# Product Specifications (Specifications subject to change without notice)

Display	Easy to Read, Yellow Text on Black Background
Suggested Operating Ranges	Standard High Range: UVA, UVB, UVV - 100mW/cm <sup>2</sup> to 10W/cm <sup>2</sup> / UVC - 10mW/cm <sup>2</sup> to 1W/cm <sup>2</sup> Mid-Range: UVA, UVB, UVV -10mW/cm <sup>2</sup> to 1W/cm <sup>2</sup> / UVC: 1mW/cm <sup>2</sup> to 100mW /cm <sup>2</sup> Low Power: UVA, UVB, UVV - 1mW/cm <sup>2</sup> to 100mW/cm <sup>2</sup> / UVC - 1mw/cm <sup>2</sup> to 100mW/cm <sup>2</sup> Units will "turn on" and display data at irradiance values much lower than the suggested Operating Ranges. The suggested Operating Ranges are where the instrument performs best.
Accuracy	+/- 10%; +/- 5% typical
Spectral Ranges (UV Power Puck® II)	4-channel continuous monitoring Standard version: 320-390nm (UVA), 280-320nm (UVB), 250-260nm (UVC), 395-445nm (UVV) UVA2 Version: 380-410nm (UVA2 replaces the UVC band)
Spectral Ranges (UVICURE® Plus II)	1-channel continuous monitoring. 320-390nm (UVA), 280-320nm (UVB), 250-260nm (UVC), 395-445nm (UVV) , 380-410nm (UVA2) for LED monitoring & additive bulb monitoring
Spatial Response	Approximately cosine
Operating Temperature	0-75°C Internal temperature; tolerates high external temperatures for short periods (audible alarm indi- cates when temperature has exceeded tolerance)
Smooth Modes	Smooth ON: Effective Sample rate of 25 samples/second Smooth OFF: Effective Sample rate of 2048 samples/second Smooth PROFILER: Effective Sample rate of 128 samples/second
Sample Rate for Profiling	The Profiler instruments use a fixed sample rate of 128 samples/second for profiling. For best matching between instrument display and PowerView Software <sup>®</sup> II values, use Smooth PROFILER mode
Memory Capacity For Profiling	The memory capacity of the Power Puck <sup>®</sup> II and UVICURE <sup>®</sup> Plus II Profilers in Profiler Mode is sufficient to collect data for >100 minutes
PowerView Software <sup>®</sup> II	National Instruments LabVIEW based programming designed for Windows XP, Windows NT, Windows Vista and Windows 7. Collected data stored in LabVIEW based *.tdms files
Time-Out Period	2 minutes DISPLAY mode (no key activity). A no time-out mode can be ordered
Battery	Two user-replaceable AAA Alkaline Cells
Battery Life	Approximately 20 hours with display on
Dimensions	4.60 x 0.50 inches; 117 mm x 12.7 mm (D x H)
Weight	10.1 ounces (289 grams)
Instrument Materials	Aluminum, stainless steel
Carrying Case Material	Cut polyurethane interior, scuff resistant nylon exterior cover
Carrying Case Weight	9 ounces (260 grams)
Carrying Case Dimensions	10.75 x 3.5 x 7.75 inches; 274 x 89 x 197 mm (W x H x D)

#### Designed and manufactured in the USA

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.





P/N IM-0084 Rev A Puck Profiler Brochure

CE



INSTRUMENT MARKETS



A single band radiometer

The radiometers that first set the standard for the industrial UV curing industry now have the ability to be used with display or as a profiling radiometer that transfers the irradiance profile to a computer for analysis.

# **Display Mode**

Easy to use on the production line with irradiance (W/cm<sup>2</sup>), energy density (J/cm<sup>2</sup>) and irradiance profile information easily available on the display.



	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)

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# UVICURE<sup>®</sup> PLUS II & UVICURE<sup>®</sup> PLUS II PROFILER UV Power Puck<sup>®</sup> II & UV Power Puck<sup>®</sup> II Profiler



Power Puck II A four band radiometer

# **Profiler Mode**

Profiler Mode adds the ability to transfer the irradiance profile and data to a computer for further analysis and evaluation.



- Above Left: Instrument Display-Graph Mode
- Above: Profiler instrument irradiance screen from computer
- Left: Profiler instrument data screen arranged by band from computer

# UVICURE<sup>®</sup> Plus II & UV Power Puck<sup>®</sup> II

# Instrument Features On All EIT "Puck" Style Instruments

- Easy to Use. Single Button for On/Off and Run Mode makes it easy to collect and view data.
- Data Mode. UV data (joules/cm<sup>2</sup>, watts/cm<sup>2</sup>) displayed on one screen for up to 4 bands.
- Graph Mode. A graph illustrating the collected UV irradiance and energy is displayed for each of the UV bands. Graph shows the irradiance profile as a function of time (mW/cm<sup>2</sup> on y-axis, time on x-axis).
- **Reference Mode.** Allows the user to store a run into the instrument memory to allow for easy comparison to current UV conditions.
- Setup Mode Soft buttons are used for function selections, and are indicated on the bottom of the display for easy operator selection and use. User can decide what screen mode & units to display and also select the sample rate.
  - Smooth On: Compatible with previous sampling rate on legacy Power Puck units sampling at 25 samples per second
  - Smooth Off: Compatible with UV PowerMAP sampling rate at over 2000 samples per second.

