ISD-50HF-BTS256-LED

https://www.gigahertz-optik.com/en-us/product/isd-50hf-bts256-led/

Product tags: VIS

Description

The BTS256-LED light meter

In its standalone mode, the compact BTS256-LED meter is designed for the convenient measurement of luminous flux, spectrum, color, and color rendering index of single LEDs. A key feature is the conical measurement port at the entry of the internal integrating sphere which enables the measurement of onboard LEDs. The bayonet connector used to attach the conical adapter makes it possible to combine the BTS256-LED with other accessory components. Gigahertz-Optik offers different accessories as part of the BTS256-LED Plus Concept which greatly extends the measurement capabilities of the BTS256-LED.

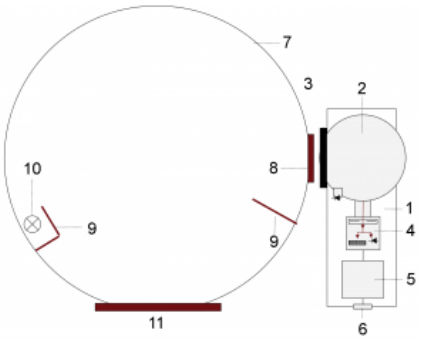
BTS256-LED spectroradiometer with ISD-50HF-V01 integrating sphere for 2pi and 4pi LED lamps inside the sphere. ISD-50HF-V02 with additional measurement port and port plug.

Enhancement of the BTS256-LED using the ISD-50HF-V01 or ISD-50HF-V02 integrating sphere

The 50 cm diameter ISD-50HF-V01 integrating sphere makes it possible to measure the luminous flux, spectrum, color, and color rendering index of extra-large LED lamps with 2pi and 4pi radiation characteristics. One half of the sphere can be opened in order to fix LED lamps onto the sample holder at the center of the sphere. The height of the sample holder can be adjusted.

The ISD-50HF-V02 is offered as an alternative and has an additional 2pi measurement port with a 127 mm diameter. This remains closed whenever it is not in use.

Both variants are equipped with an auxiliary lamp. The BTS256-LED can still be used to measure single, onboard LEDs. A bayonet adapter enables connection of the device onto the ISD-50HF integrating sphere.



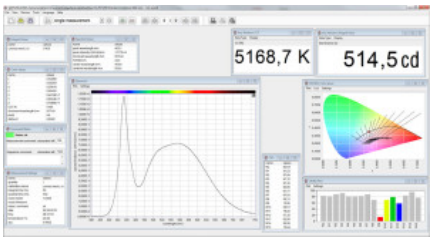
1) BTS256-LED 2) 50mm integrating spherel 3) Precision bayonet mount 4) BiTec sensor with Si photodiode, CMOS diode array spectrometer and shutter 5) Microprocessor 6) USB interface 7) ISD-21 integrating sphere 8) Bayonet mount 9) Baffle 10) Auxiliry lamp 11) Measurement port

Calibration

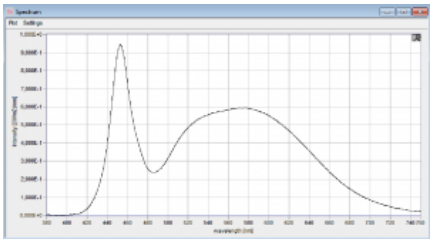
One essential quality feature of photometric devices is their precise and traceable calibration. The ISD-50-HF with the BTS256-LED is calibrated by Gigahertz-Optik's calibration laboratory that is accredited by DAkkS (D-K-15047-01-00) for the *spectral responsivity* and *spectral irradiance* according to ISO/IEC 17025. Calibration for the luminous flux is performed using a BN-LHSF-104, which is placed at the sphere center. Spheres with an additional measurement port require additional calibration with a BN-LHSF-2P-20 calibration lamp, which has 2pi radiation characteristics in the integrating sphere. Every device comes with its respective calibration certificate.

