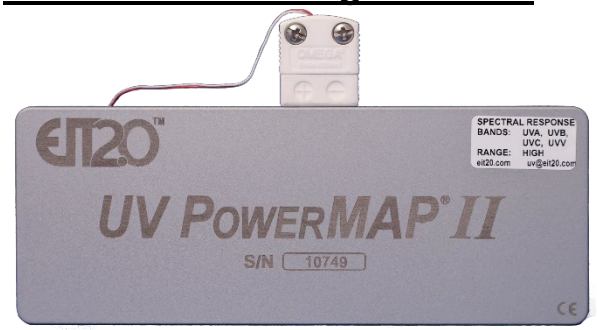
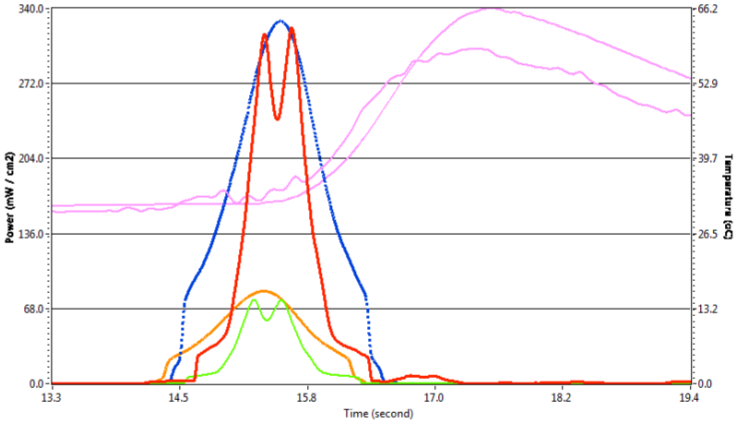
EIT 2.0™ LLC UV PowerMAP® II, LEDMAP™ & UV PowerView Software® III

The EIT 2.0 PowerMAP II and LEDMAP are Profiling Radiometers that provides the irradiance (W/cm^2), energy density (J/cm^2), irradiance profile (Watts/cm^2 as a function of time) and temperature profile (°C as a function of time). The compact, one-piece instruments are smaller than the legacy PowerMAP and have a larger memory for increased data gathering. Both instruments utilize EIT 2.0's UV PowerView Software III for detailed visual and numerical analysis of the sources.

Broadband Profiling Solution:



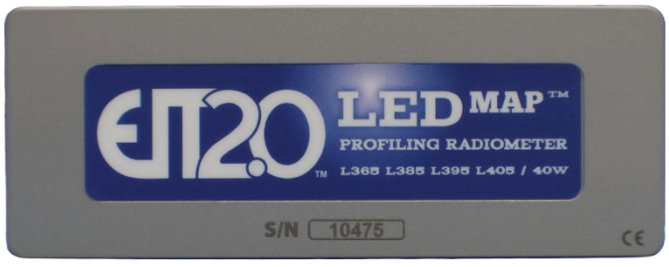
EIT 2.0 UV PowerMAP II with thermocouple



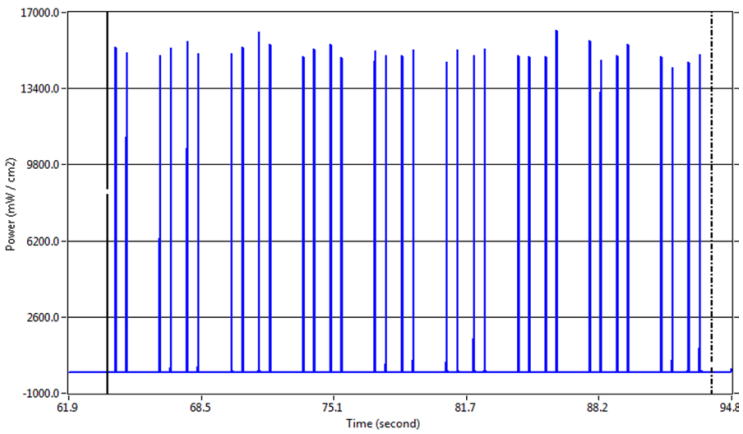
Time is shown on the X-axis, UV irradiance on the left Y-axis and temperature on the right Y-axis

The EIT 2.0 PowerMAP is designed to measure UV broadband sources in four (UVA, UVB, UVC, UVV) EIT 2.0 spectral regions. The image shows the difference in performance for a focused lamp (in blue and orange) and an out-of-focus lamp (in red and green) with the temperature profiles in light purple.

UV LED Profiling Solution:



EIT 2.0 LEDMAP



Time is shown on the X-axis, UV irradiance on the left Y-axis

The EIT 2.0 LEDMAP is designed to measure LED sources in high speed applications with EIT 2.0's patented LED L-Bands. The image shows 34 individual LED peaks collected over a 30-second interval at a speed of 400 fpm on a high speed digital printer. The sample rate was 2130.5 Hz.