Top to Bottom: Data Mode, Graph Mode, **Reference Mode, Setup Mode** 

## **Dynamic (Operating) Ranges**

The UVICURE Plus II or UV Power Puck II instruments are available in three dynamic (operating) ranges.

- The standard range (10 Watt) works well for high power curing applications.
- The mid-range (1 Watt) works well with low power arc lamps and in applications with lamps that are non focused or away from the cure surface.
- The low range (100 mW) works well in exposure systems and applications with low power lamps

# **EIT Bands**

- EIT Puck Instruments are available in UVA. UVA2, UVB, UVC, UVV
- UVA (320-390nm), UVA2 (380-410nm) UVB (280-320nm), UVC (250-260nm), UVV (395-445nm)
- UVICURE Plus II available in any one of EIT's bands
- UV Power Puck II available with UVA, UVB, UVC & UVV or with UVA. UVA2. UVB. UVV
- UVA2 can be used to measure LEDs in the +/- 390-400 nm range as well as additive (mercury-iron, mercury gallium) bulbs.



J/CM2

J/CM2

5.503

J/CM2

SETUP

DIFF% +94.6

nne.

OUTHE

UVA

SEL

W/CM2

0.506

0.057

0.969

W/CM2

3.323

W/CM2

3.355 3.433

-2.3

-

SET

RUN

RUN

RUN

EXIT

EIT PROFILER instruments contain the same functions and features as the standard Puck II Instruments. The new PROFILER function allows the transfer of the numerical (irradiance, energy density) values and the irradiance profile to your computer via a USB port for analysis with the new PowerView Software<sup>®</sup> II Program.

# **Puck PROLIFER Instrument Features**

- Fixed sample rate of 128 samples/second
- Memory supports data collection of over 100 minutes Analyze up to four UV bands on two different files or a single UV band on four individual files Information displayed on the screen for production
  - team, transfers to computer for analysis & archiving
- "PROFILER" mode in instrument to match instrument display with calculated PowerView Software<sup>®</sup> II values
- Upgrade to existing USB port instruments with return Easily share & paste information into reports/programs to EIT

## **Graph by File** Display up to four bands on two different files





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# UVICURE<sup>®</sup> PLUS II PROFILER & UV POWER PUCK<sup>®</sup> II PROFILER

# **PowerView Software<sup>®</sup> II Features**

- New program for use with **PROFILER** instruments
- Display instrument data by UV band (UVA, UVB, etc.) or units/parameter (irradiance, energy density)
- Enhanced note and information options to add information to your collected files

mmary (by File)					
	Sample File	Reference File	Difference		
JVA - Power (mW/cm2)	1212.526	374.982	837.544		
Power (%)	223.4	0	223.4		
Energy (mJ/cm2)	1003.519	536.700	466.818		
Energy (%)	87.0	0	87.0		
JVB - Power (mW/cm2)	964.005	370.149	593.856		
Power (%)	160.4	0	160.4		
Energy (mJ/cm2)	710.063	530.889	179.174		
Energy (%)	33.7	0	33.7		
JVC - Power (mW/cm2)	81.138	59.530	21.608		
Power (%)	36.3	0	36.3		
Energy (mJ/cm2)	57.879	83.877	(25.999)		
Energy (%)	(31.0)	0	(31.0)		
JVV - Power (mW/cm2)	6027.102	490.032	5537.070		
Power (%)	1129.9	0	1129.9		
Energy (mJ/cm2)	4863.790	705.767	4158.023		
Energy (%)	589.1	0	589.1		
				-	

#### Table by File Data arranged by bands, also available by units

## Table by Band Summary of data on four different files

	Power (mW/cm2	% Power	Energy (mJ/cm2)	% Energy
16520 test)	1212.526	0	1003.519	0
.6539 2)	374.982	(69.1)	536.700	(46.5)
Arc mid power)	340.695	(71.9)	383.156	(61.8)
ample microwave H slov	496.820	(59.0)	919.322	(8.4)
rom Reference File				
Reference File	(837.544)	(69.1)	(466.818)	(46.5)
Reference File	(871.831)	(71.9)	(620.362)	(61.8)
Reference File	(715.706)	(59.0)	(84.197)	(8.4)

#### File Information includes data transferred from instrument as well as user added information. Select from templates & text or customize to your needs

	Notes	Not
iler 46 -05-29 3:46:11 PM *cm2 .246 .513 .064 .098	Formulator Product Name: Thickness: Application Method: Photoiniator: Photoiniator Concentration: Oligimer Type: Monomer Type: Additives: Trial Conditions:	UV Lin Lar Equ Lar Pov Lin Ref Pro Pro Ma:

Notes
UV System Line: Lamp Number: Equipment: Lamp Type: Power Setting: Line Speed/Exposure Time: Reflector Poistion: Product : Product Notes: Maintenance Notes: