KRAFTWERK®

FAVORITE TOOLS SINCE 1979

AUTOMOTIVE

EN

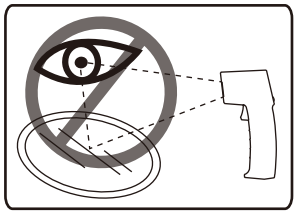
Instruction Manual
Infrared Thermometer

505.003.001





LASER RADIATION
DO NOT STARE INTO BEAM
CLASS 2 LASER PRODUCT



RoHS

OVERVIEW

505.003.001 Infrared thermometer is a non-contact temperature measuring instrument using infrared technology and laser pointer. You could use this product to measure the surface temperature, which is not suitable for traditional measuring (such as moving objects, charged objects, toxic objects or hard-to-reach objects).

The instrument features a low consumption design. It has a LCD with backlight, a laser pointer for accurate aiming and capable of auto holding the readings. It has the advantages of rapid measuring, easy operation and portability. It is widely used for applications such as finding the hot spot of electric connection and bearing, measuring the hot and high-frequency induction heated objects, monitoring food processing and storage, inspecting temperature for heating & refrigeration system, inspecting temperature for technics control of metallurgy industry, inspecting temperature during laying asphalt and fire-control work, or any other temperature measuring without compromising the temperature field. It is a good measuring tool for the metallurgy, the electric power plant, the chemical industry, the rubber industry, the spinning and weaving, the plastic, the papermaking and the food processing.

505.003.001 Infrared thermometer is Class II laser product and in compliance with EN60825-1.

SAFETY INSTRUCTIONS

Failure to follow the instructions listed below may cause personal injury.

- Read and understand all instructions prior to any operation.
- Do not remove any labels from the tool.
- Do not operate the tool with the presence of flammable/explosive gases.
- Do not operate the laser tool around children or allow children to operate the laser tool, failure to do so will injure children's eyes.
- Do not stare into the laser beam.
- Do not project the laser beam directly into eyes of others.
- Do not set up the tool at eye level or operate the tool on or near a reflective surface, as the laser could be projected into people's eyes.
- Do not observe the laser beam by using optical tools such as binoculars, magnifying glass.
- To avoid burning danger, remember that the reflected objects make the measuring temperature lower than the real one.
- Warning

DANGER
Class II Laser Product
Maximum Power Output< 1mW
Wavelength: 630-660 nm
Do not stare into the beam!
Avoid direct eye exposure!
This tool emits a laser radiation!

BATTERY SAFETY INSTRUCTIONS

- Please remove the batteries when clean the product.
- Remove the batteries before long term storage
- Please install the batteries properly as the instructions of the positive and negative charges
- Please dispose the batteries properly. High temperature will cause explosions and do not burn the batteries. Strap insulated tape around the battery charges to avoid unsafe contacts with other objects.Many countries have regulations regarding battery disposal.Please follow the local regulations of battery disposing.

TOOL COMPONENTS

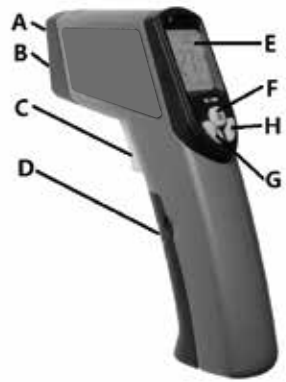


ILLUSTRATION OF DISPLAY SCREEN

A: Low battery
B: Readings
C: Measuring scan
D: Laser ON
E: °F
F: °C
G: Data hold



OPERATION STEPS

1. Pull the trigger to start the instrument and measuring. Be sure to hold the trigger more than 0.5 seconds to have an accurate data. The scan icon flashes while measuring; After the trigger released, the data is auto hold and the scan icon disappears. The screen shows hold. Auto shut off if there is no action in 7 seconds.
2. Switch between Fahrenheit and Centigrade be pressing the right key on the panel. Turn on and off the backlight using the left key.
3. Activate and deactivate the laser pointer using the middle key on the panel.
4. When the battery is low, will appear on the screen.

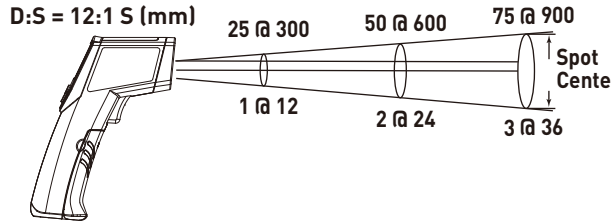
OPERATION INSTRUCTIONS

● **Battery installation**

Open the battery compartment, insert one 9V battery (6F22/6LR61), close the lid.