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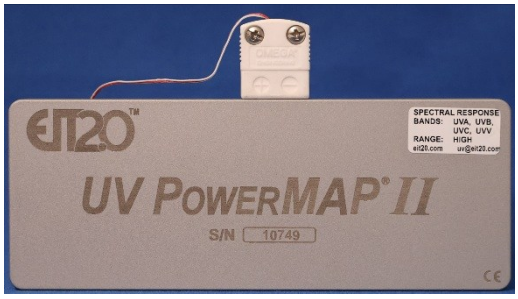
UV PowerMAP® II / LEDMAP™ Profiling Radiometers

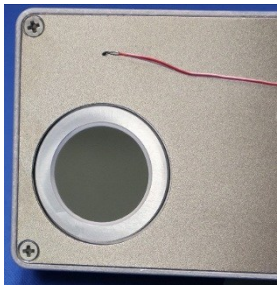
The EIT 2.0 PowerMAP II and LEDMAP provide an extensive "picture" of the UV source(s) and how the UV is delivered to the cure surface. The irradiance (W/cm^2), energy density (J/cm^2), irradiance profile (Watts/cm^2 as a function of time) and the temperature profile (°C as a function of time) are available when the data is transferred to the computer. Profiling radiometers quickly and easily identify and track:

- The number of lamps/arrays and their individual performance
- Focus conditions, bulb/array uniformity, speed/exposure time
- System changes over time with the comparison to stored files
- Maintenance needs before they impact product quality



Top: Instrument with thermocouple

Bottom: Optics with thermocouple attached to housing



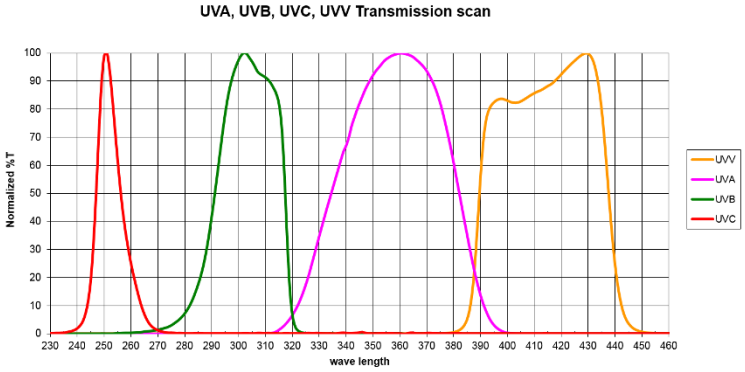
PowerMAP II/LEDMAP Features:

- ***Size:*** Compact size of 5.5" x 2.1" x 0.55" (13.8 cm x 5.3 cm x 1.27 cm), allows use on molding lines and chill drums
- ***Sample Rate:*** User adjustable from 128-2048 (Hz) samples per second
- **Memory Capacity:** Supports 65 minutes of data collection at 2048 Hz.
- ***Temperature Measurement:*** J-type thermocouple included, samples at 32 Hz
- ***Battery:*** Typical battery life is 100 minutes. Rechargeable in +/- 90 minutes with included smart charger. May also charge via a computer USB port.
- ***Pause Mode:*** Allows the user to 'pause' the instrument up to eight different times to collect data prior to transfer to UV PowerView Software III.

Different modes (Stop, Run, Pause) are indicated by the color of the LED

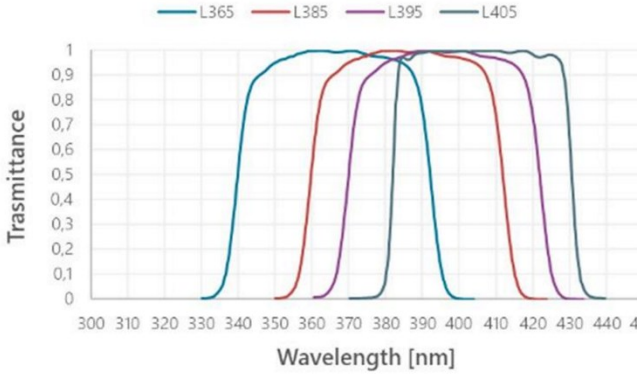
PowerMAP II Responsivity & Ranges

- Four-band instrument designed for measurement of broadband (mercury) sources
- UVA (320-390nm), UVB (280-320nm), UVC (250-260nm) and UVV (395-445nm)
- Two dynamic ranges: 10 W/cm^2 or 100 mW/cm^2



