

ISS-17-RGBW

<https://www.gigahertz-optik.com/en-us/product/iss-17-rgbw/>

Product tags:



Description

Integrating sphere light source

The integrating sphere is a "Uniform Light Source" and provides an illumination field that exhibits a magnificent level of luminance homogeneity.

LEDs based light source

We offer this ISS with an RGBW LED setup in its standard configuration. Due to 4 separate power supply channels the spectral distribution can be tuned dynamically. Especially with the help of a spectroradiometric reference sensor such as the [CSS-45](#), this control is very precise and it is also possible, for example, to control the CCT by means of different LED currents. This is in addition to the intensity control via a variable aperture and/or the LED current.

S-ISS intuitive & powerful control software

In addition to active control of CCT and intensity, the S-ISS can also be used for spectral measurements with the CSS-45 as well as data exports, control sequences, re-adjustments, etc. The S-ISS is therefore the system controller in software version. The performance range of the software will also be continuously increased.

Calibration standard for the spectral radiance

Calibration of the spectral radiance of the illumination field makes it possible to use of the integrating sphere light source as a calibration standard for the comparison of spectral radiometers for spectral radiance. High Dynamic Range Test and Calibration of Imaging and non-Imaging Devices as well as imaging spectrometers or pixel alignment are also major applications. Due to the RGBW LED different CCTs can be used.

ISS-17-RGBW integrating sphere light source

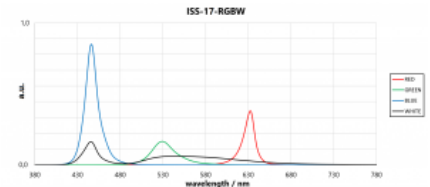
The adjustable aperture between the light source and the integrating sphere makes it possible to adjust the intensity of the spectral radiance and luminance at constant color temperature. The luminance is displayed as a reference value. Besides the luminance, the spectral monitor detector or also called reference detector measures spectral values like the color temperature. This makes it possible to set up the light source for different color temperatures. A diffuser window can be fixed between the light source and the sphere to improve diffuse light distribution in the integrating sphere.



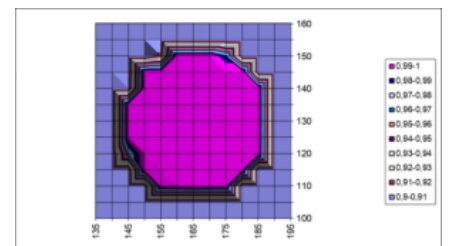
Integrating sphere light source



ISS-17-RGBW with spectral CSS-45 reference detector



The ISS-17-RGBW light source



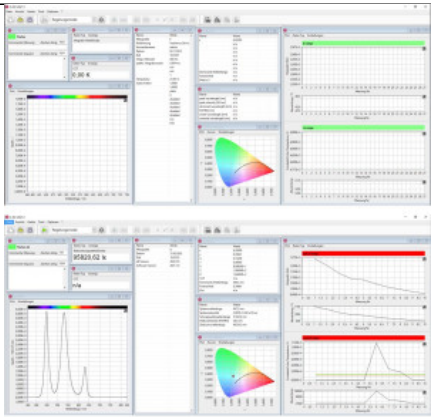
The ISS-17-RGBW offers an excellent uniformity of the Luminance distribution of typical $\pm 0.5\%$ to the center point and $\pm 0.3\%$ to the average value. The diffuser UMPF-LSOK30-DTB was used during the measurement of sphere homogeneity.

ED-SC-4x20-MD control electronic

The control electronic designed and manufactured by Gigahertz-Optik is set-up with a precise 4-channel power supply ensures high precision during operation of the integrating sphere light source.

Traceable calibration

Calibration of the luminance, spectral radiance and color temperature is performed by the [Gigahertz-Optik calibration laboratory for optical measurands](#). The calibration is done in reference to a calibration standard whose spectral radiance was calibration by the national measurements laboratory. The calibration and its results are confirmed by a corresponding calibration certificate that conforms to the ISO 17025.



S-ISS software for regulation and control of the system

Specifications

Product	
Integrating sphere	170 mm internal diameter (Base sphere model UMTB-170-S-1) with barium sulfate coating (ODP97).
Light Output Port	50 mm with resolution tube to suppress the lateral incident light (UMPA-2.0-xx)
Uniformity	better 98 %
Light Source	RGBW LED
Monitor detector	spectral reference sensor CSS-45
Design	S-ISS controls ISS-17-RGBW with the help of VAM variable aperture and CSS-45 monitor detector.
Calibration	
Calibration	Spectral Radiance: Spectral range 380 nm to 780 nm in 10 nm steps, including calibration certificate. Lumiance: At calibration point <i>(different calibrations including ISO 17025 testing are optional available)</i>
Miscellaneous	
Control electronics	ED-SC-4x20-MD elektronik device in a 3/4 19" rack mounting.
Power Supply	AC input for (115 - 230) V / (50 - 60) Hz to the ED-SC-4x20-MD.
Temperature range	(+5 to +30) °C, no condensation

Configurable with

Product Name	Product Image	Description	Go to product
S-ISS		Application Software for Uniform Light Sources (ISS)	https://www.gigahertz-optik.com/en-us/product/s-iss/

Purchasing information

Article-Nr	Modell	Description
Product		
15314291	ISS-17-RGBW	Integrating sphere calibration standard. Including RGBW LED, electronics, CSS45, S-ISS and calibration certificate.
Calibration		
15311742	KP-ISS17VA-L-I	Option: DIN EN ISO/IEC 17025:2018 Test Certificate (DAkKS). Integral luminance (cd/m²).
15311744	KP-ISS17VA-L-S	Option: DIN EN ISO/IEC 17025:2018 Test Certificate (DAkKS). Spectral radiance (W/(m² sr) nm) for the wavelength range 400 nm - 1200 nm in 50 nm steps
Re-calibration		
15311741	KKP-ISS17VA-L-I	Factory Calibration Certificate with DIN EN ISO/IEC 17025:2018 Test Certificate. Integral luminance (cd/m²).
15311743	KKP-ISS17VA-L-S	Factory Calibration Certificate with DIN EN ISO/IEC 17025:2018 Test Certificate. Spectral radiance (W/(m² sr) nm) in the wavelength range 400 nm - 1200 nm in 1 nm steps.
Accessories		
15297388	UMPF-LSOK30-DTB	Diffuse transmitting window for use in UMPF-LSOK30.

Contact, Calibration, Service & Support

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](#).

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