

# ISD-50-BTS256-LED

<https://www.gigahertz-optik.com/en-us/product/bts256-led-isd-50-v01/>

**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.

### Enhancement of the BTS256-LED using the ISD-50-V01 integrating sphere

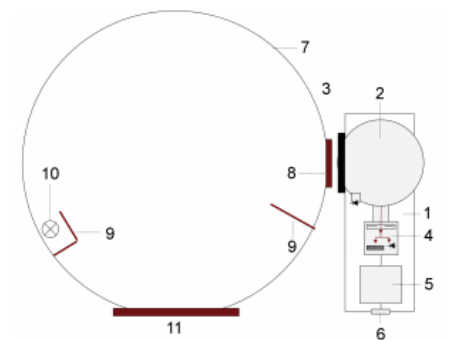
The ISD-50-V01 integrating sphere makes it possible to measure the luminous flux, spectrum, color, and color rendering index of LED arrays and LED spot lamps with diameters of up to 127 mm as well as single LEDs with diameters of up to 10 mm (BTS256-LED without additional integrating sphere).. The integrating 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-50-V01 integrating sphere.

### Calibration

One essential quality feature of photometric devices is their precise and traceable calibration. The ISD-50-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-LHSE-2P-20](#) calibration lamp that has 2pi radiation characteristics in the sphere. Every device is delivered with its respective calibration certificate.



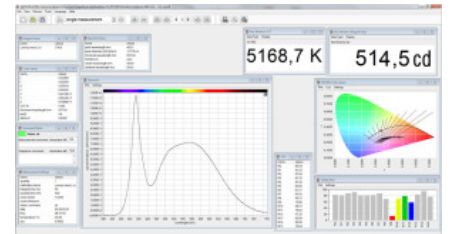
*BTS256-LED spectroradiometer with integrating sphere for LED spot lamps with diameters of up to 127 mm*



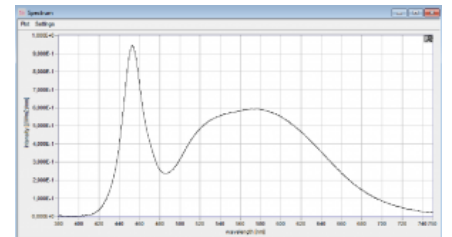
*1) BTS256-LED 2) 50mm integrating sphere 3) Precision bayonet mount 4) BiTec sensor with Si photodiode, CMOS diode array spectrometer and shutter 5) Microprocessor 6) USB interface 7) ISD-21 integrating sphere 8) Bayonet mount 9) Baffle 10) Auxiliary lamp 11) Measurement port*



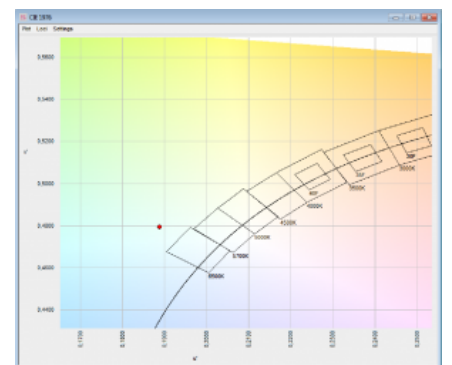
*BTS256-LED for measurement of the luminous flux, spectrum, color, and color rendering index of single LEDs*



*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*



*Self-Absorption correction (also know under ubstition 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 127 mm
Main features	Integrating sphere with a 50 cm diameter and 127 mm measurement port. Spectroradiometer can be used without the integrating sphere – for measurement of single LEDs
Measurement range	1.2 lm to 120,000 lm, 360 nm to 830 nm
Typical applications	Inspection of incoming products (single LEDs), LED spot lamps with a diameter of up to 127 mm, quality assurance in production processes, design
Calibration	Factory calibration. Traceable to international standards

### Product

Calibration uncertainty	Luminous flux calibration $\pm 5\%$
Input optic - ISD-50-V01	Integrating sphere with barium sulfate coating. Measurement port with 127mm diameter. Port reducer with 50.8mm diameter and knife-edges. 12V/20W Halogen auxiliary lamp. Table stand.
General	This device is based on the <a href="#">BTS256-LED</a> , please find detailed specification there.