● **Measuring temperature**

1. Point the product to target objects, hold the trigger to read the data.
2. The distance and target area: the value of D:S must be considered (as showed), the ratio should no more than the value of D:S. The field of view must be full of objects. As the distance from the object increases, the spot size of measuring area becomes larger.



3. Field of view: Be sure the target area is larger than the unit's spot size. The smaller the target get, the closer the measured distance. For precise measuring, make sure the target is at least twice as large as the spot size.

● **Operation Notes**

1. No glass、plastic or water vapor .etc should between the product and target object.
2. Keep the product away from the following places, which will damage the devices:

a. Environment has vapor and dust;

b. EMF places（Electro-magnetic fields: such as arc welders、induction heaters）;

c. Static environment;

d. Heat shock (by abrupt temperature changes, allow 30 minutes for unit to stabilize before use.);

e. High temperature objects;

● **TROUBLE SHOOTINGS**

Problems	Causes	Solutions
No vision	Dead battery	Check and replace battery.
Show“ ”	Low battery	Replace battery
Show “OL—”	The target temperature lower than range.	Choose target within the range
Show “OH”	The target temperature higher than range.	Choose target within the range
Temperature differs much	①No suitable object and view field.	①Choose proper field of view.
	②Wrong emissivity setting.	②choose proper emissivity value

● **Maintenance**

1. Cleaning the lens: Abrupt temperature changes will cause vapor, please clean after the vapor disappears. Blow off loose particles using clean compressed air. Gently brush remaining debris away with a camel's hair brush. Carefully wipe the surface with a moist cotton swab.
2. Keep clean; Avoid drop and wet; The housing could be cleaned with wet sponge.

CAUTIONS

- Don't drop and use the tool by force.
- Don't disassemble the tool, (avoid to cause trouble).
- Keep the tool dry and clean.
- Don't place the tool with corrosive gas or objects.
- Avoid dust and water, which may stain the lens.
- Don't clean the lens by any solvent.
- Don't immerse the tool into water to avoid damage.
- In case of damage of tool by deterioration of battery.
- Remove the battery when not in use for an extended period of time.

TECHNICAL SPECIFICATIONS

Name	Infrared Thermometer
Model	505.003.001
Measuring range	-40°C~580°C (-40°F~1076°F)
Response wavelength	8~14 μm
Measuring precision	±2°C (±3.6°F) or ±2% of reading (when T > 0°C)
	±3°C (±5.4°F) or ±2% of reading, whichever is greater (when T ≤ 0°C)
Repetition	1% of reading or 1°C
Response time	500 mSec, 95% response
Optical ratio（D：S）	12:1
Emissivity	0.95
Display resolution	±0.1°C
Display resolution	630~660 nm
Power of laser	<1 mW
Laser class	Class II
Laser switch	√
Backlight switch	√
Data hold	√
Temperature units exchange	√
Low battery indication	√
Backlight shut off	At the same time with readings
Auto turn off for tool	No action in 7 s
Power supply	One 9 V battery (6F22/6LR61)
Max. power	<30 mA
Operating temperature	0°C~40°C (32°F~104°F)
Operating humidity	RH 0~75% non-condensing
Storage temperature	-20°C~60°C (-4°F~140°F), ≤85% (w/o battery)
Product dimension	135 x 170 x 36 mm
Product weight	About 168 g (w/o battery)

WARRANTY

The product is warranted to be free from defects in materials and workmanship for a period of one year from the date of purchase on the basis of providing relevant card.

Notice: The warranty does not apply to the following conditions:

- Disassembling the laser tool will void the warranty.
- We are not responsible for any damage resulting from abrasion, water, dropping or disassembling.

Tips: Most parts of the product could be recycled, please refer to your local regulations for disposing of them instead of throwing into the dustbin.



Waste electrical products should not be disposed of together with household waste. Please recycle where designated facilities exists. Check with your local authority or retailer for recycling advice.

- The battery must be removed from the appliance before it is scrapped.
- The appliance must be disconnected from the main power supply when removing the battery.
- The battery must be disposed of safely.

WARRANTY

We do not take responsibility for any damage caused by misuse or any use that is not in compliance with the safety standards described herein.

CUSTOMER SERVICES

Contact your local importer of your specialized dealer to obtain address of our service department.

FROM DATE OF PURCHASE RECEIPT
2 YEAR GUARANTEE
ON MATERIAL OR PRODUCTION DEFECTS

KRAFTWERK®

FAVORITE TOOLS SINCE 1979

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