

**Servicing North America:**

**U.S.A.:** One Omega Drive, Box 4047  
Stamford, CT 06907-0047  
Tel: (203) 359-1660 FAX: (203) 359-7700  
e-mail: info@omega.com

**Canada:** 976 Bergar  
Laval (Quebec) H7L 5A1, Canada  
Tel: (514) 856-6928 FAX: (514) 856-6886  
e-mail: info@omega.ca

**For immediate technical or application assistance:**

**U.S.A. and Canada:** Sales Service: 1-800-826-6342 / 1-800-TC-OMEGA®  
Customer Service: 1-800-622-2378 / 1-800-622-BEST®  
Engineering Service: 1-800-872-9436 / 1-800-USA-WHEN®

**Mexico:** En Español: (001) 203-359-7803 e-mail: espanol@omega.com  
FAX: (001) 203-359-7807 info@omega.com.mx

**Servicing Europe:**

**Czech Republic:** Frystatska 184, 733 01 Karviná, Czech Republic  
Tel: +420 (0)59 6311899 FAX: +420 (0)59 6311114  
Toll Free: 0800-1-66342 e-mail: info@omegashop.cz

**Germany/Austria:** Daimlerstrasse 26, D-75392 Deckenpfronn, Germany  
Tel: +49 (0)7056 9398-0 FAX: +49 (0)7056 9398-29  
Toll Free in Germany: 0800 639 7678  
e-mail: info@omega.de

**United Kingdom:** One Omega Drive, River Bend Technology Centre  
Northbank, Irlam, Manchester  
M44 5BD United Kingdom  
Tel: +44 (0)161 777 6611 FAX: +44 (0)161 777 6622  
Toll Free in United Kingdom: 0800-488-488  
e-mail: sales@omega.co.uk

It is the policy of OMEGA Engineering, Inc. to comply with all worldwide safety and EMC/EMI regulations that apply. OMEGA is constantly pursuing certification of its products to the European New Approach Directives. OMEGA will add the CE mark to every appropriate device upon certification.

The information contained in this document is believed to be correct, but OMEGA accepts no liability for any errors it contains, and reserves the right to alter specifications without notice.

**WARNING:** These products are not designed for use in, and should not be used for, human applications.

**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 in which wear is not warranted, include but are 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 the company will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED 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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# User's Guide

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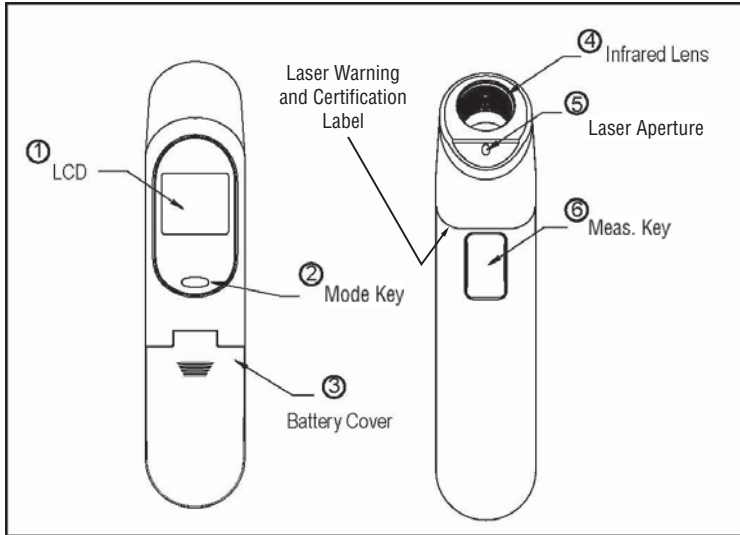
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# OS561 Infrared Thermometer

# OS561 Thermometer Operating Instructions

This thermometer is a non-contact infrared thermometer and always operates with Real-Time and (MAX) data. Please remember to keep away from children and don't use it for safety-related applications.



The thermometer will automatically shut off if left idle for more than 15 sec.

Default Screen



- Simply aim the thermometer at the measure target with Lens ④ and press Meas. Key ⑥ to display the surface temperature.
- During the measurement, the MAX reading will be displayed beside the MAX icon.
- The Distance:Spot is 9:1. Please make sure the target area is within the field of view.