### Spectral Detector

Typical measurement time	BTS256-LED: max. 1000 lm $\leq$ 5 ms (white light)
	BTS256-LED: min. 10 mlm $\leq$ 30 s (white light)
	BTS256-LED with ISD-50-V01: max. 120000 lm $\leq$ 5 ms (white light)
	BTS256-LED with ISD-50-V01: min. 1,2 lm $\leq$ 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

## Downloads

Type	Description	File-Type	Download
Dimensions	BTS256-LED + ISD-50-V01	pdf	<a href="https://www.gigahertz-optik.com/assets/Uploads/102732-01-isd-50-v01.pdf">https://www.gigahertz-optik.com/assets/Uploads/102732-01-isd-50-v01.pdf</a>

## Configurable with

Product Name	Product Image	Description	Go to product
S-SDK-BTS256		Software Development Kit for BTS256 variants.	<a href="https://www.gigahertz-optik.com/en-us/product/s-sdk-bts256/">https://www.gigahertz-optik.com/en-us/product/s-sdk-bts256/</a>
S-BTS256		Application software for BTS256 variants.	<a href="https://www.gigahertz-optik.com/en-us/product/s-bts256/">https://www.gigahertz-optik.com/en-us/product/s-bts256/</a>
BN-LHSF-2P-20		Calibration standard lamp for 2π spectral flux, total flux and CCT	<a href="https://www.gigahertz-optik.com/en-us/product/bn-lhsf-2p-20/">https://www.gigahertz-optik.com/en-us/product/bn-lhsf-2p-20/</a>
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.	<a href="https://www.gigahertz-optik.com/en-us/product/umla-shap-gu5.3/">https://www.gigahertz-optik.com/en-us/product/umla-shap-gu5.3/</a>
BTS256-LED Tester		Compact BiTec Spectroradiometer LED Tester for the Measurement of Total Luminous Flux of Single VIS and NIR LEDs	<a href="https://www.gigahertz-optik.com/en-us/product/bts256-led/">https://www.gigahertz-optik.com/en-us/product/bts256-led/</a>
BTS256-LED Plus Concept		The Plus concept describes the many applications that are possible with the BTS256-LED	<a href="https://www.gigahertz-optik.com/en-us/product/bts256-led-plus-concept/">https://www.gigahertz-optik.com/en-us/product/bts256-led-plus-concept/</a>
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	<a href="https://www.gigahertz-optik.com/en-us/product/bn-llsf-2p/">https://www.gigahertz-optik.com/en-us/product/bn-llsf-2p/</a>
BN-LHSF-AP-100		Calibration standard lamp for 4π spectral flux, total flux and CCT	<a href="https://www.gigahertz-optik.com/en-us/product/bn-lhsf-ap-100/">https://www.gigahertz-optik.com/en-us/product/bn-lhsf-ap-100/</a>

## Purchasing information

Article-Nr	Modell	Description
<b>Product</b>		
15298128	ISD-50-V01	Integrating sphere, 80mm port reducer, Detector port for the BTS256-LED. Aperture for shadowing of the measurement port. Auxiliary lamp

<b>Article-Nr</b>	<b>Modell</b>	<b>Description</b>
15308420	BTS256-LED	Measurement device, BTS256-LED-CA10 cone adapter, USB cable, hard-top casing, operation manual, software CD, calibration certificate.
<b>Calibration</b>		
15300260	K-BTS256LED-Phi-2	Calibration of the BTS256-LED with external integrating sphere in $2\pi$ geometry.
<b>Re-calibration</b>		
15300226	K-BTS256-LED-I	Recalibration of the BTS256-LED Tester. Only possible with the 10mm cone adapter
15300260	K-BTS256LED-Phi-2	Re-calibration of the BTS256-LED with external integrating sphere in $2\pi$ geometry.
<b>Software</b>		
15298218	S-SDK-BTS256	Software Development Kit for the implementation of the BTS256 or variants into custom made software

## 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](#).

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