INSTRUMENT MARKETS

Instruments for UV Measurement Monitoring & Process Control

UV-IR Expert UNIONPRINT srl

Introduction

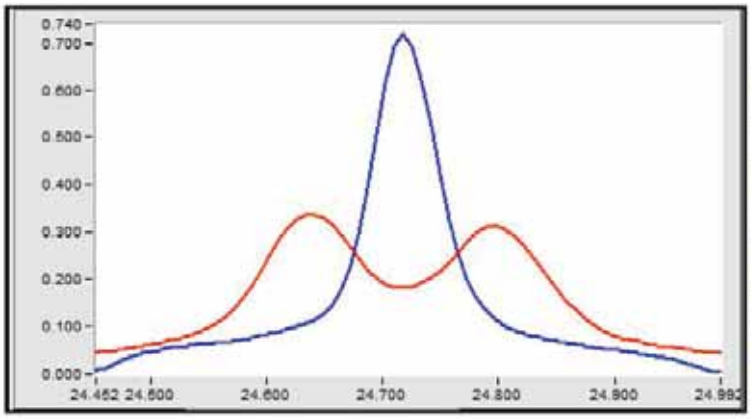
EIT offers a wide selection of UV Measurement & Process Control Instruments. This guide will help you select the most appropriate EIT instrument for your application. Detailed product information can be found on the EIT website (www.eit.com) or through our worldwide network of representatives and distributors. Product improvements and specifications are subject to change.

Why Measure UV?

You cannot establish, maintain, improve or troubleshoot a process without measuring it. EIT instruments allow end users and suppliers (chemistry & equipment) measure key parameters of the curing process. A specification that can be understood and reproduced makes it easier to maintain good cure conditions in production. *Measuring UV helps you save time and money.* Long term, this helps to improve the bottom line of your company.

Above: EIT has several source types (arc, microwave, spot & LED) available in our lab.

Industrial UV energy can be generated by different methods including arc, microwave and LED. The source and bulb type should be matched to your process. Regardless of the source, users need to understand three parameters: Peak Irradiance, Energy Density and Wavelength.



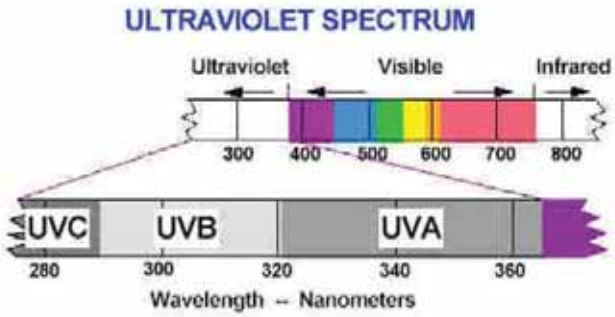
Left: Data collected with an EIT profiling radiometer under two single but different UV sources. Irradiance is on the Y axis and time is displayed on the X axis. Irradiance is depicted by the height of the trace. The red trace is a single, non-focused lamp. Energy density is represented by the area under each curve.

Irradiance & Energy Density

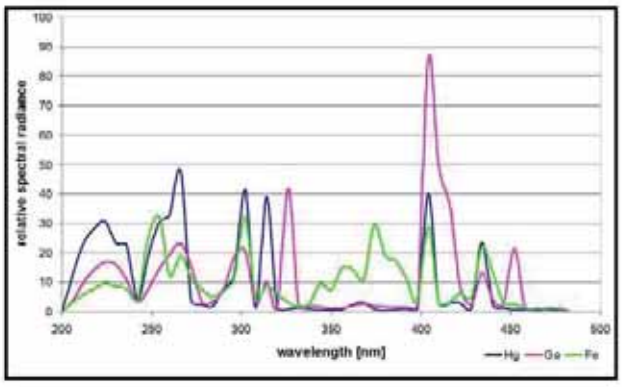
While thermal processes frequently rely on temperature and time, UV processes are ordinarily based on irradiance and time. Irradiance may be thought of as how "bright" a UV source is, often determined by the lamp design, optics and the distance between the source and the target. Irradiance is commonly expressed in terms of Watts per square centimeter (W/cm^2 or mW/cm^2). Energy Density is a measurement of the irradiance over time and is expressed in terms of Joules per square centimeter (J/cm^2 or mJ/cm^2). One Watt for One second = One Joule. Most UV processes require a minimum level of both irradiance and energy density.

Wavelength: Where Do You Measure UV?

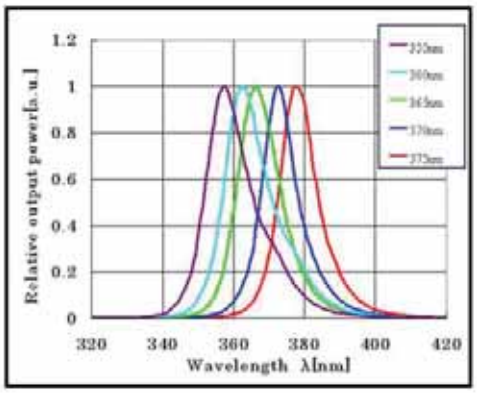
Names are used to identify portions of the visible spectrum. Visible energy between +/- 510-560 nm is "green". Letter designations (UVA, UVB, UVC, UVV) are used to describe UV. The non-vacuum portion of the UV spectrum extends from +/- 200-400 nm. Broad band sources (arc & microwave) produce UV across the spectrum. The amount of UV produced in any one area depends on the bulb type and system design. Longer wavelengths (UVA, UVV) have the ability to move further into a coating while shorter wavelengths (UVC) are more associated with surface cure.