BTS256-LED for measurement of the

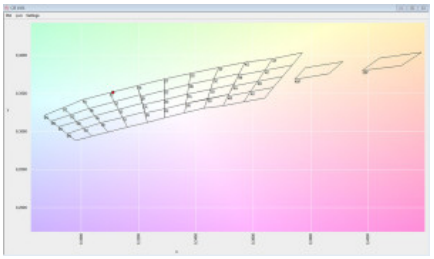
luminous flux, spectrum, color, and color rendering index of single LEDs



The S-BTS256 user software for the luminous flux with integrated and external sphere.



Full screen display of the luminous spectrum



CIE 1931 chromaticity diagram with binning fields

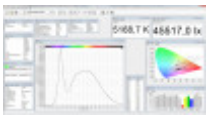
Substitution correction menu

Specifications

General	
Short description	- ISD-50HF-V01-BTS256-LED: Spectroradiometer for measurement of the luminous flux, spectrum, color, and color rendering index. Operation with the LED lamps at the center of the sphere - ISD-50HF-V02-BTS256-LED: spectroradiometer for measurement of the luminous flux, spectrum, color, and color rendering index. Operation with the LED lamps at the center of the sphere or outside the sphere
Main features	- ISD-50HF-V01-BTS256-LED: Integrating sphere with a 50 cm diameter. Height-adjustable sample holder. Spectroradiometer can be used without the integrating sphere to measure single LEDs - ISD-50HF-V02-BTS256-LED: Integrating sphere with a 50 cm diameter. One openable hemisphere. Additional measurement port with a 127 mm diameter. Height-adjustable sample holder. Spectroradiometer can be used without the integrating sphere to measure single LEDs
Measurement range	1.2 lm to 120,000 lm, 360 nm to 830 nm
Typical applications	Inspection of incoming products (LED lamps), quality assurance in production processes, design
Calibration	Factory calibration. Traceable to international standards
Product	
Calibration uncertainty	Luminous flux calibration ±5%
Input optic - ISD-50HF-V01	Integrating sphere with barium sulfate coating. Measurement port with 63.5mm diameter. Port reducer with 50.8mm diameter and knife-edges. 12V/20W Halogen auxiliary lamp. Table stand.
Input optic - ISD-50HF-V02	Integrating sphere with barium sulfate coating. 500mm internal diameter. An openable hemisphere. Additional measurement port with a 127mm diameter in the fixed hemisphere. Port plugs for closure of the measurement port. UMSH-AP-500 height-adjustable sample holder. Two-way baffle between the detector and the sphere center as well as the detector and measurement port. Shadowing to the sphere meter for lamps with an extent of up to 100mm. 12V/50W Halogen auxiliary lamp. Table stand.
General	This device is based on the BTS256-LED, please find detailed specification there.
Spectral Detector	
Typical measurement time	BTS256-LED: max. 1000 lm ≤ 5 ms (white light) BTS256-LED: min. 10 mlm ≤ 30 s (white light) BTS256-LED with ISD-50HF-V01: max. 120000 lm ≤ 5 ms (white light) BTS256-LED with ISD-50HF-V01: min. 1.2 lm ≤ 30 s (white light)
Integral Detector	
max. luminous flux	BTS256-LED typ. 70000 lm BTS256-LED with ISD-50 typ. 8000 klm
Noise equivalent luminous flux	BTS256-LED Tester typ. 0.05 mlm BTS256-LED Tester with ISD-50-V01 typ. 10 mlm

Configurable with

Product Name	Product Image	Description	Go to product
S-SDK-BTS256		Software Development Kit for BTS256 variants.	https://www.gigahertz-optik.com/en-us/product/s-sdk-bts256/