## ADD VALUE:

°C or °F	Press Mode Key ② for °C or °F switching.
Backlight	LCD Backlight: always on.
Laser	Class II Laser: always enable while measuring.

## EMC/RFI

Readings may be affected if the unit is operated within radio frequency electromagnetic field strength of approximately 3 volts per meter, but the performance of the instrument will not be permanently affected.

Note: Under the electromagnetic field of 3 V/m from 350 to 550 MHz, the maximum error is 8°C (14.4°F).



## PATENT NOTICE:

U.S. PAT. B1 5,368,392; 5,524,984; 5,727,880; 5,823,678; 5,823,679; 6,123,453; 6,267,500 B1; 6,341,891 B1; 6,377,400 B1; 6,540,398 B2; 6,614,830 B1; 6,633,434 B2; 6,659,639; 6,901,089 B1 / Canada 2,114,806; 2,317,734 / France 2 756 920; 2 767 921; 2 773 213; 2 773 214 / Germany G 94 22 197.9; G 94 22 203.7 / Holland 1007752; / U.K. Registered 2,237,493; 2,320,324; 9726133.3 / EPO 0 644,408 B2; EPO 1085 307 A1. Other U.S. and Foreign Patents Pending.



**CAUTION** You may receive harmful laser radiation exposure if you do not adhere to the warnings listed below:

- Use of controls or adjustments or performance of procedures other than those specified here may result in hazardous radiation exposure.
- Do not look at the laser beam coming out of the lens or view directly with optical instruments - eye damage can result.
- Use extreme caution when operating the laser sighting.
- Never point the laser beam at a person.
- Do not attempt to open the thermometer. There are no user serviceable parts inside.
- Keep out of reach of all children.

## STORAGE & CLEANING

The sensor lens is the most delicate part of the thermometer. The lens should be kept clean at all times. Care should be taken when cleaning the lens; use only a soft cloth or cotton swab moistened with water or medical alcohol. Allow the lens to fully dry before using the thermometer. Do not submerge any part of the thermometer. The thermometer should be stored at room temperature between -20 and 65°C (-4 and 149°F).

**LCD ERROR MESSAGES** The thermometer incorporates visual diagnostic messages as follows:

- Er2**: 'Er2' is displayed when the thermometer is exposed to rapid changes in the ambient temperature.
- Er3**: 'Er3' is displayed when the ambient temperature exceeds 0°C (32°F) or 50°C (122°F). The thermometer should be allowed plenty of time (minimum 30 minutes) to stabilize to the working/room temperature.
- Er**: For all other error messages, it is necessary to reset the thermometer. To reset it, turn the instrument off, remove the batteries and wait for a minimum of one minute, reinsert the batteries and turn the instrument on. If the error message remains, please contact the Service Department for further assistance.

**BATTERIES** The thermometer incorporates visual low battery indication as follows:



- 'Battery OK': measurements are possible
- 'Battery Low': batteries need to be replaced; measurements are still possible
- 'Battery Exhausted': measurements are not possible

**CAUTION** When the 'Low Battery' icon indicates the batteries are low, the batteries should be replaced immediately with AAA, 1.5 V batteries. Please note: It is important to turn the instrument off before replacing the batteries; otherwise, the thermometer may malfunction. Dispose of used batteries promptly and keep away from children.

## SPECIFICATIONS

Measurement Range	-60 to 500°C (-76° to 932°F)
Operating Range	0 to 50°C (32 to 122°F)
Accuracy (Tobj=15~35°C, Tamb=25°C)	±1.0°C (1.8°F)
Accuracy (Tobj=33~400°C, Tamb=23 ±3°C)	±2% of reading or 2°C (4°F), whichever is greater
Emissivity	0.95 fixed
Resolution (-9.9~199.9°C)	0.1°C/0.1°F
Response Time (90%)	1 sec
Built-in Laser	Non-contact temperature measurement with laser circle sighting
Distance:Spot	10:1
Battery Life	Typ.18, min 14, hours continuous use
Dimensions	175.2 x 39.0 x 71.9 mm (6.9 x 1.53 x 2.8 in)
Weight	179 grams (6.3 oz) including batteries (AAA 2 pcs)
Laser Power Output	<math><1\text{mW}</math>
Wavelength	630~ 670 nm, Red
Laser Classification	Class 2, EN60825-1
Beam Diameter	5mm
Beam Divergence	2mrad
Laser Power Switch	② key