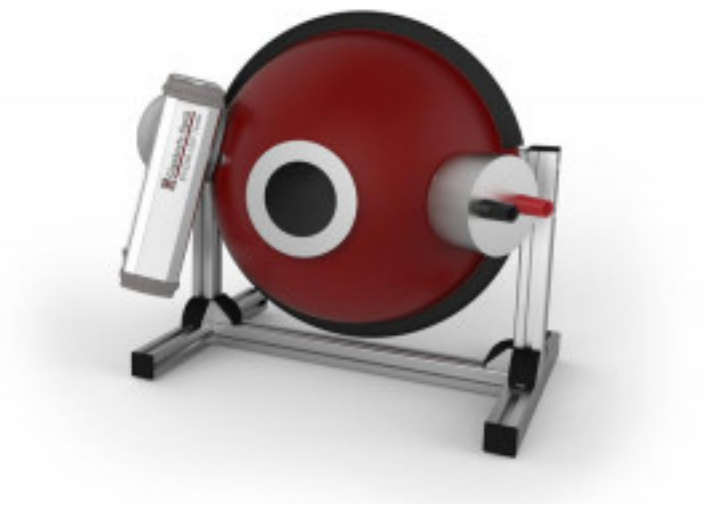
ISD-21-BTS256-LED

https://www.gigahertz-optik.com/en-us/product/bts256-led-isd-21/

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.

Spectroradiometer for LED spot lamps up to 63.5 mm

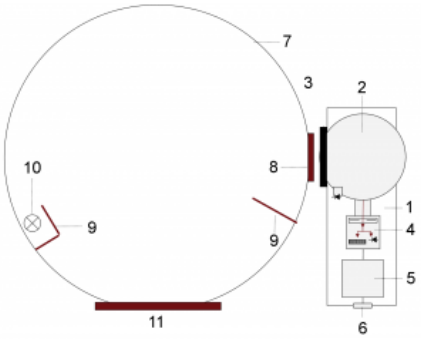
Enhancement of the BTS256-LED using the ISD-21-V01 integrating sphere

The ISD-21-V01 integrating sphere makes it possible to measure the luminous flux, spectrum, color, and color rendering index of single LEDs with diameters of up to 10 mm (BTS256-LED without additional integrating sphere) as well as of LED matrices and LED spot lamps with diameters of up to 63.5 mm. The integrating sphere is equipped with an auxiliary lamp for self-absorption correction. The BTS256-LED can still be used for single, onboard LEDs. A bayonet adapter enables connection of the device onto the ISD-21-V01 integrating sphere.

BTS256-LED spectroradiometer with integrating sphere for LED spot lamps with diameters of up to 63.5 mm

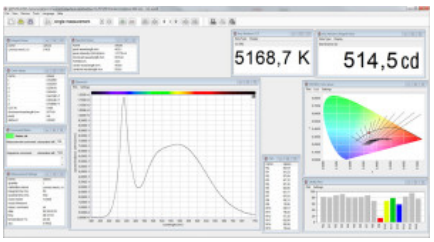
Calibration

One essential quality feature of photometric devices is their precise and traceable calibration. The ISD-21-V01 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 of the luminous flux is done using a BN-LHSF-2P-20 calibration lamp that has 2pi radiation characteristics in the sphere. Every device is delivered with its respective calibration certificate.

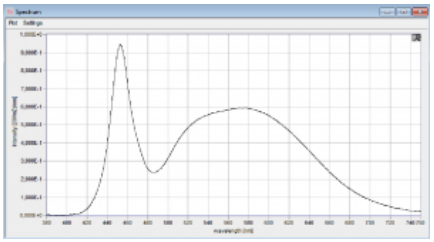


1) BTS256-LED 2) 50mm integrating spherel 3) Precision bayonet mount 4) BiTec sensor with Si photodiode, CMOS diode array spectrometer and shutter 5) Microprocessor 6) USB interface 7) ISD-21 integrating sphere 8) Bayonet mount 9) Baffle 10) Auxiliry lamp 11) Measurement port