UV LEDs have their energy concentrated in an intense but narrow region. UV LEDs are often described with a number such as 395 nm. A UV source needs to match the chemistry and application. The instrument needs to measure the band(s) which are of importance to the process.



Spectral data from broad band sources: mercury (blue), mercury-gallium (pink) & mercury-iron (green)



Spectral data from UV LED sources

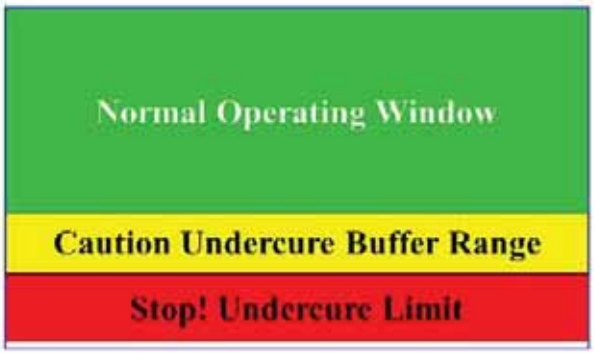
How Do You Measure UV?

Measuring UV requires exposure of the EIT instrument to UV in the same (preferred) method as the product. EIT sensors may be installed in the equipment permanently and be continuously exposed to the UV source. Values obtained may be absolute (calibrated) values in the case of radiometers or relative values in the case of installed sensors. In some cases, both may be used to maintain a process.

Process Window

The conditions and variables in any manufacturing process that produce good quality products (Process Window) need to be identified, optimized, maintained and documented. For UV, the variables include the type and intensity of the UV and the exposure conditions (time or process speed).

The UV measurement strategy you use depends on several factors. Are you in a manufacturing environment looking to maintain an established and documented process? Are you in R&D looking to develop and document a new process? Your measurement strategy needs to factor in the size of the process window, type of product, manufacturing equipment and customer requirements.



Above: Experiment to find your process window and then document it

Right: Data Values from EIT Power Puck II

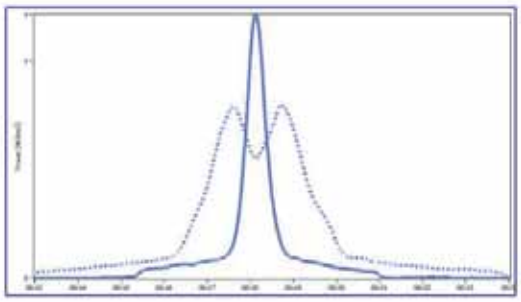
Instrument Types-Radiometers

EIT Radiometers are calibrated to a NIST traceable source and measure the numerical peak UV irradiance (W/cm^2) and/or total energy density (J/cm^2) values. The instrument may move past or under UV source(s) or the source(s) move over the instrument. EIT Radiometers are available in single band or multiband options. Multiband instruments allow the user to identify the bulb type and to look for aging, reflector and lamp condition of each UV station by comparing the readings in the different bands.

Instrument Types-Profiling Radiometers

EIT Profiling Radiometers are also calibrated to a NIST traceable source and measure the numerical peak UV irradiance (W/cm^2) and total energy density (J/cm^2) values when exposed to the UV source(s). EIT Profiling Radiometers provide the most complete picture of the curing process by providing a graph profile of the UV irradiance and/or temperature on the y-axis over time which is on the x-axis. EIT Profiling radiometers:

- Are ideal for multi-lamp systems. While standard radiometers only report aggregate data, profiling radiometers show the performance of each individual lamp
- Save previous measurements as a benchmark for comparison. The software allows you to display and compare a series of measurements to help identify changes in system performance rapidly and graphically
- Show how UV is being delivered to the cure surface. Each lamp's focus characteristics & performance can be easily tracked and analyzed over time
- Offer high speed sample rates and the ability to monitor the temperatures to which the work piece is exposed



Irradiance Profiles from 2 lamps

Instrument Types-Online Measurement Systems

EIT Online Monitoring Systems provide continuous monitoring of UV lamp intensity. The reading is a relative reading in which the user looks for changes over time from previous readings.

Online Monitoring Systems are used:

- In processes where a radiometer will not fit or it is difficult to easily reach the UV source
- For high speed or high product value applications where a tremendous amount of expensive scrap can be generated before a problem might ordinarily be detected
- In applications where the process window is narrow and requires close attention
- As a complement to radiometers to correlate absolute to relative readings
- To generate quality, conformance or compliance documentation in applications that require constant monitoring

Instrument Selection

How do you select the proper EIT instrument for your application? This checklist and product selection chart on the next page cover a few of the important considerations. More information is available through EIT, our representatives & distributors, as well as on the EIT web site: www.eit.com

