

OMEGAerte On-Line Service Internet e-mail
www.omega.com info@omega.com

Servicing North America:

USA: One Omega Drive, Box 4047
Sausalito, CA 08907-0047 FAX: (203)359-7700
Tel: (203) 359-1600
e-mail: info@omega.com

Canada: 976 Berger
Laval (Quebec) H7L 5A1, Canada
Tel: (514) 836-6928 FAX: (514) 836-6886
e-mail: info@omega.ca

For immediate technical or application assistance:

USA Sales Service: 1-800-626-6342 / 1-800-TC-OMEGA
Customer Service: 1-800-622-2378 / 1-800-622-5878
Engineering Service: 1-800-873-2436 / 1-800-USA-WHEN
Canada: TEL: 96404 EASTLINK; 62968934 CABLE: OMEGA
Mexico: El Equador: (001) 203 359-7803
E-mail: sales@omega.com
Fax: (001) 203 359-7807 info@omega.com.mx

Servicing Europe:

Benelux: Postbus 8034, 1180 LA Amstelveen, The Netherlands
Tel: +31 (0)20 6418405 FAX: +31 (0)20 6434643
Toll Free in Benelux: 0800 099334
e-mail: sales@omega.nl

Czech Republic: Fryskata 184, 735 01 Karvina, Czech Republic
Tel: +420 (0)59 6311899 FAX: +420 (0)59 6311114
Toll Free: 0800-1-66342 e-mail: info@omega.cz

France: 11, rue Jacques Cartier, 78280 Guyancourt, France
Tel: +33 (0)1 61 37 2900 FAX: +33 (0)1 30 57 3427
Toll Free France: 0800 466 342
e-mail: sales@omega.fr

Germany/America: Dahnlestrasse 26, D-75392 Dockersgrün, 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
Kingsthorpe, M44 5BD, United Kingdom
ISO 9002 Tel: +44 (0)161 777 6611 FAX: +44 (0)161 777 6622
Certified e-mail: sales@omega.co.uk

It is the policy of OMEGA to comply with all worldwide safety and EMC/CEI regulations that apply. OMEGA is constantly pursuing certification of its products to the European New Approach Directive. 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 Engineering, Inc. 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 / DISCLAIMERS

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 solution. OMEGA's Customer Service Department will issue an authorized Return (AR) number immediately upon receipt of the unit. The Return (AR) number is essential to the unit's warranty. OMEGA's WARRANTY does not apply to equipment repaired from any action of the purchaser, including but not limited to: misassembly, 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 compression, 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, tubes, and brass.

OMEGA is pleased to offer suggestions on the use of its products. However, OMEGA neither makes any representation for any conditions or errors in the specifications nor assumes any liability for damage 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 asserted or the price of such OMEGA be liable for consequential, incidental or punitive 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 warranty and repair requests apply 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 damage in transit.

FOR WARRANTY RETURNS:

- 1. Please have the following information available BEFORE returning OMEGA:
 - 1. Purchase Order number under OMEGA.
 - 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 RETURNS:

- 1. Please have the following information available BEFORE returning OMEGA:
 - 1. Purchase Order number under OMEGA.
 - 2. Model and serial number of the product under warranty, and
 - 3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make routine changes, not model changes, whenever an improvement is possible. This alerts our customers the latest in technology and engineering. OMEGA is a registered trademark of OMEGA ENGINEERING, INC.
© Copyright 2003 OMEGA ENGINEERING, INC. All rights reserved. This document may not be copied, photocopied, reproduced, translated, or reduced to any electronic, medium or machine-readable form, in whole or in part, without the prior written consent of OMEGA ENGINEERING, INC.

Where Do I Find Everything I Need for Process Measurement and Control?

OMEGA...Of Counsel
Shop online at www.omega.com

TEMPERATURE

- Thermocouple, RTD & Thermistor Probes, Connectors, Panels & Assemblies
- Wire: Thermocouple, RTD & Thermistor
- Calibrators & Ice Point References
- Recorders, Controllers & Process Monitors
- Infrared Pyrometers

PRESSURE/STRAIN AND FORCE

- Transducers & Strain Gauges
- Load Cells & Pressure Gauges
- Displacement Transducers
- Instrumentation & Accessories

FLOW/LEVEL

- Rotameters, Gas Mass Flowmeters & Flow Computers
- Air Velocity Indicators
- Turbine/Paddlewheel Systems
- Transmitters & Batch Controllers

pH/CONDUCTIVITY

- pH Electrodes, Testers & Accessories
- Benchtop/Laboratory Meters
- Controllers, Calibrators, Simulators & Pumps
- Industrial pH & Conductivity Equipment

DATA ACQUISITION

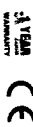
- Data Acquisition & Engineering Software
- Communications-Based Acquisition Systems
- Plug-In Cards for Apple, IBM & Compatibles
- Datalogging Systems
- Recorders, Printers & Plotters

HEATERS

- Heating Cable
- Cartridge & Strip Heaters
- Immersion & Band Heaters
- Flexible Heaters
- Laboratory Heaters

ENVIRONMENTAL MONITORING AND CONTROL

- Metering & Control Instrumentation
- Refrigerators
- Pumps & Tubing
- Air, Soil & Water Monitors
- Industrial Water & Wastewater Treatment
- pH, Conductivity & Dissolved Oxygen Instruments

