LCR-20/LCR-21

https://www.gigahertz-optik.com/en-us/product/lcr-20/

Product tags: UV ,



Description

UV reflection

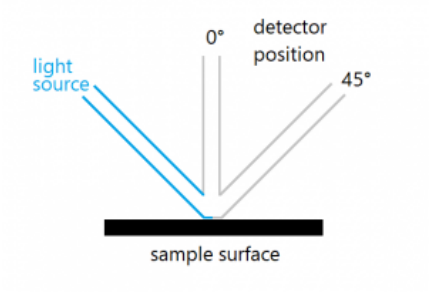
UV reflection is an important parameter of materials by,for instance, the planing of UV disinfection light installations. It is particularly of importance when it comes to specification of reflection material, wall color, etc.



light reflection meter

LCR-20 UV reflection measurement device

The LCR-20 is especially designed for light reflection measurement of surfaces in the UV spectral range. 45° and 0° measurement geometry are possible and the device comprises of a collimated UV radiation source (LED based) with reference detector for correction of light source fluctuations and a UV-37xx detector. The signals are directly measured, corrected and evaluation with a special version of the versatile X1 meter. Both, light source and meter are running with battery. The one of the light source with an USB rechargeable Li-Ion type. For recalibration in field an optional ODM reference standard is used for calibration at 45°/0° (diffuse reflectance) and for recalibration at 45°/45° (specular reflectance) a UV-enhanced mirror is supplied optionally. To ensure the best possible traceability, the reference standards are available in two versions. One version with traceable calibration and one without calibration. The version without calibration is used in the field as a transfer standard, where the respective calibrated standard is only occasionally used to adjust the transfer standard values. All standards are delivered in a closed housing to avoid external influences from the environment.



Measurement geometry LCR-20

LCR-21 UV reflection measurement device

The LCR-21 is based on the same concept, but two detectors are used to perform the measurement simultaneously. In addition, both measured values can be shown on the display.



LCR-21 light source with detector

Measurement device for freehand measurements

The integrated UV LED based light source is tracked by an reference sensor and corrected dynamically. This allows freehand measurements in the field since all influences to the light source like temperature, orientation are corrected. One of the characteristic properties of the LCR series is its ability to easily perform a quick measurement:



1. Connection of the source and X1-5 V01 meter
2. For diffuse measurement at 0/45° position do the recalibration with optional ODM reference
3. Alignment to the test sample/surface
4. Start of measurement
5. Display of the measurement values
6. For specular measurement at 45°/45° use the specular calibration standard and repeat item 3 to 5 (with the LCR-21, steps 3 to 5 do not have to be repeated, since the second detector performs them in parallel)
7. For total reflectance measurement sum up both measurement results from item 5

(diffuse + specular)

LCR-20 light source with detector

Traceable measurements

We offer ODM reflection standards for applications where traceable measurement values are required.



X1 Optometer

Specifications

General	
Short description	Mobile measuring Instrument for UV reflection
Main features	UV LED light source. Compact source and receiver. Battery operated.
Measurement range	Spectral range: 254 nm Detection: Reflection
Typical applications	Measurement of the UV reflection of surfaces for e.g. UV disinfection installations.
Calibration	Relative measurement methode with 100 % reference adjustment.
Product	
Measurement geometry	45°/45° and 45°/0° geometry
Light Source	UV LED collimated with monitor detector
Sensor	UV-3725
Spectral range	254 nm LED Peak +/- LED tolerance
Calibration	Relative measurements after performing 100% match against air. Traceable measurements after matching with calibrated standard filters.
Housing	LCR-20: Aluminum housing (light source) and external detector for switching between positions, with external X1-5 V01. LCR-21: Plastic housing in which everything is integrated, with external X1-5 V03.
Control electronics	X1 Optometer, special firmware version for LCR-20 (X1-5 V01) and LCR-21 (X1-5 V03), but can also be used with any -5 detector.
Spot Diameter	10 mm
Miscellaneous	
Temperature range	10 °C to 40 °C
Humidity	Above the saturation temperature
Electrical connection	USB power supply light source / charging

Purchasing information

Article-Nr	Modell	Description
Product		
15315956	LCR-21	Measurement device
15312480	LCR-20	Measurement device
Calibration		
15312500	K-BNRxxD2-I-RE	Calibration of the reflectance at 254 nm. Calibration certificate included. Measuring field 9 mm x 17 mm or 19,2 mm diagonal. For plate sizes <=2 inch.
Accessories		
15312937	BN-LCR20-Specular	Reference standard for 45°/45° (specular)
15295998	BN-R98-D2	Reference standard for 0°/45° (diffuse)
15312989	BN-LCR20-C-Diffuse	Reference standard for 0°/45° (diffuse) including calibration

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We are known worldwide for excellent technical consulting and after sales support. Contact us to find together the best solution for you. Our services:

- Technical Consulting & Sales
- 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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