MSC15-W

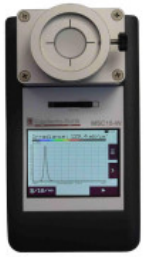
https://www.gigahertz-optik.com/en-us/product/msc15-w/

Product tags:

Description

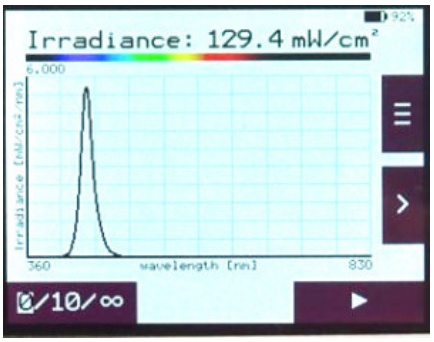
Polymerization Light Source Meter

Dentists and dental surgeons regularly use polymer materials for dental restoration. Those materials are typically applied to teeth after dental surgery has happened in order to protect the teeth. To make the process of applying the materials as comfortable as possible for the patient, curing lights are typically used that allow shorter curing durations of the polymer materials. At the same time, this light polymerization process also saves time for the dentist and allows completing dental surgeries in shorter amounts of time.



Compact and handheld spectral light meter

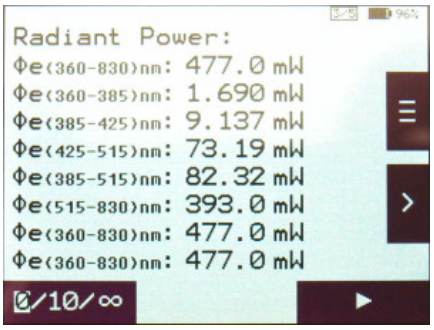
Polymerization light sources are required to give off sufficient amounts of radiation to allow the polymerization process to happen. At the same time, the amount of radiation needs to stay within specific limits so they pose no harm to the patient. The MSC15-W allows testing dental curing lights in a fast and simple manner. Both the total output as well as the wavelength of the curing light are tested to make sure they operate according to specifications.



Display of the spectral power distribution, radiant power

MSC15-W Polymerization and Curing Spectrum Meter

The compact, hand-held MSC15-W light spectrum meter from Gigahertz-Optik GmbH focuses on the precise measurement of the radiant power and spectral distribution to enable the accurate power seperation over wavelength. Its cutting-edge design concentrates on measurement accuracy rather than unnecessary esoteric electronic features. This makes the MSC15-W a high quality Polymerization and Curing Spectrum Meter at an attractive price. The light sensor consists of a fast spectroradiometer that covers a spectral range between 360 nm and 830 nm with a spectral bandwidth of 10 nm. The device also integrates an optical bandwidth correction feature (CIE 214) in order to further improve the quality of the values calculated based on the spectral measurement data.



Radiant Power of different wavelength ranges

Special designed input optics for optical fibers used for polymerization plus a wide measurement range

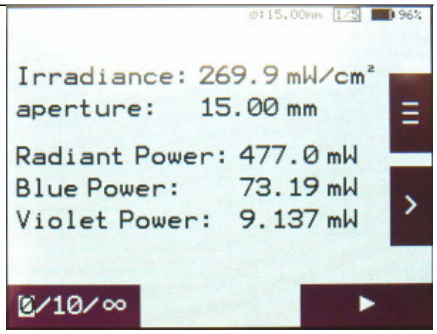
Another key feature that ensures accurate measurements with its carefully designed entrance optic. The entrance optic allows the positioning of the optical fibre directly at the meter and fast and reliable measurements can be performed.

Intuitive simple color touch-screen operation

The colored touch screen of the device makes it extremely easy to use. Activating and deactivating of individual measurement displays is possible as well via a configuration menu which is implemented into the MSC15-W spectral light meter. Uninterrupted operation of more than 8 hours is provided by its lithium ion battery which is recharged via the USB 2.0. Remote control of the device and data read out are made possible by the supplied software.

Application Software

The included software allows control of the MSC15-W light meter device via its USB 2.0 interface. It provides numerical and graphical displays for all the measured parameters. Measurement data can be stored, loaded and exported. The software also enables the configuration of which display screens are active on the meter.



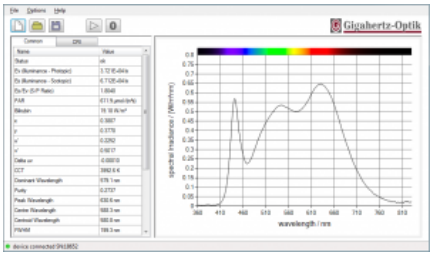
Radiant flux for QA in polymerization

Store up Measurements internally

In addition, the MSC15-W is equipped with an internal memory which can be used to store up measurements internally and read them out via software later. The device allows the comfortable management of the stored measurements on its screen.

Calibration of the MSC15-W Meter

One essential quality feature of photometric devices is their precise and traceable calibration. The MSC15-W is calibrated by Gigahertz-Optik's calibration laboratory that is accredited by DAkkS (D-K-15047-01-00) for the *spectral responsivity* and *spectral irradiance* according to ISO/IEC 17025. Every device is supplied with its respective calibration certificate.



Example measurement in the MSC15's software

Specifications

General	
Short description	Light meter based on spectroradiometer technology for measurement of the radiant power and spectrum for light polymerization and light curing tasks
Main features	Mobile light meter, spectroradiometer 360 nm to 830 nm with a 10 nm optical bandwidth and additional optical bandwidth correction (CIE214), precise Input optics for fibre optics for radiant power measurement, Lithium ion battery with over 8 operation hours and traceable calibration
Measurement range	8E-6 W to 15 W, 360 nm to 830 nm
Typical applications	Precise spectral light meter for the lighting industry and all kind of applications
Calibration	Factory calibration. Traceable to international calibration standards.
Product	
General	Handheld light meter for radiant power, spectral data and light color. Color-Touchscreen, simple intuitive Operation with clearly arranged display views. Storage of 10 measuring points and selection of different display views is possible.
Measured Quantity	Radiant power spectral radiant power Radiant power of individual wavelength ranges CRI (colour rendering index)
Input optics	Integrating sphere type of entrance optic wiht 14,85 mm entrance diameter

Spectral Detector	
Spectral range	(360 - 830) nm
Optical Bandwidth	10 nm optical bandwidth correction applied according to CIE 214
Measurement range	(8E-6 - 15) W (typical blue LED)
ΔCCT	± 50 K (standard illuminant type A, *k=2*) ± 3 MK^{-1} (Standard illuminant type A, *k=1*) ± 4% (depending on the LED spectrum, *k=2*)
Δy Δx uncertainty	± 0.002 (Standard illuminant A, *k=2*)
Repeatability	± 0.0002
Peak wavelength	± 1 nm
Calibration	
Calibration uncertainty	Radiant Power (*k=2*) +/- 5% *(Traceable to national standard. Uncertainty of the standard is included.)*
Miscellaneous	
Interface	USB 2.0
Temperature range	Operation: 10°C to +30°C Storage: -10°C to +50°C
Power Supply	5VDC by USB
Power Supply	rechargeable battery 8h of operation (continuos measurement, 100% display backlight on) 13.5h of operation (one measurement, standy modus, 100% display backlight on) 30h of operation (one measurement, standby-modus, reduced display backlight to 10% (sufficient for indoor lighting conditions))
Display	Color Touchscreen
Weight	160 g
Dimensions	136 mm x 74 mm x 32 mm

Downloads

Type	Description	File-Type	Download
Brochure	Light measurement solutions for general and specialized lighting	pdf	https://www.gigahertz-optik.com/assets/Uploads/generallighting-broschuere-DINA4-hoch-v2.pdf

Purchasing information

Article-Nr	Modell	Description
Product		
15320738	MSC15-W-V01	MSC15-W-V01 spectral light meter measurement device, USB cable, case for device and USB cable, S-MSC15 software as a download, calibration, Factory calibration certificate
Re-calibration		
15306906	K-MSC15-W-Phi	Calibration of the MSC15-W including wavelength adjustment. Factory calibration certificate
Software		
15306347	S-SDK-MSC15	Software development kit

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- Repairs & Updates
- OEM & Feasibility Consulting of Customized Solutions

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Gigahertz Optik GmbH (Headquarter)

Tel.: +49 (0)8193-93700-0
Fax: +49 (0)8193-93700-50
info@gigahertz-optik.de

An der Kaelberweide 12
82299 Tuerkenfeld, Germany

Gigahertz-Optik, Inc. (US office)

Phone: +1-978-462-1818
info-us@gigahertz-optik.com

Boston North Technology Park
Bldg B - Ste 205
Amesbury, MA 01913 USA