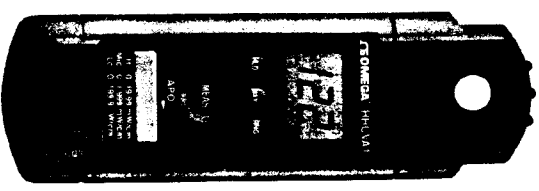


Shop online at

omega.com

www.omega.com

e-mail: info@omega.com



HHUVA1
Digital UVA
Thermometer

ME917/08/03

INTRODUCTION

This HHUVA1 is a portable easy use 3 1/2 digit, compact-sized digital UVA designed for simple one hand operation. The meter provides measurements in 199.9µW/cm² and 19.99mW/cm² units. MAX-HOLD and DATA-HOLD facilities. There is a pocket hook and a magnetic holder on the back of the unit.

SAFETY INFORMATION

It is recommended that you read the safety and operation instructions before using the UVA meter.

WARNING

- To avoid injury or fire hazard, do not use this product in an explosive atmosphere.
- To avoid eye injury, wear eye protection if there is a possibility of exposure to high-intensity rays.
- Do not immerse in liquids, clean the sensor head using only a damp cloth.
- Cover sensor head when not in use to extend silicon photodiode sensor life.

SPECIFICATIONS

GENERAL

- Display:** 3 1/2 digit liquid crystal display (LCD) with maximum reading of 1999.
- Overrange:** (OL) is displayed
- Low battery indication:** The "E3" is displayed when the battery voltage drops below the operating level.
- Measurement rate:** 2.5 times per second, nominal.
- Operating Environment:** 0°C to 50°C at < 75% R.H.
- Storage Temperature:** -20°C to 60°C, 0 to 80% R.H. with battery removed from meter.
- Battery:** 3 pcs 1.5V (AAA size) included.
- Battery Life:** 200 hours (continuous) typical.
- Dimensions:** 155mm(H) x 48mm(W) x 24mm(D).
- Weight:** Approx. 2.9 oz. (81.2g) including battery.

ELECTRICAL

Range: 199.9µW/cm²
1.999mW/cm²
19.99mW/cm²

Resolution:

Range	Resolution
199.9µW/cm ²	0.1µW/cm ²
1.999mW/cm ²	0.001mW/cm ²
19.99mW/cm ²	0.01mW/cm ²

Accuracy:

±(4% FS ± 2 digits) (FS: full scale)
Stated accuracy at 23°C ± 5°C, <75% R.H.

UV sensor spectrum:

Band pass 320nm~400nm.

Wavelength Peak:

365nm.

OPERATING INSTRUCTIONS

Push buttons

MEAS (MEASURE) Button

Press "MEAS" button to turn on the meter for measuring UVA. Press "MEAS" button again to turn off the meter.

Range Select Button

Press "RNG" button to select the desired range. Each time you press "RNG" button, the range (and the input range annunciator) increments, and a new value is displayed.

DATA HOLD Button

Press "HLD" button to enter the Data Hold mode. In the DATA HOLD mode, the "H" annunciator is displayed.

Press the "HLD" button again cancels DATA HOLD mode, causing UVA meter to resume taking measurements.

MAX HOLD Button

Press "MAX" button to toggle in and out of MAX HOLD mode.
In the MAX HOLD mode, the "MAX" annunciator is displayed.

OPERATION

1. Press "MEAS" button to turn meter on, and then set to the desired range (using range button select 199.9µW/cm², 1.999mW/cm², 19.99mW/cm² range).
 2. Remove the cover of sensor head.
 3. Hold the sensor head steady.
 4. Read the UVA value from the display. If magnitude of UV is not known, press "RNG" button to the highest range 19.99mW/cm² and reduce the range until a satisfactory reading is obtained.
 5. Cover sensor head to extend sensor life after use.
 6. Press "MEAS" button measure and hold down the button measure continuously.
- #### APD (Auto power off) Function
- Remove rubber cover on front case and slide the switch to right to enable "APD" function, the "APD" annunciator is displayed. It will turn off automatically after approximately 15 minutes to lengthen battery life. Slide the switch to left to disable "APD" function.

SPECIAL CONSIDERATIONS

- When UVA is received from many directions simultaneously, take special care to avoid reflection or shadowing the sensor with anything.
- For best accuracy, repeat the measurement several times to ensure that the UV source has remained stable.

PROCEDURE OF CALIBRATION

Note:

The following calibration procedure should perform only by a qualified for technician who have access to the items as following.

Equipment:

A UVA lamp the wavelength at 365nm.

Zero Calibration

Set the function/range to the 19.99mW/cm², then cover sensor head adjust VR3 until display reading 00.0±50dgt.

Basic Calibration

Set the function/range to the 199.9µW/cm², then apply 130.0µW/cm² adjust VR10 until reading 130.0µW/cm² ±(4%FS,±2dgt).

MAINTENANCE

Battery Replacement

1. Power is supplied by three 1.5V (AAA size) batteries.
2. The "E3" appears on the LCD display when replacement is needed. To replace the batteries, remove the screw from the back of the meter and lift off the battery cover.
3. Remove the batteries from battery contacts and replace.
4. When not in use for long period of time, remove the batteries.
5. Don't store in a location with high Temp. or high humidity.

Cleaning

Periodically wipe the case with a damp cloth and detergent, do not use abrasives or solvents.