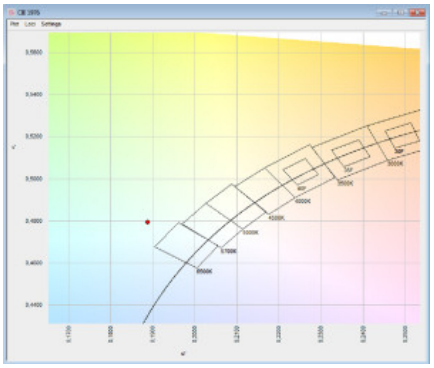
BTS256-LED for measurement of the luminous flux, spectrum, color, and color rendering index of single LEDs



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



Full screen display of the luminous spectrum



CIE 1976 chromaticity diagram with binning fields

Substitution correction menu

Specifications

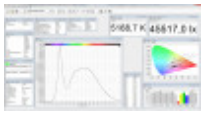
General	
Short description	Spectroradiometer for efficient measurement of the luminous flux, spectrum, color, and Color rendering index of LED spot lamps with diameters of up to 63.5 mm
Main features	Integrating sphere with a 21 cm diameter and 63.5 mm measurement port. Spectroradiometer can be used without the integrating sphere – for measurement of single LEDs.
Measurement range	0.3 lm to 35000 lm, 360 nm to 830 nm
Typical applications	Inspection of incoming products (single LEDs), LED spot lamps with a diameter of up to 63.5 mm, quality assurance in production processes, design
Calibration	Factory calibration. Traceable to international standards
Product	
Calibration uncertainty	Luminous flux calibration ±5%
Input optic - ISD-21-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.
General	This device is based on the BTS256-LED, please find detailed specification there.
Spectral Detector	
Typical measurement time	BTS256-LED: max. 1000 lm ≤ 5ms (white light) BTS256-LED: min. 10 mlm ≤ 30s (white light) BTS256-LED with ISD-21-V01: max. 35000 lm ≤ 5ms (white light) BTS256-LED with ISD-21-V01: min. 350 mlm ≤ 30s (white light)
Integral Detector	
max. luminous flux	BTS256-LED Tester typ. 70000lm BTS256-LED Tester with ISD-21 typ. 2000klm

Noise equivalent luminous flux	BTS256-LED Tester typ. 0.05mlm BTS256-LED Tester with ISD-21 typ. 2mlm

Downloads

Type	Description	File-Type	Download
Dimensions	BTS256-LED Tester + ISD-21-V01	pdf	https://www.gigahertz-optik.com/assets/Uploads/102733-01-ISD-21-V01.pdf

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/
S-BTS256		Application software for BTS256 variants.	https://www.gigahertz-optik.com/en-us/product/s-bts256/
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/
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/

Purchasing information

Article-Nr	Modell	Description
Product		
15298130	ISD-21-V01	Integrating sphere with 63.5 mm port, Detector port for the BTS256-LED. Baffle for shadowing of the measurement port. Auxiliary lamp, table stand
15308420	BTS256-LED	Measurement device, BTS256-LED-CA10 cone adapter, USB cable, hard-top casing, operation manual, S-BTS256 software, calibration certificate.
Calibration		
15300260	K-BTS256LED-Phi2-S-V01	Calibration of the BTS256-LED with external integrating sphere using a 2pi calibration standard.
15300227	K-BTS256LED-PhiC-S-V01	Calibration of the BTS256-LED with external integrating sphere using a collimated beam.
Re-calibration		
15300226	K-BTS256LED-Phi-S-V01	Recalibration of the BTS256-LED Tester. Only possible with the 10mm cone adapter
15300260	K-BTS256LED-Phi2-S-V01	Recalibration of the BTS256-LED with external integrating sphere using a 2pi calibration standard.
15300227	K-BTS256LED-PhiC-S-V01	Recalibration of the BTS256-LED with external integrating sphere using a collimated beam.
Software		
15298218	S-SDK-BTS256	Software Development Kit for the implementation of the BTS256 or variants into custom made software
Accessories		
15297956	BTS256-LED-ALP-V2	Power supply for external auxiliary lamps including remote operation via USB. Output voltage: 0 V to 16 V, output current: 0 A to 10 A.

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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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