Instrument Checklist

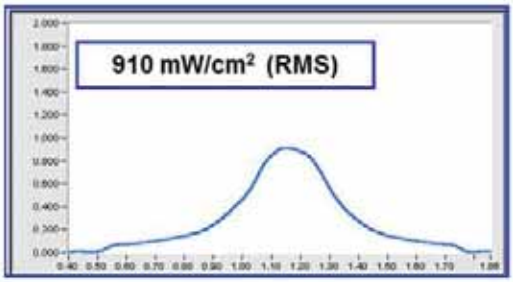
- ✓ **Size** - EIT instruments come in a variety of sizes. Are there any restrictions in my process? If an instrument will not physically fit, is there room to install an Online Compact Sensor?
- ✓ **Measurement Process** - Will exposure of the instrument involve movement or will it be a static exposure? How fast is the movement? Is the process of taking a measurement repeatable?
- ✓ **Ease of Use** - How easy is it to use and get information from the instrument? Does use of the instrument require a process engineer or can production staff use it?
- ✓ **Dynamic Range** - Match the dynamic range of the instrument to the UV source and process. Having values on the instrument from a reading does not mean the instrument range used to collect the readings was optimized for the source.
- ✓ **Spectral Bandwidth** - Determine if the source is broad (arc, microwave) or narrow band (LED). Match the band(s) in the instrument to your process. Multi-band instruments such as the PowerMAP II, Power Puck II Profiler and Power Puck II allow the user to monitor both the short wave and long wave UV. Tracking UV in multiple bands can quickly identify problems such as aging bulbs and dirty reflectors. EIT's instrument responses are relatively narrow and provide specific information versus a single reading from a wide response band of 150-200 nm or more.
- ✓ **Absolute vs. Relative values** - How will I use the values obtained from the instrument? Do I need to communicate in absolute (calibrated) values or am I looking for relative changes over time? Do I need a combination of both calibrated and relative readings?
- ✓ **Communication** - Will I be able to share the values obtained from the instrument with suppliers and others in the industry and have them communicate with me?
- ✓ **Stability, Service & Support** - How stable and how much experience does the company have that makes the product? Will I be able to get service and support from the manufacturer? Do they have a worldwide network of representatives and distributors?

Product Selection Chart

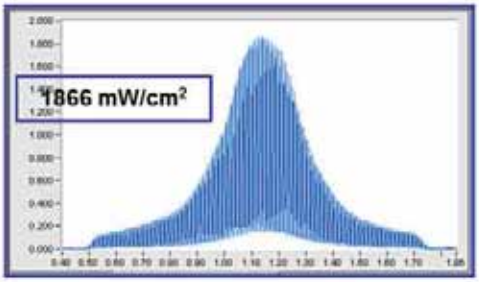
Product ► / Feature ▼	Power Map II	Power Puck II Profiler	UviCure Plus II Profiler	Power Puck II	UviCure Plus II	Micro Cure	Spot Cure	3D Cure	PALM Probe	LEDCure Profiler
Energy Density Reading	•	•	•	•	•	•		•	•	•
Peak Irradiance Reading	•	•	•	•	•	•	•	•	•	•
Sample Rate Effective Samples per Second	128-2048	25, 128, 2048	25, 128, 2048	25, 2048	25, 2048	2048	NA	40	NA	25, 128, 2048
Smooth On Irradiance Values	•	•	•	•	•		•	•	•	•
Smooth Off Irradiance Values	•	•	•	•	•	•				•
Profile Function (Computer)	•	•	•							•
Profile Function (Display)		•	•	•	•					•
Single Band			•		•	•	•	•	•	•
Multi Band (4)	•	•		•						

Irradiance Values: "Average" or "Peak"?

Many EIT instruments sample fast enough to see the cycling of 50/60 Hz AC powered lamps. EIT reports the RMS peak intensity as the "Smooth On" value while the instantaneous peak is reported as the "Smooth Off" value. The example below is the same lamp. The RMS/Smooth On value is 910 mW/cm^2 while the Instantaneous/Smooth Off value is 1866 mW/cm^2. It is important to identify if the irradiance value reported is Smooth On or Smooth Off. Energy Density values are similar for either reading.



Smooth On



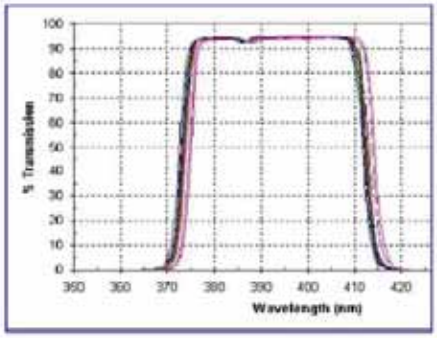
Smooth Off

UV LED Sources

UV energy for industrial applications has traditionally been generated by arc or microwave technology. UV generated by arc or microwave sources is broad and emitted across the ultraviolet, visible and infrared spectrum. UV LEDs continue to advance and improve. The technology, power output levels, spectral choices available and form factor of the equipment have and will continue to change rapidly. Formulators continue to develop products that can work with the relatively narrowband UV LEDs. UV LEDs can be a viable alternative, or in some cases, a primary choice for UV curing applications.

The technical advantages/disadvantages along with the economics (investment costs, maintenance costs, formulation costs) for any type of UV source need to be clearly and fully understood when deciding what to use.

EIT developed the UVA2 band for 395 nm LED sources. This band (380-410 nm) is available in the EIT "Puck" family of instruments including the Power Puck® II Profiler, Power Puck®II, UVICURE® Plus II Profiler and UVICURE® Plus II. EIT continues to support UVA2 and it can be ordered in any of the instruments listed above.

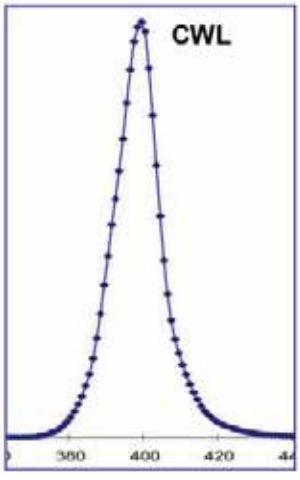


EIT UVA2 Filter Response

LED-R™ Series

Recognizing the growth of UV LEDs, EIT has developed a new approach to UV LED measurement with our new LED-Radiometer (LED-R™) Series of Instruments.

Suppliers of UV LEDs specify a tolerance (often +/- 5nm) for the peak output of energy or Center Wave Length (CWL). There is also variation in the "diodes" selected or "binned" which contribute to the overall pattern of energy delivered by the LED.



