1 YEAR WARRANTY

User's Guide

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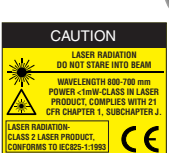

OS541
Infrared Thermometer

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Czech Republic:
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Tel: +420 (0)59 6311899 FAX: +420 (0)59 6311114
Toll Free: 0800-1-66342 e-mail: info@omegashop.cz

France:
11, rue Jacques Cartier, 78280 Guyancourt, France
Tel: +33 (0)1 61 37 2900 FAX: +33 (0)1 30 57 5427
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e-mail: sales@omega.fr

Germany/Austria:
Daimlerstrasse 26, D-75392 Deckenpfronn, Germany
Tel:+ 49 (0)7056 9398-0 FAX: +49 (0)7056 9398-29
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Tel: +44 (0)161 777 6611 FAX: +44 (0)161 777 6622
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CONTENT Page

I. ⚠ SAFETY INFORMATION

- Read the following safety information carefully before attempting to operate or service the meter.
- Only qualified personnel should perform repairs or servicing not covered in this manual.
- Periodically wipe the case with a dry cloth. Do not use abrasives or solvents on this instrument.
- Safety symbols:


Dangerous, refer to this manual before using the meter.


Apply with European CE.

This instrument conforms to the following standards:

EN50081-1: 1992 Electromagnetic Emissions

EN50082-1: 1997 Electromagnetic Susceptibility

Test were conducted using a frequency range of 80-1000 MHz with the instrument in three orientations. The average error for the three orientations is ± 2.0°C (±4.0°F) at 3V/m throughout the spectrum. However, between 300 MHz and 500 MHz at 3V/m, the instrument may not meet its stated accuracy.

Warning of laser!

Do not point laser directly at human eye or indirectly from reflective surfaces.

II. CAUTIONS

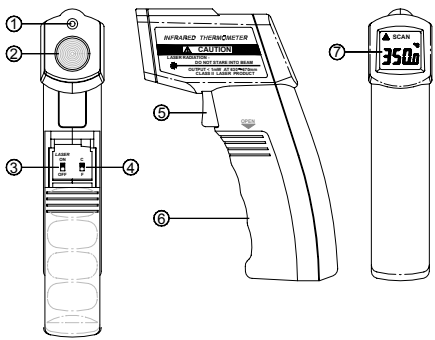
Before using the infrared thermometer you notice the following:

- Away from electrical welders, induction heaters and EMF sources.
- When using this thermometer under large or abrupt ambient temperature changes, allow 15 minutes for unit to stabilize before use.
- Do not keep this thermometer in the environment of high temperature for a long time.
- Keep away from dusty environment, and keep in carry case after operation to avoid contamination of optical lenses.

III. GENERAL SPECIFICATION

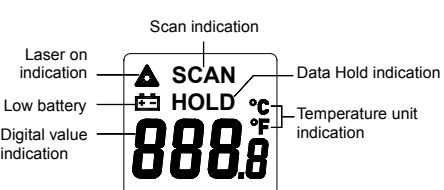
Display: 4 digit LCD
Display Illumination: Backlight by LED
Field of View: 8:1
Target Indicator: Laser spot
Emissivity: 0.98
Power Off: Automatic power-off after 10 seconds
Temperature Range: -20~500°C -4~932°F
Accuracy: ±2°C(4°F) or ±2% of reading
Resolution: 0.5°C / 0.5°F
Repeatability: Within ±1% of reading or ±1°C(2°F)
Storage Condition: -10~60°C, 14~140°F, ≤ 75%RH
Operating Condition: 0~40°C, 32~104°F, 10~90%RH
Response time: 0.5 second
Battery: 9V battery, 006P, IEC6F22, NEDA1604
Battery Life: Approximately:15 hrs (Alkaline)
Dimension: 157.5x115x36mm, 17.5x4.5x1.4inch
Weight: 180g Approx.
Accessory: 9V battery, instruction manual, carrying case

IV. NAME AND FUNCTION



① Laser dot/circle switch ② Infrared sensor aperture
③ Laser on/off switch ④ °C/°F switch
⑤ Measuring Trigger ⑥ Battery cover
⑦ LCD display

LCD Display



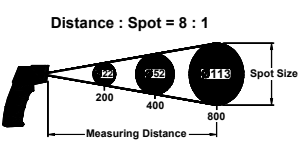
V. OPERATION INSTRUCTIONS

- Measuring Trigger

  To measure a temperature, point the unit at an object and pull the trigger. Be sure to consider distance-to-spot size ratio and field of view. The laser is used for aiming the target for reference. When the laser is on, you can switch between laser dot and circle by moving a lever in front of optics. Laser dot is an indication of the center of the field of view. Laser circle is an indication of the perimeter of the field of view. The temperature reading will be updated on the LCD. When the operator releases the trigger, the reading will automatically be held on the LCD for 10 more seconds. After 10 seconds this thermometer will power down itself to save battery.

- Distance to Spot Ratio (D/S)

  You have to make sure that the detection area you want to measure is larger than the required spot size to get a correct reading. The temperature you get is an average temperature of the detected region. The smaller the target, the shorter distance is required for the measuring.
  (Please refer to the diagram on the side of the unit)



- Emissivity

  Emissivity is a term used to describe the energy-emitting characteristics of materials. The higher of this value means the more capability of radiation emittance the materials has. Most organic materials and painted or oxidized surfaces have an emissivity of 0.98. Metal surfaces or shiny materials has a lower emissivity and give inaccurate readings. Please note this during applications.

- Maintenance

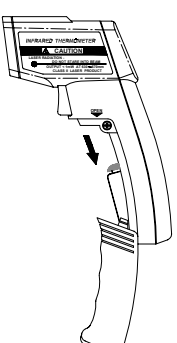
  Blow off loose particles using a lens blow. Gently brush remaining debris away with a lens brush. Carefully wipe the surface with a moist cotton swab. The swab may be moistened with water.

  NOTE: Don't use solvents to clean the glass lens.

- Replace Battery

  When the battery voltage drops below that required for reliable operation, the low battery symbol will appear, indicating it is the time to replace the battery.

  To change the 9V battery, detach the battery compartment cover by pushing the engraved pattern on the handle and pull down. Change the 9V battery with new one and put the battery cover back.



WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components which wear are not warranted, including but not limited to contact points, fuses, and triacs.

OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by it will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESS OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive, and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.

CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a "Basic Component" under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY/DISCLAIMER language, and, additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

RETURN REQUESTS / INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

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