Product Name	Product Image	Description	Go to product
S-BTS256		Application software for BTS256 variants.	https://www.gigahertz-optik.com/en-us/product/s-bts256/
UMLA-SHAP-E27		Bulbs measuring socket for the use with integrating spheres. Features: E27 socket. Quadrupole connecting the lamp to a galvanically isolated power supply and voltage measurement	https://www.gigahertz-optik.com/en-us/product/umla-shap-e27/
UMLA-SHAP-E14		Bulbs measuring socket for the use with integrating spheres. Features: E14 socket. Quadrupole connecting the lamp to a galvanically isolated power supply and voltage measurement	https://www.gigahertz-optik.com/en-us/product/umla-shap-e14/
UMLA-SHAP-G9		Bulbs measuring socket for the use with integrating spheres. Features: G9 socket. Four-line connection of the lamp socket for a separate power supply and voltage measurement.	https://www.gigahertz-optik.com/en-us/product/umla-shap-g9/
UMLA-SHAP-GU10		Bulbs measuring socket for the use with integrating spheres. Features: GU10 socket. Four-line connection of the lamp socket for a separate power supply and voltage measurement.	https://www.gigahertz-optik.com/en-us/product/umla-shap-gu10/
UMLA-SHAP-GX53		Bulbs measuring socket for the use with integrating spheres. Features: GX53 socket. Four-line connection of the lamp socket for a separate power supply and voltage measurement.	https://www.gigahertz-optik.com/en-us/product/umla-shap-gx53/
BN-LHSF-2P-20		Calibration standard lamp for 2π spectral flux, total flux and CCT	https://www.gigahertz-optik.com/en-us/product/bn-lhsf-2p-20/
UMLA-SHAP-GU5.3		Bulbs measuring socket for the use with integrating spheres. Features: GU5.3 socket. Four-line connection of the lamp socket for a separate power supply and voltage measurement.	https://www.gigahertz-optik.com/en-us/product/umla-shap-gu5.3/
BTS256-LED Tester		Compact BiTec Spectroradiometer LED Tester for the Measurement of Total Luminous Flux of Single VIS and NIR LEDs	https://www.gigahertz-optik.com/en-us/product/bts256-led/

Product Name	Product Image	Description	Go to product
BTS256-LED Plus Concept		The Plus concept describes the many applications that are possible with the BTS256-LED	https://www.gigahertz-optik.com/en-us/product/bts256-led-plus-concept/
BN-LLSF-2P		LED based calibration standard according CIE reference spectrum L41 (CIE 251) lamp for luminous flux or irradiance including electrical supply and temperature stabilization	https://www.gigahertz-optik.com/en-us/product/bn-llsf-2p/
BN-LHSF-AP-100		Calibration standard lamp for 4π spectral flux, total flux and CCT	https://www.gigahertz-optik.com/en-us/product/bn-lhsf-ap-100/

Purchasing information

Article-Nr	Modell	Description
Product		
15298101	ISD-50HF-V01	Integrating sphere with 500mm diameter. One hemisphere can be opened. Height-adjustable sample holder. Detector port for the BTS256-LED. Two-direction baffle for shadowing the sphere center and measurement port. Auxiliary lamp, table stand.
15298102	ISD-50HF-V02	Integrating sphere with 500mm diameter. One hemisphere can be opened. Height-adjustable sample holder. Measurement port with 127mm diameter. Removable port plug. Detector port for the BTS256-LED. Two-direction baffle for shadowing the sphere center and measurement port. Auxiliary lamp, table stand.
15308420	BTS256-LED	Measurement device, BTS256-LED-CA10 cone adapter, USB cable, hard-top casing, operation manual, software CD, calibration certificate.
Calibration		
15300260	K-BTS256LED-Phi-2	Calibration of the BTS256-LED with external integrating sphere in 2π measuring geometry.
15306983	K-BTS256LED-Phi-4	Calibration of the BTS256-LED with external integrating sphere in 4π measuring geometry.
Software		
15298218	S-SDK-BTS256	Software Development Kit for the implementation of the BTS256 or variants into custom made software

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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

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