEAM. OUTPUT <1Mw WAVELENGTH 645 - 660nm. CLASS II LASER PRODUCT.
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1. Set the IR/K selector switch to IR. Turn the thermometer on by holding down the trigger.
2. Line up the laser (except 380a) with the target and hold the front of the thermometer nine inches from the target (spot size will be one inch at this distance).
3. Read the temperature on the LCD.

Temperature Measurement (Thermocouple)

1. Set the IR/K selector switch to K and connect a K-type thermocouple probe to the input jack located at the bottom right side of the handle.
2. Turn the thermometer on by holding down the trigger.
3. Touch the thermocouple to the item under test.
4. Read the temperature on the LCD.

E. ACCESSORIES

<u>Item #</u>	<u>Description</u>
A009A	9 Volt Alkaline Battery
A380	Soft Carrying Pouch for 380/381/382/383

F. MAINTENANCE

1. Clean the surface of the instrument and optical lens with a damp cloth.
2. Replace the 9 Volt battery when the low battery indicator appears on the LCD.

G. TROUBLE SHOOTING

Symptom

Probable Cause

Temperature seems inaccurate.

- Dirty optical lens.
- Low battery.
- Instrument held too far away from target increasing desired target area.
- Target surface has poor emissivity qualities.
- Laser sight out of alignment.

Unit does not turn on.

- Dead or low battery.
- Defective POWER ON switch.
- Broken batter connector.

Laser does not turn on.

- Low battery.
- Broken connector to Laser.

H. WARRANTY

This product is warranted to the purchaser against defects in material and workmanship for three years from the date of purchase.

Covered by Warranty: Repair parts and labor; or replacement of the product at company's option. Normal transportation charges to the purchaser are also covered.

Not Covered by Warranty: Damages to the product which are the result of abuse, improper use or maintenance are not covered. Any other expense, consequential damages, incidental damages, or incidental expenses including damages to property are not covered. Transportation expenses to the company are not covered.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

Implied Warranties: Any implied warranties including implied warranties of merchantability and fitness for a particular purpose, are limited in duration to three years from date of purchase. To the extent any provision of this warranty is prohibited by federal or state law and cannot be preempted, it shall not be applicable. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.