Cure-Met

https://www.gigahertz-optik.com/en-us/product/cure-met/

Product tags: UV , Dosimeter , Handheld device ,



Description

Conveyor Belt Type UV Radiometers

UV curing is a process in which photocurable chemicals applied to substrates are irradiated with high energy UV LED, traditional UV arc or blue light sources. This energy accelerates polymerization (cross-linking) and consequently the hardening or drying (curing) process. The irradiating energy must be controlled and monitored since too low a dose will not cure the product, whereas too high a dose may damage the surface layer.

In this industry conveyor belt systems are commonly employed with the product traveling at a set speed through the UV curing station(s). The belt speed is determined to ensure the required UV dose is delivered. One downside to this system is that irradiance intensity profiles are produced due to LED, UV or blue light source spacing along the belt.

Low profile UV radiometers that can travel down the production line under or through UV curing stations are an important quality control tool. They provide real time measurement of UV curing irradiance and dose ensuring fully cured product repeatedly. One critical design element of the UV disc meter is its ability to withstand high temperatures and intense UV radiation while maintaining stability between recalibrations.

Similarly, conveyor systems employing germicidal UVC are used in food processing industries to disinfect surfaces and food items.

For more information see our application page about **accurate UV Curing and Blue Light Curing Measurements**.



UV Curing Disc for high-intensity LED and UVA



UV Curing Disc Radiometer for high temperature and intensity conveyor belt applications in flat disc shape with cosine-corrected field-of-view



Many measurement modes with specific evaluations

Cure-Met UV Curing Meter for Use on Conveyor Belt Systems

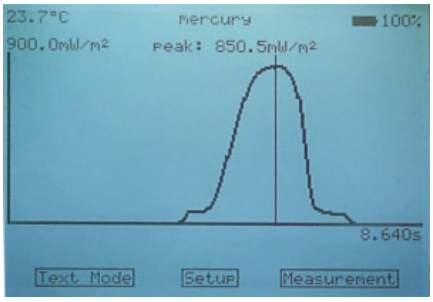
The Cure-Met UV radiometer is designed to handle the high temperature and intense UV or blue light levels normally found in UV curing processes.

It even monitors its internal temperature, which is also displayed, and corrects its reading to compensate for any temperature coefficient differences. A key feature not found in competitive products.

Irradiance profiling is possible with its internal datalogger and graphical display mode.

A reference measurement can be set enabling the percent difference between subsequent test measurements and the reference to be displayed.

All measurement data can be exported to a PC via the device USB port and supplied user software. The Cure-Met is also recharged when connected to



Internal logger for time resolved measurements

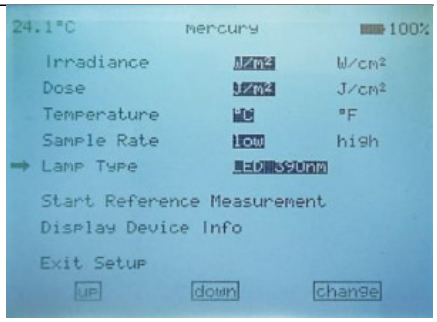
the USB port.

For precise UV curing measurements of LED light sources or other UV and blue light sources, calibration entries for key LED wavelengths are stored in the instrument for user selection to obtain the lowest possible measurement uncertainty. Several versions are available:

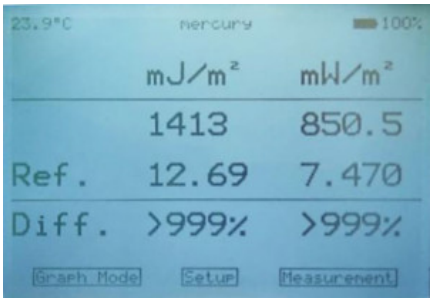
- **Cure-Met-LED** for LED-based curing 330 nm to 480 nm;
- **Cure-Met-LED-V01** for LED-based curing 350 nm to 460 nm;
- **Cure-Met-UVA** for discharge lamp-based curing 328 nm to 382 nm.
- **Cure-Met-UVC** for LED and low pressure Hg (254nm), 250 nm to 290 nm;

The UV meter's field of view is cosine corrected as required for accurate irradiance and dose radiometry.

For UV spectral irradiance measurements the UV Spectroradiometer BTS256-UV is available providing irradiance vs. wavelength data for any type UV or blue light source under test.



intuitive display settings and selection of light source to be measured (calibration factor for e.g. different LED wavelength), unit, reference values, etc.



Perform reference measurements and quality checks with displayed deviations

UV Curing Meter Calibration

All applicable Gigahertz-Optik instrumentation is calibrated and certified to internationally traceable standards following ISO 17025 guidelines and requirements. **Gigahertz-Optik optical radiation calibration laboratory is DIN EN ISO/IEC 17025 accredited** (DaKKs Registration No. D-K-15047-01-00).

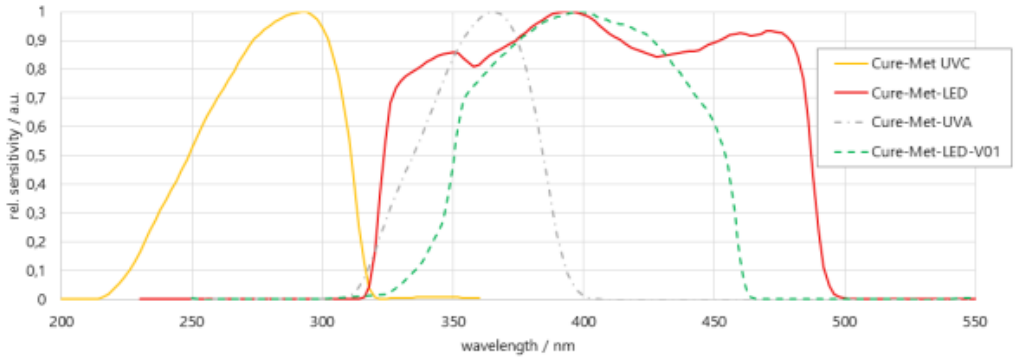
The Cure-Met UV Curing Radiometer is calibrated at key **LED wavelengths** used in the curing process. The end-user can simply select the LED wavelength of interest for best measurement accuracy. The UVC version includes additional calibrations at 254nm for LP-Hg lamps typically used in germicidal applications.



USB port for software operation and charging of the internal battery

Specifications

General	
Short description	UV Curing disc radiometer for high-power UVA & UVC LEDs and lamps. Suited for conveyor belt applications.
Main features	UV LED, UVA and UVC source versions available with optimized calibration strategies. Internal memory and battery for time resolved logging e.g. in conveyor belt applications. Cosine corrected field-of-view, flat disc design. Suited for high temperature and high intensity present in UV curing applications.
Measurement range	1 mW/cm² to 10 W/cm². Different LED wavelengths and UVA/UVC sources
Typical applications	Monitoring and regulation of LED emitters in UV-A and blue light radiation curing, conveyor belt application, etc.

Calibration	Cure-Met-LED: Irradiance calibration (W/cm²) at specific LED peak wavelengths (365 nm, 375 nm, 385 nm, 395 nm, 405 nm, 430 nm, 460 nm). Cure-Met-LED-V01: Irradiance calibration (W/cm²) at specific LED peak wavelengths. Cure-Met-UVA: Irradiance calibration (W/cm²) in the UVA range from 328 nm to 382 nm. Cure-Met-UVC Irradiance calibration (W/cm²) at 254 nm (LP-Hg) and specific LED peak wavelengths (250 nm, 255 nm, 260 nm, 265 nm, 270 nm, 275 nm, 280 nm, 285 nm, 290 nm) Factory calibration. Traceable to international calibration standards. ISO 17025 calibration on request.
Product	
Spectral responsivity	(328 to 382) nm (UVA Model) (330 to 480) nm (LED Model) (350 to 460) nm (LED-V01 Model) (250 to 300) nm (UVC Model) 
ADC	16 bit
Housing	Diameter: 117.6 mm Height: 12.7 mm
f2 (directional response/cosine error)	<10%
Data logger	32000 data points possible with 25 Hz or 2500 Hz
Miscellaneous	
Display	Graphical LCD with backlight, 128 px x 64 px
Temperature range	(-10 to 60) °C
Power Supply	USB interface (Mini-B): 5 VDC, 500 mA Lithium polymer battery charged by USB interface
Battery runtime	10 hours (backlight on, no operation) 6 hours (backlight on, full operation) Note: Backlight is automatically switched off during measurements which extends the battery life.

Purchasing information

Article-Nr	Modell	Description
Product		

Article-Nr	Modell	Description
15314608	Cure-Met-UVA	Cure-Met with UVA calibration, hard case, USB cable, manual
15316675	Cure-Met-LED	Cure-Met with different LED peak wavelength calibrations (365nm, 375nm, 385nm, 395nm, 405nm, 430nm, 460nm), hard case, USB cable, manual
15314607	Cure-Met-LED-V01	Cure-Met with different LED peak wavelength calibrations, hard case, USB cable, manual
15318243	Cure-Met-UVC	Cure-Met for UVC range. Calibration for use with LP-Hg (254 nm) and with different LED peak wavelength calibrations (250nm, 255nm, 260nm, 265nm, 270nm, 275 nm, 280 nm, 285nm, 290 nm), hard case, USB cable, manual
Re-calibration		
15314922	K-CureMet	Calibration of irradiance sensitivity in A/(W/cm²) and A/(W/m²) at different LED Peak Wavelength. Calibration certificate. Option: Calibration of the relative spectral responsivity.
Software		
15314919	S-SDK-CureMet	Software development kit (SDK) for software implementation of the Cure-Met into custom made software.

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- After-Sales Support
- Calibrations & Re-Calibrations (ISO/IEC 17025 Calibration Services, factory calibration, Calibration of Third-Party Products)
- Repairs & Updates
- OEM & Feasibility Consulting of Customized Solutions

Send us your inquiry or contact us by phone or e-mail. We would welcome your feedback too or review us on Google.

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