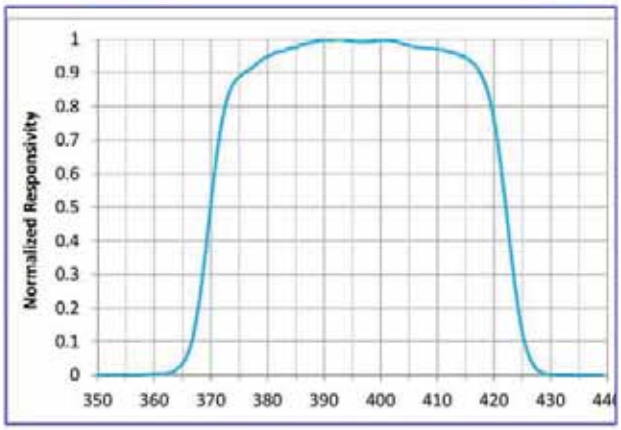
EIT's approach with LED-R is two fold:

1. Design the optics wide enough to account for the variations in CWL and how the diodes are binned

2. Have the instrument response incorporate ALL optical components in the response for an instrument for a ***TOTAL OPTICS RESPONSE***

EIT® LEDCure™

The first radiometer in the LED-R Series is the LEDCure L395. The response (right) is optimized for 395 nm LEDs. The response is the total response and not just the response of the filter. Users can expect more consistent readings run to run and unit to unit.



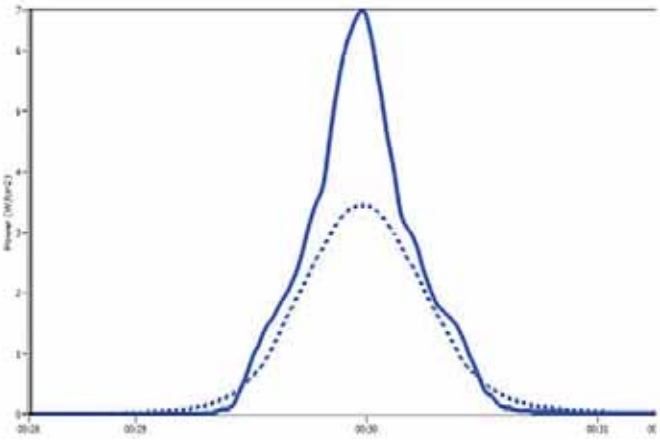
The Total Measured Optics Response of the L395 LEDCure radiometer

Above: L395 Instrument Display

Right: Comparison of LED at different heights with PowerView II software

L395 Profiler Instrument Features

- Measured response of 370-420 nm
- Profiler enabled to transfer Irradiance profile, irradiance & energy density values to computer using PowerView II for further analysis
- Display with data values and irradiance profile
- Dynamic Range: 40 W/cm^2



Profiling Radiometers

EIT's Profiling Radiometers offer several advantages over non-profiling radiometers. In addition to measuring the peak irradiance (W/cm^2) and total energy density (J/cm^2), these instruments provide the user with the irradiance profile as a function of time. Irradiance profiles are useful and allow the user to:

- Compare and analyze UV system changes over time. Previous readings can be easily compared to current readings to look for changes and trouble shoot what has changed. Changes easily identified include:
  - The number and type of lamps
  - Lamp focus and changes to the focus
  - Process speed or exposure time variations
- Document R&D efforts on equipment, formulations and applications
- Transition a process from the lab to production and communicate between facilities and others in the supply chain
- Easily compare and isolate individual lamps in multi-lamp systems
- The PowerMAP II instrument also profiles temperature

UV PowerMAP® II

- Smaller one piece construction, compact size (5.5" L x 2.1" W)
- USB download, works with PowerView II Software®
- User adjustable sample rate, up to 2048 samples per second
- Supports use of optional thermocouple
- Ability to support 1-4 bandwidths

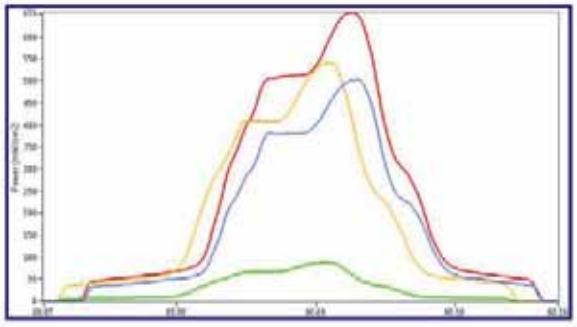
Power Puck® II Profiler & UVICURE® Plus II Profiler

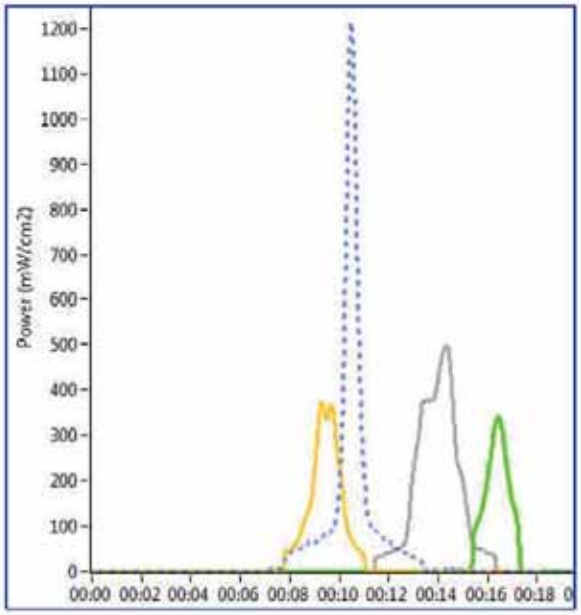
- EIT Puck style radiometer with peak irradiance, energy density and irradiance profile on the display
- Ability to transfer the peak irradiance, energy density and irradiance profile via USB port for analysis with PowerView Software® II
- Sample rate of 128 samples/second
- Power Puck II available with four UV bands, UVICURE Plus II available in a single band

PowerView Software® II

PowerView Software® II allows the user to:

- Analyze irradiance profiles with the ability to zoom in on individual lamps
- Overlay or synchronize different files
- Calculate values for individual lamps in a multi-lamp system
- Display and compare the irradiance profiles and data from two (Sample & Reference) files, each with four bands at once
- Display and compare single bands of four different files at once
- Decide how to display numerical values and group them either by band-width (i.e. UVA) or value (i.e. irradiance)
- Track user defined or specific process parameters
- Easily export irradiance profiles and data for inclusion in reports and presentations
- Export numerical sample/data points to Excel





Above & Right: PowerView II Graph screens
Below: Unit information transferred to PowerView II
Below Right: Data screen from PowerView II

Info

```
Model PowerPuck2 Profiler
Board Temperature 27
Battery Voltage 1.26546
Firmware Version 5
Serial Number 16772
Calibration Date 2012-05-29
Smoothing Profiler
Date & Time 8/17/2012 3:46:11 PM

        J/cm2       W/cm2
UVA     1.257       1.246
UVB     0.505       0.513
UVC     0.061       0.064
UVV     1.127       1.098
```

	Sample File	Reference File	Difference
UVA - Power (mW/cm2)	1550.406	325.695	1224.711
Power (%)	376.0	0	376.0
Energy (mJ/cm2)	346.811	373.638	(26.827)
Energy (%)	(7.2)	0	(7.2)
UVB - Power (mW/cm2)	586.618	317.299	269.318
Power (%)	84.9	0	84.9
Energy (mJ/cm2)	91.949	348.207	(256.258)
Energy (%)	(73.6)	0	(73.6)

Power Puck® II & UVICURE® Plus II

Applications:

- Ideal for all UV curing applications including inks, adhesives, coatings and resins
- Establish the optimum level for curing; then measure and maintain this level for production
- Available in:
    - Standard (High Power) Version-100mW-10W/cm^2; UVC 10mW-1W/cm^2
    - Mid Range Version-10mW-1W/cm^2; UVC 1mW-100mW/cm^2
    - Low Power Range-1mW-100mW/cm^2

Features:

- The UV Power Puck II measures 4 different UV bands simultaneously
- The UVICURE Plus II is a single band instrument (choose UVA, UVA2, UVB, UVC or UVV at time of purchase)
- Robust, easy to use with user replaceable AAA batteries
- Set up menu allows user to display data screen mode, graph screen mode or reference mode, select units and instrument sample rates
- Have both broad band and a 395 nm LED source? The Power Puck II can be ordered with UVA, UVA2, UVB & UVV

Power Puck® II & UVICURE® Plus II Display Screens

Data from Power Puck II

Reference Mode

Graph Mode-Single Lamp

Graph Mode-Two Lamps

Setup Mode

Which Instrument Best Fits My Needs?

The PowerMAP II offers:

- Higher resolution analysis with a sample rate up to 2048/second
- Thermocouple that can be used for temperature sensitive applications

The Power Puck II and UVICURE Plus II Profiler offer:

- The ability to analyze the irradiance profile on a computer plus track key UV metrics on the instrument display
- Profile sample rate of 128/second, fast enough for most industrial UV curing applications

The Power Puck II and UVICURE Plus II offer:

- Easy to use UV measurement solutions with key metrics on the display
- Ability to upgrade to Profiler enabled units in the future

MicroCure®

Applications

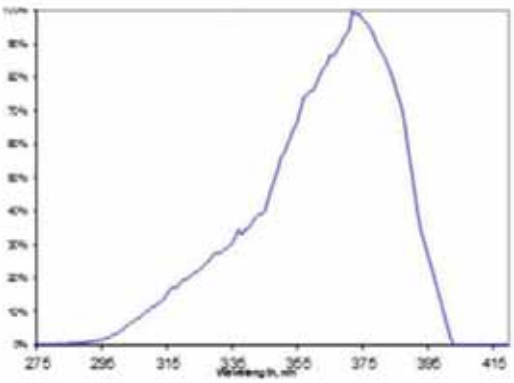
- Use in applications that cannot be accessed by EIT's puck-size radiometers including small piece, small conveyor, exposure systems, batch applications and small dimensional objects
- Use to establish UV curing levels and monitor UV lamp performance

MicroCure

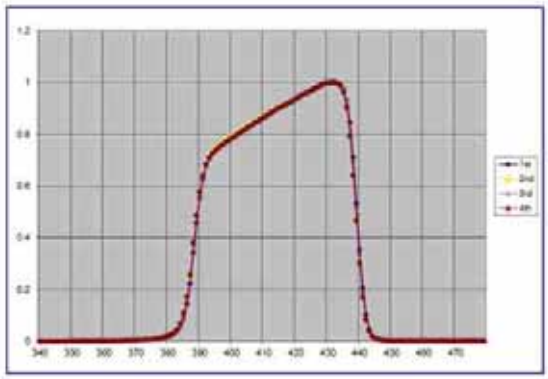
- Miniature radiometer: 1.3"L x 0.95" H x 0.25"T (33.00 mm x 24.13 mm x 6.35 mm)
- High sampling rate-over 2000 samples per second, 2W or 10W versions
- Available in MC-UVA or MC-UVV, see responses below
- Each unit for good for 200 readings or one year, which ever comes first

DataReader

- Battery powered display used to communicate with MicroCure
- Displays peak irradiance and energy density values when MicroCure is inserted into the unit after UV exposure
- Supports UVA and UVV MicroCure units