LEDMAP Responsivity & Ranges

- Single or four-band instrumentsdesigned for measurement of UV LEDs
- Patented EIT 2.0 L-Band with all optics included in the instrument response
- L365 (340-392 nm), L385 (360-412 nm), L395 (370-422 nm) and/or L405 (380-432 nm)
- Dynamic range of 40 W/cm^2



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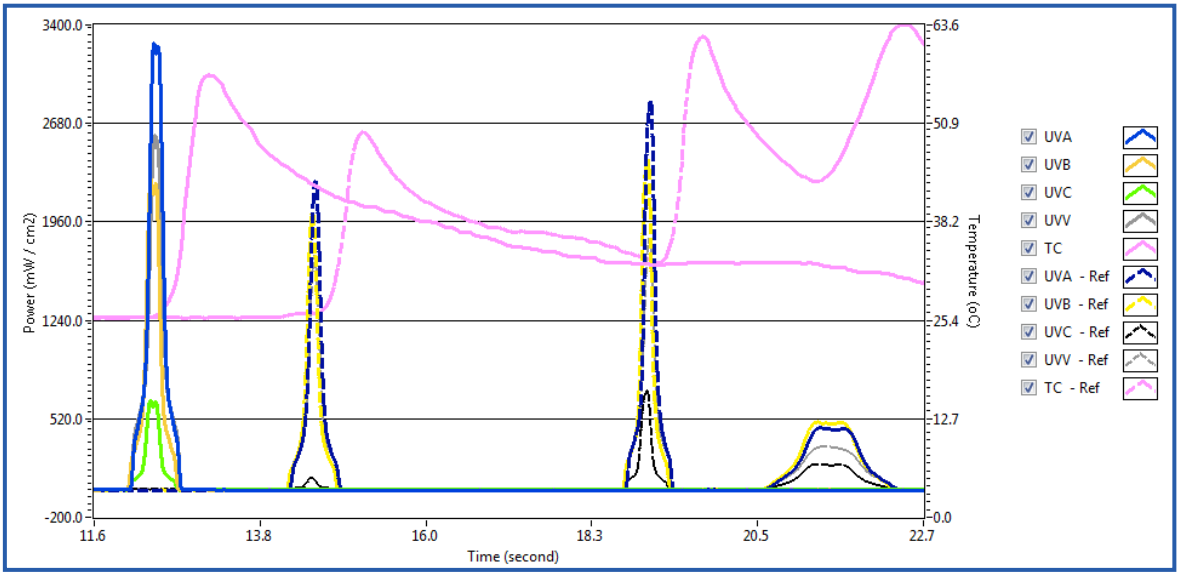
UV PowerView Software® III Features

EIT 2.0's UV PowerView Software III is designed to work with the PowerMAP II, LEDMAP & Profiler versions of the Power Puck® II, UviCure Plus® II and LEDCure®. UV PowerView Software III is a National Instruments LabVIEW based program designed to work on Windows 7-11. Collected data is stored in LabVIEW based *.tdms file format.

Instrument /Software Features

- USB Download
- LabView (*.tdms) file format
- Multiple right click options
- Files are easy to share and export to Excel
- Easily capture and share screen shots, add process notes to files in the enhanced notes section

Graph by File: Display two files with four UV bands and temperature



Summary By Table

	Sample File	Reference File	Difference	%
UVA- Power (mW/cm2)	3266.950	2837.660	429.291	15.1
UVB- Power (mW/cm2)	2271.329	2419.520	-148.191	-6.1
UVC- Power (mW/cm2)	651.502	720.282	-68.780	-9.5
UVV- Power (mW/cm2)	2592.923	1835.324	757.599	41.3
TC_Peak(oC)	57.100	63.600	-6.500	-10.2
UVA- Energy (mJ/cm2)	836.688	1465.192	-628.503	-42.9
UVB- Energy (mJ/cm2)	563.862	1344.463	-780.601	-58.1
UVC- Energy (mJ/cm2)	147.622	310.246	-162.624	-52.4
UVV- Energy (mJ/cm2)	701.967	1106.244	-404.277	-36.5
TC_Mean(oC)	31.202	34.050	-2.848	-8.4
Enable cursors	OFF			
Time	0.00			
Time - Ref	28.84			

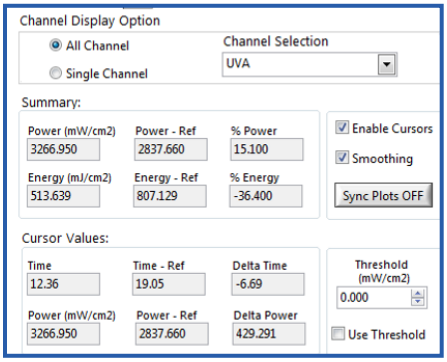
Left:
Table by File with data displayed by units. The data can also be displayed by UV Bands

