CSS-45 with CSS-D

https://www.gigahertz-optik.com/en-us/product/css45-d/

Product tags: VIS

Description

As well as spectroradiometers with integrated displays, Gigahertz-Optik manufactures spectroradiometer sensors that are separated from the operator's handheld controller. These are more suitable for applications that require the sensor to be incorporated within some measurement system or equipment. In some situations the influence of the operator on the measured value can be reduced by the greater distance to the sensor.

Sensor with fully integrated spectroradiometer function

The CSS-45 is a complete spectroradiometer in a compact metal housing. With its cosine-corrected field of view, the sensor is suitable for measuring the absolute spectral irradiance without requiring any additional accessories. The sensor calculates a comprehensive range of measurement quantities from the measured spectral data. The high-quality diffuser offers a cosine-adjusted field of view with an f_2 error of ≤ 1.5 %. The sensor is therefore qualified for measuring extended light sources and large area lighting devices.

Compact control unit

Since measurement data is processed directly in the CSS-45 sensor, the CSS-D unit is used exclusively for controlling the sensor and displaying the measured values. For this purpose, it is connected to the sensor by means of a 2 m long flexible cable. The CSS-D is equipped with a high capacity rechargeable lithium battery which also powers the sensor. The battery can be charged with common USB chargers. The color touch-screen offers a good contrast display.
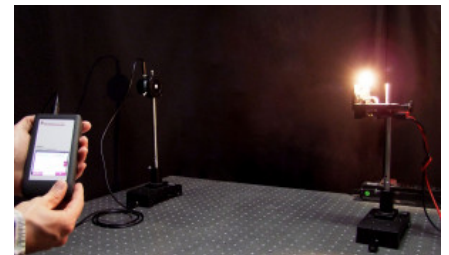
Alternatively, the CSS-D can be attached to a PC by a USB cable. This enables remote-control of the device.

Universal hand-held spectroradiometer

The instrument measures from 360 nm to 830 nm, thereby supporting the CIE spectral range for photometric measurements (ISO/CIE 19476). The spectral bandwidth is 10 nm which, in combination with the mathematical bandwidth correction according to CIE 214, provides a sufficiently high spectral resolution for most photometric and colorimetric applications. The illuminance measurement range is 1 lx to 350.000 lx, exceeding the performance of many other products. An absolute must-have for any array spectroradiometer is the ability to perform a dark current measurement for accuracy and to compensate for temperature influences. The CSS-45 sensor incorporates an electromechanical shutter for this purpose, which performs fully automatic dark current measurements when the operating

Handheld instrumenmt CSS-45 with CSS-D

CSS-45 sensor is used in an application separated from the control unit CSS-D.

Display screenshot.

temperature changes. The meter displays comprehensive radiometric, photometric and colorimetric quantities, all of which are derived from the measured spectrum.

 Many additional measurands expand the supported applications of the handheld spectroradiometer. They are described on the [product page of sensor CSS-45](#).

Calibration and adjustment

With its individual wavelength and linearity correction, the meter provides a cost effective solution for high precision light measurements, irrespective of the intensity or spectral distribution of the source.

 A key quality feature of Gigahertz-Optik's light meters is their precise and traceable calibration. The calibration laboratory of Gigahertz-Optik GmbH guarantees the high quality and traceability of their factory calibrations. The calibration of the CSS-45 with CSS-D is confirmed by a factory calibration certificate.

Specifications

General

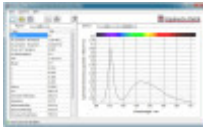|	
Short description	Handheld instrument for illuminance, color, irradiance (360 nm - 830 nm), PAR and bilirubin.
Main features	Compact and robust sensor with splashproof housing and universal mounting options. Sensor separated from control unit for easier integration into measurement setups. Direct output of radiometric, photometric, colorimetric and specialist functions. Precision cosine diffuser. Remote controlled dark level shutter. Application software.
Measurement range	1 lx to 350,000 lx (for white LED), 360 nm to 830 nm.
Typical applications	Compact and precise illuminance handheld measurement device for lighting applications (i. a. architecture, museum illumination) as well as for laboratory applications.
Calibration	Factory calibration. Traceable to international calibration standards.
Product	
Specifications	see specifications of sensor: [CSS-45](#)
Miscellaneous	
Weight	Sensor: 130 g, only sensor without cable
	Display unit: 160 g
Temperature range	Operation: 10°C bis +30°C
	Storage: -10°C bis +50°C
Power Supply	rechargeable battery (>8h normal use, 6h continues measurement, >14h stand-by)

Downloads

Type	Description	File-Type	Download
technical drawing	CSS-45	pdf	https://www.gigahertz-optik.com/assets/Uploads/V127682.pdf
CSS-45 with CSS-D Technical Datasheet	CSS--45 with CSS-D brochure	pdf	https://www.gigahertz-optik.com/assets/Technical_Datasheet_CSS-45_CSS-D_210x297_EN_RZ_2022_Vers1_web.pdf

Configurable with

Product Name	Product Image	Description	Go to product
S-SDK-MSC15		Software Development Kit for MSC15 and CSS-45 variants for full measurement device control and implementation in own software.	https://www.gigahertz-optik.com/en-us/product/s-sdk-msc15/
S-MSC15		Application software for MSC15 and CSS-45 variants for measurement device control, measurement mode setup and data export.	https://www.gigahertz-optik.com/en-us/product/s-msc15/

Purchasing information

Article-Nr	Modell	Description
Product		
15308867	CSS-45	Measurement device, USB cable, software, calibration, calibration certificate.
15308950	CSS-45-WT	Splash-proof measurement device, USB cable, software, calibration certificate.
15309361	CSS-D	Control unit for CSS-45. Connector cable.
Calibration		
15310446	KP-CSS45-E-S	Option: DIN EN ISO/IEC 17025:2018 Test Certificate (DAkkS) Spectral irradiance measurement in wavelength range from 360nm to 830nm.
Re-calibration		
15308903	K-CSS45-E	Re-calibration of a CSS-45's spectral irradiance including wavelength adjustment. Calibration certificate.
15309228	K-CSS45-WT-E	Re-calibration of a CSS-45-WT's spectral irradiance including wavelength adjustment. Calibration certificate.
15311529	KKP-CSS45-E-S	Factory Calibration Certificate with DIN EN ISO/IEC 17025:2018 Test Certificate.
Software		

Article-Nr	Modell	Description
15306347	S-SDK-MSC15	Software Development Kit for software implementation of the CSS-45 into custom software.
Accessories		
15308887	BHO-24	Carry case for CSS-45 and accessories.
15309091	CSS-45-Z01	RS-485 interface connector for CSS-45.
15309559	CSS-45-Z02	25 m long RS485 cable for CSS-45.

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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:

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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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