MicroCure UVA response



MicroCure UVV Response

PALM Probe® (Production Ambient Light Measurement)

Applications

- Use to measure system performance in applications where space is limited or the UV source is difficult to access (such as label, web & converting applications)
- Establish and maintain a UV process window, coordinate readings from online sensors and online displays
- Measure irradiance in production (high level) and stray hazard (low level) environments

Features

- Measure and display peak irradiance, energy density and exposure time
- Wide dynamic range, auto-ranging and zeroing
- Electrically isolated and insulated probe. Contains no fiber which can break
- Locator kits for exact positioning are available

PALM Probe Locator Kit

SpotCure®

Applications

- Monitor spot curing system performance
- Measure light guide degradation
- Determine optimum positioning of light guide
- Compare spot cure systems

Features

- Measures UV irradiance
- Small size 6.4"L x 1.74" diameter
- Easy to use, extremely long battery life
- Adaptors support different size light guides and allow repeatable measurements

PALM Probe® (Production Ambient Light Measurement)

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- Establish and maintain a UV process window, coordinate readings from online sensors and online displays
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Features

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- Wide dynamic range, auto-ranging and zeroing
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PALM Probe Locator Kit

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- Compare spot cure systems

Features

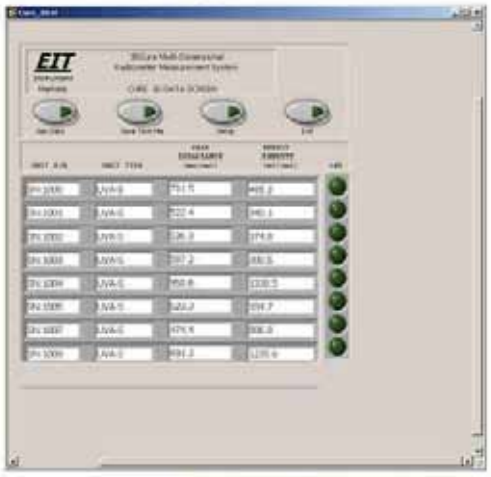
- Measures UV irradiance
- Small size 6.4"L x 1.74" diameter
- Easy to use, extremely long battery life
- Adaptors support different size light guides and allow repeatable measurements

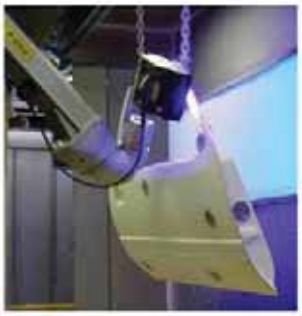
3D Cure® Data Collection Module Features

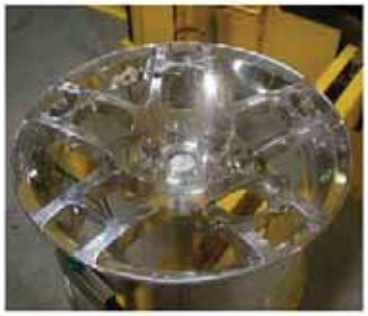
- Small, durable & portable
- Uses rechargeable batteries that provide power to the sensors
- Transfers collected data to a computer via a standard USB interface

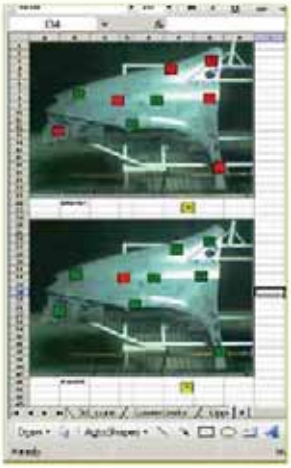
3D Cure® Software Features

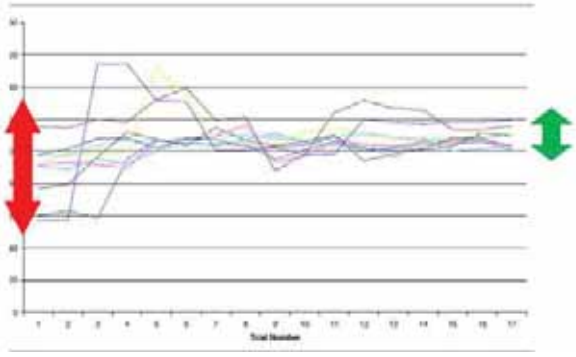
- Supplied with each 3DCure® System
- Displays collected data from each sensor
- Allows operator to 'ping' each sensor to activate LED locator
- Supports ActiveX® and export of the data to other programs











Above: 3D Sensors mounted on auto door and wheel to measure UV

Above Right: Use of Active X to track Sensor location

Left: Multiple runs used to adjust lamps for uniform UV exposure

Online UV Measurement Systems

There are two basic building blocks to online or continuous monitoring; a Compact Sensor and a means to track or display real-time data. EIT offers a number of Compact Sensor and display options. Results are relative and are displayed or presented as either a percentage of the original output, usually set to 100% when the lamps are new, or on a scale of 0-10 volts or 4-20 milliAmps.

