

MICROCURE[®] RADIOMETER & DATAREADER



Actual size: 1.3" x 0.95" x 0.25"



The MicroCure[®] UV Measurement System is comprised of two items:

MicroCure[®] UV Radiometer

- Small (1.3" x 0.95" x 0.25" / 33 x 24.13 x 6.35 mm) microprocessor based, electro-optical instrument that measures the total energy density (Joules/cm²) and peak irradiance (Watts/cm²)
- Lightweight (0.33 ounces/9.4 grams), battery powered radiometer with a fast sample rate (2048 Hz), adapts to a variety of demanding physical and thermal measurement environments where a larger radiometer will not fit
- Available band is UVA in 10 Watt, 2 Watt or 200 milliWatt dynamic ranges
- Each MicroCure is good for 200 readings or one year; whichever comes first
- Once activated, the MicroCure will re-enter 'sleep mode' if not exposed to UV within four minutes

MicroCure[®] DataReader

- The DataReader is portable and used to communicate with and display the data collected by the MicroCure
- The "SELECT" button "toggles" display between *Energy Density* and *Irradiance* (see below) values. The display shows the UV band of the MicroCure.
- The "RESET" button is used to "activate" a MicroCure unit and place it into "active data collection" mode.
- When "activated", the DataReader display shows the number of readings ("r 123") a individual unit has undergone
- The DataReader utilizes a user changeable nine volt battery, low battery symbol, auto shut off and works with all MicroCure units
- The MicroCure utilizes the two case halves to transfer data. Avoid shorting the two case halves against metal or through handling (conductive coating, moist hands)

Applications

The MicroCure excels in UV applications with a small footprint that require accurate, repeatable UV values. The MicroCure provides both Energy Density and Irradiance values in a numerical format that is not subject to different interpretations of color. Applications include:

- Narrow conveyor curing such as credit card processing
- Small container curing (bottles, cans, tubes, etc.)
- Batch applications (semiconductor printing, small part bonders, etc.)
- Printing including digital and pad
- Part curing where flood lamps in fixtures are used
- Dimensional fixtures for curing medical products such as catheters
- Small/large objects such as furniture, headlamps or dashboards, wood moldings
- Flexible light guide systems where the MicroCure can fit in with the part



Top Right : Display showing a "UVA" MicroCure and irradiance values

Right: The "SELECT" button allows you to toggle between Watts and Joules

MicroCure & DataReader Product Specifications (Specifications subject to change without notice)

MicroCure

UVA Spectral Response	320-390 nm
Suggested Operating Ranges	10 Watt (UVA): 500 mW/cm ² to 10 W/cm ² 2 Watt (UVA): 100 mW/cm ² to 2 W/cm ² 200 milliWatt (UVA): 10 mW/cm ² to 200 mW/cm ² DataReader display flashes if the unit has over-ranged. Suggested Operating Range provides the best instrument performance. MicroCure units will "turn on" at lower irradiance values.
Sample Rate/Smooth Mode	2048 samples per second. The MicroCure reports the peak "Smooth Off" irradiance value versus the "RMS" or average irradiance value.
Spatial Response	Approximately cosine
Accuracy	+/- 7% typical @ 25°C, -0.2% per °C over operating range
Operating Temperature Range	Range is 15-70°C
Calibration	Each MicroCure is supplied with a NIST traceable calibration certificate
Battery/Unit Life	Permanent lithium cell/200 readings or one year whichever comes first. Note: Expired MicroCure units can be return to EIT for proper disposal
Timeout Period	4 minutes nominal after last UV exposure or activation with UV exposure
Dimensions/Weight	1.3" x 0.95" x 0.25" (33 x 24.13 x 6.35 mm)/0.33 ounces (9.4 grams)
Materials	Plated Aluminum/Nylon/ RoHS

DataReader

User Interface	Push button switches allow user to display Joule/Watt/cm ² data, activate/ reset the unit
Display	4 digit LCD, resolution shown to 0.001 Joule/Watt/cm ²
Operating Temperature	Range is 0-70° C
Battery/Timeout	User changeable 9V battery either alkaline or lithium/ DataReader timeout period is 30 seconds
Dimensions/Weight	5.77" X 4.38" x 1.45" (139.7 x 108 x 36.8 mm)/ 11.75 oz. (333.11 grams)
Materials	Steel, nylon, polycarbonate, RoHS

Designed and Manufactured in the USA

The MicroCure and DataReader were tested in accordance with EMC Directives of the European Economic Community: 2004/108/EC Amending Directives: 92/31/EEC, 93/68/EEC, 91/263/EEC. The generic product standard was EN 61326-1: 2005 and the specific tests performed were Emissions (EN 55011: 2007), Radiated Immunity (EN 61000-4-3: 2006 +A1: 2008) and Electrostatic Discharge (EN 61000-4-2: 2009)



ABOUT EIT LLC

Founded in 1977, EIT provides contract electronic manufacturing & engineering services for medical, industrial, analytical instrument, tele-communications and aerospace customers from multiple facilities in Virginia and New Hampshire. EIT LLC designs, manufactures, sells, supports and services EIT radiometers and on-line measurement systems for industrial UV curing applications. EIT UV products have been sold since 1986 and are available for UV LED and Broadband (mercury) arc, microwave and spot sources.

For more information contact EIT or:

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