Bottom Left:
Sample Information screen with data transfer time and sample information. User notes can also be added in this area of the software

Below:
Summary/Cursor section of the software allows analysis of the file

Info:

```
Model: PowerMAP II
Board Temperature: 33
Battery Voltage:  1.37
Firmware Version: 1.48.06.11
Serial Number: 10346
Calibration Date: 2023-06-21
Actual Sample Rate: 2130.5
Date & Time: 18. 1. 2024 12:21:53
```



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EIT 2.0™ PowerMAP® II / LEDMAP™ / UV PowerView Software® III Product Specifications

Shared Physical Characteristics: PowerMAP II & LEDMAP

Unit Dimensions	5.5" x 2.1" x 0.55" / 139.7mm x 53.34mm x 13.97mm (LWH)
Materials	Aluminum & Stainless Steel
Instrument Weight	7.3 ounces (207 grams)
Carrying Case, Ship Kit	Supplied with carrying case, cut polyurethane foam interior, scuff resistant nylon exterior cover, USB cable and USB drive with PowerView III software/manual
Time-Out Period	2 minutes from Standby Mode (Red Flashing LED) with no button activity
Battery/Battery Life	Rechargeable NiMH Battery. Smart charger provided with unit recharges in fast mode (+/- 90 minutes). Charge speed on USB ports varies depending on the computer USB port. Battery life: 100 minutes typical
Memory Capacity	65 minutes of data collection time
Sample Rate Adjustment	User adjustable from 128-2048 Hz (128-256-512-1024-2048)
Operating Temperature	0-75°C Internal temperature; withstands high external temperatures for short periods (Audible alarm indicates when temperature has exceeded upper limit)
Thermocouple	Supplied with J type Thermocouple, effective sample rate of 32 Hz
Spatial Response	Approximately Cosine "Lambertian"
Calibration	Supplied with NIST traceable calibration certificate

PowerMAP II Optics & Performance

Spectral Response	UVA: 320-390nm UVB: 280-320nm UVC: 250-260nm UVV: 395-445nm
Dynamic Ranges Available	10 W/cm^2 High Range 1 W/cm^2 Mid Range 100 mW/cm^2 Low Range
Suggested Operating Ranges **Mid Range is New**	High Range: UVA, UVB, UVV: 100mW/cm² to 10W/cm² /UVC - 10mW/cm² to 1W/cm² **Mid-Range: UVA, UVB, UVV -10mW/cm^2 to 1W/cm^2 / UVC: 1mW/cm^2 to100mW /cm^2** Low Range: UVA, UVB, UVC, UVV: 1 mW/cm² to 100 mW/cm²
Accuracy	+/- 10%; +/- 5% typical plus ±0.2% of full scale Typical ±5% or better
Repeatability	± 2-5% typical; Dependent on source and equipment (conveyor) stability, unit alone better than 2.0%

LEDMAP Optics & Performance

Spectral Response	L365: 340-392 nm; ±2 nm (FWHM, 52 nm); 4 OD Blocking L385: 360-412 nm; ±2 nm (FWHM, 52 nm); 4 OD Blocking L395: 370-422 nm; ±2 nm (FWHM, 52 nm); 4 OD Blocking L405: 380-432 nm; ±2 nm (FWHM, 52 nm); 4 OD Blocking
Dynamic Range	40W/cm^2
Suggested Operating Ranges	200 mW/cm^2-40 W/cm^2; 0-250 J/cm^2 On static (shuttered) sources, readings down to 100 mW/cm^2 are possible
Accuracy	Typically ±2% or better; ± 10% of reading plus ± 0.2% of full scale
Repeatability	Typically better than 0.2% (unit alone); ≤ 1% max
PowerView Software III	National Instruments LabVIEW based programming designed for Windows 7-10. Collected data stored in LabVIEW based *.tdms files **PowerView III is incompatible with ARM-based processors. Confirm before downloading.**

This equipment is in conformity with the following standards and therefore bears CE marking: IEC 61326-1:2005, EN55011: 1998, EN61000-4-2: 1995, A1: 1998, A2: 2001; EN 61000-4-3: 2002, A1: 2002, following the provisions of the applicable directives: 98/34/EEC and amendments, 89/336/EEC and amendments.

CE

About EIT 2.0 LLC

Originally established in 1977 to provide contract engineering & electronic manufacturing services EIT's UV measurement products which include radiometers and on-line measurement systems have been sold worldwide since 1986. EIT 2.0 LLC was established in 2022 under the same ownership and key management team to focus and accelerate the development of EIT's proprietary UV measurement products. Over 113,000 EIT measurement solutions have been sold to measure LED, broadband and UV germicidal sources.

For more information contact EIT 2.0 or:

EIT 2.0 Products are designed and manufactured in the USA.
Product Specifications Subject to Change without Notice.

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