Compact Sensor

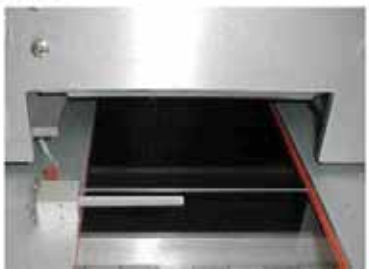
The key to the success of EIT's Online Monitoring Systems is the patented durable, long lasting Compact Sensor. Features include:

- High resistance to solarization (degradation)
- Compact profile for installation in tight spaces
- Square body design for easy mounting
- Optional port for air/nitrogen purge to keep the sensor clean and cool
- Sealed optics to prevent fouling
- Provided signal that is proportional to the UV intensity
- Choice of several bandwidths to fit application
- Multiple Mounting options

EMI Compact Sensor

The installation environment for Compact Sensors can present challenges in terms of electrical magnetic interference (EMI) and/or RF noise. Some environments have the power supply in very close proximity to the UV source and others have large amounts of RF energy nearby that can interfere with the Compact Sensor. EIT has developed a hardened Compact Sensor that has the same stable long lasting properties of our standard Compact Sensor and is also EMI resistant. The EMI versions of the Compact Sensor are used with an EMI version of EIT's UV Intensity Monitor (DIN Rail). The EMI Compact Sensor also is available in a BTR design that mounts Behind The Reflector of microwave sources.

Above
Compact Sensors CS-1, CS-2, BTR, EMI

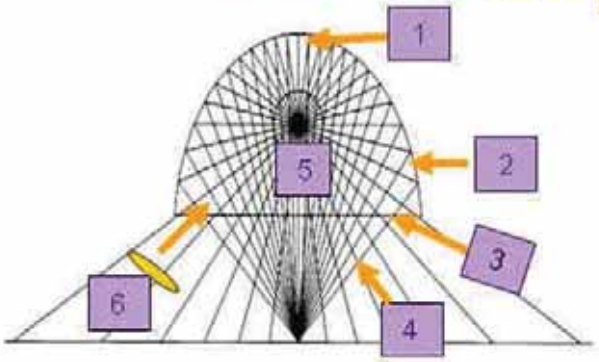


Far Left
Compact Sensor mounted behind lamp reflector

Left
Use of Quartz Rod to pick up UV

Suggested Sensor Locations

1. Behind reflector looking at bulb
2. Behind reflector looking at bulb and reflected energy
3. Below reflector angled up toward bulb and reflected energy
4. From cure surface looking at bulb and reflector
5. From end of lamp housing
6. UV picked up through quartz plate or rod



UV lamp systems vary in design and the above mounting locations are suggestions

CS-1 Compact Sensor with 3.94" (10 cm) Quartz Rod

Online UV Intensity Display

Features

- Monitors a single UV lamp, 0-10V analog output proportion to UV
- Designed for feedback to PLC or other controls
- 24V AC/DC, user settable alarms & relay contacts

UV Intensity Monitor (DIN RAIL)

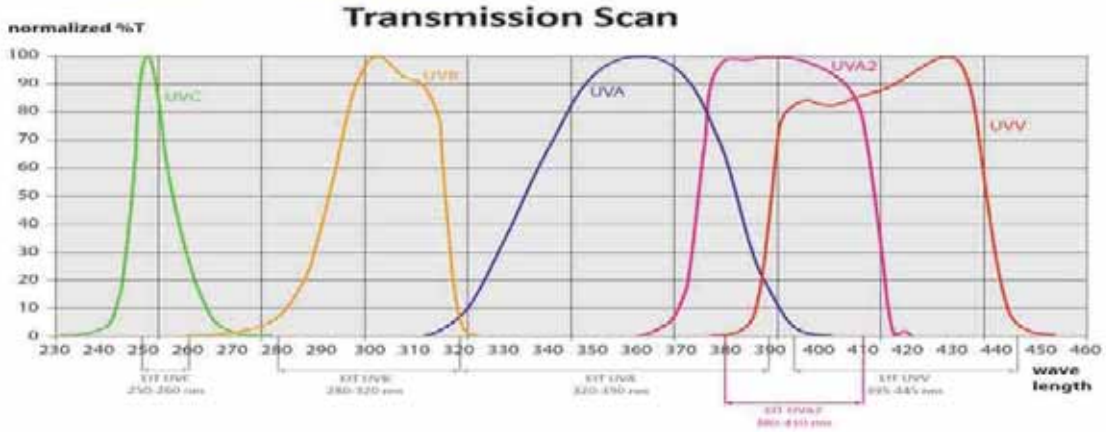
Features

- Monitors a single UV lamp, 0-10V or 4-20 mA analog output proportional to UV
- Designed for PLC feedback with maximum flexibility
- User settable alarms & relay contacts
- 24V AC/DC power, DIN Rail panel mountable
- Available in standard or EMI versions

UV Bandwidth Choices

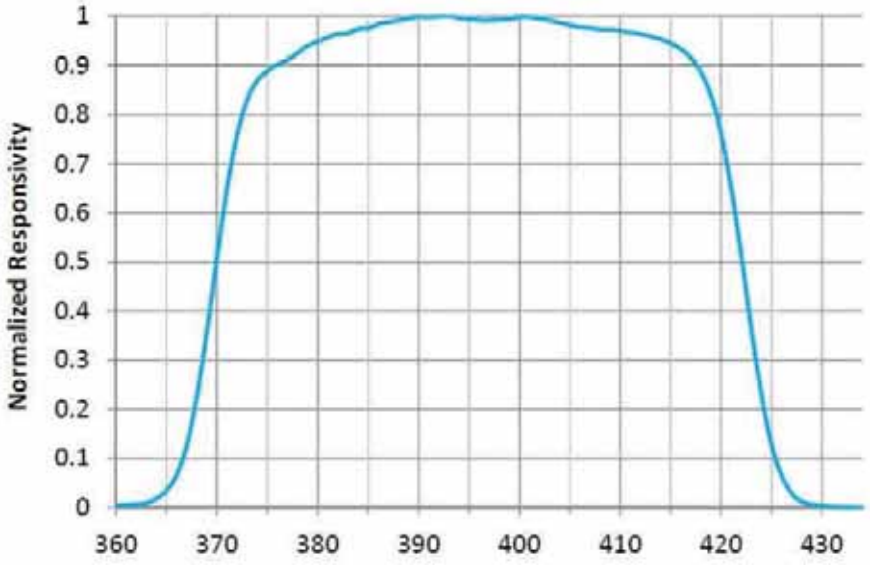
EIT offers instruments in the following bandwidths:

- **UVC:** 250-260 nm
- **UVB:** 280-320 nm
- **UVA:** 320-390 nm
- **UVA2:** 380-410 nm
- **UVV:** 395-445 nm



The responses above are the response curves of the bandpass filter and have been how the UV industry has traditionally characterized instrument responsivity.

EIT also offers the LED-R™ Family of instruments. The first band available for the LED-R Family is L-395 which has a response of 370-425 nm. The response illustrated below is the ***Total Measured Optics Response*** from the instrument.



Cleaning

EIT radiometers are used in a wide variety of locations and conditions. The conditions can vary from pristine (medical cleanroom) to challenging (industrial wood manufacturing facility). Careful cleaning of the outer optics will help your EIT instrument perform as designed between service intervals at EIT. The guidelines are general and there is additional information posted on our web-site. Please contact us with specific questions.

General Cleaning Guidelines

1. Establish an area for cleaning with the necessary supplies.
2. Avoid cleaning the optics with anything dry or abrasive such as a cloth, towel or clothing.
3. Fingerprints, oils from your hands, lint, dust, or contamination on the optics window usually increases the UV values reported.
4. Scratches to the metallic coating on the optics window also most often cause the readings to increase.
5. We suggest two cleaning methods: EIT Instrument Wipes or Swabs. Select the one that best suits your needs and train your staff on these techniques.
6. Further information including a link to videos showing these techniques can be found on the EIT web site (www.eit.com) under UV Products.

Top: Use of clean air to first remove debris

Middle: Use of cotton swabs and IPA

Bottom: Use of EIT Instrument Wipes

EIT® Instrument Wipes

EIT Instrument Wipes contain a fast evaporating, mild solvent for cleaning EIT optics. The wipe is non-linting, non-abrasive and does not contain any detergents or surfactants that can harm the optics. Each wipe stays sealed until used to prevent contamination of the cleaning solution.

Authorized
EIT Service

EIT Services EIT UV Instruments

EIT radiometers are exposed to intense levels of ultraviolet and other energies (such as infrared) in both laboratory and production environments. Instruments may come in contact with coatings. Recommended cleaning procedures for the optics are not always followed.

EIT radiometers are designed, manufactured and assembled by EIT. Periodic service allows EIT to properly evaluate the instrument and restore it back to the original factory settings. Evaluation, service, repair and adjustment of an EIT radiometer requires specialized training and knowledge of EIT's electronics, optics and procedures. Service and adjustment of many EIT instruments also requires proprietary EIT software. Attempts to service instruments using other methods may cause damage, and can delete or overwrite settings needed for the instrument to function properly.

EIT technicians understand the design, specifications and tolerances for our instruments and have access to the original factory components and optics that are used in our radiometers. Each device is serviced or repaired according to EIT procedures to ensure repeatable results and reliable data. A lifetime historical service record is maintained and can be accessed for the life of each instrument.

EIT has also authorized a select number of independent Service Centers throughout the world to work on EIT instruments. The staff at these Service Centers have completed training at EIT and work closely with our technicians and engineers to service EIT instruments using procedures, standards and components supplied by EIT.

From time to time non-authorized labs "try" to perform calibrations on EIT units without EIT's support. Our advice is to ask any party attempting to service an EIT instrument how the units are evaluated and what procedures are followed. How is the instrument adjusted without the proprietary software? How are the optics evaluated?

Customer Service

The EIT Customer Service Staff strive to provide a quick turn-around on all services. Please include an EIT Service Request Form with any units sent to EIT for service. This Service Request Form as well as the most recent information can be found on our website. You may also email EIT at calibrations@eit.com if you have any questions.

Continuing Education & EIT Product Knowledge

EIT is committed to education and having users understand UV and the fundamentals of UV measurement, UV process control, and the proper use of our instruments. EIT exhibits at industry related trade shows, generates articles and technical papers, hosts webinars and frequently presents papers at seminars, conferences and symposiums on UV and UV measurement. Much of the educational work that EIT has generated is posted on the EIT website to help educate users and potential users.

A number of technical papers and presentations are available on the EIT Website (eit.com)

EIT's representatives and distributors also have extensive experience with UV equipment, applications and measurement and should also be used as a resource to help your understanding.

About EIT

Founded in 1977, EIT provides contract electronic assembly manufacturing & engineering services for a variety of medical, industrial, analytical instrument, telecommunications and aerospace customers. EIT operates from multiple facilities in Virginia and New Hampshire. EIT employees work to support our customers and to design, manufacture, assemble, calibrate, sell, service and support our UV measurement products. EIT is ITAR registered and our Quality Management System is registered to ISO 9001, ISO 13485 and AS9100. Visit the EIT website for the most current information and EIT news.

The EIT contract electronic manufacturing facility in Danville, VA

INSTRUMENT MARKETS

eit.com

The Leader in Industrial UV Measurement

EIT Instruments Feature

Robust, industrial design
Reliable, repeatable results
Choice of wavelength response

EIT Wavelength Responses

- UVC: 250-260 nm
- UVB: 280-320 nm
- UVA: 320-390 nm
- UVA2: 380-410 nm
- UVV: 395-445 nm

EIT L Band Response

- L-395: 370-420 nm

Check with EIT as we announce additional L Band choices

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