

BN-LHSF-2P-20

<https://www.gigahertz-optik.de/en-us/product/BN-LHSF-2P-20>

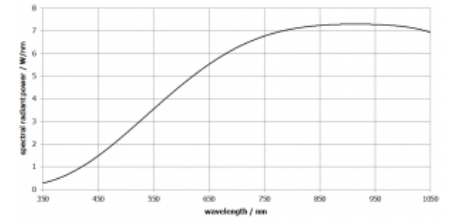
Product tags:



Description

Calibration standards

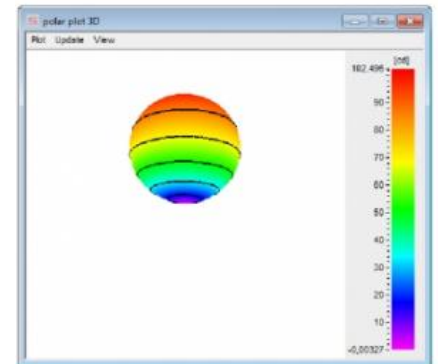
Calibration standards enable the calibration and adjustment of measurement instruments to absolute measurement quantities. Calibration standards provide a reference signal corresponding to the measurement quantity to be calibrated. The reference signal of the calibration standard is calibrated in the respective measurement quantity. The calibration of the measurement instrument is performed by comparing the measurement signal of the measurement device with the standard specifications in the calibration certificate. Deviations are compensated for by adjusting the measurement instrument accordingly.



Typical emission spectrum

Measurement of the spectral radiant flux

The spectral radiant flux [W/nm] is important for qualification of illuminants based on their total emitted radiant power. The spectral radiant flux and its photometric equivalent luminous flux is therefore also used in the investigation of the energy efficiency of lamps. In order to measure the spectral radiant flux, the total light emitted by the lamp must be measured regardless of the radiation direction. Integrating sphere spectrometers and goniometers are typical measurement instruments for the spectral radiant flux.



3D illustration of the luminous intensity distribution

2π radiation characteristics

Calibration standard lamps with 2π radiation distribution characteristics are preferred for calibration of integrating sphere spectrometers that are used in measurement of lamps such as LEDs and spot lamps with hemispherical light distribution. By use of 2π standard lamps calibration is done under similar illumination conditions of the sphere surface, baffle and sample holder as in the test sample measurement.



BN-LHSF-2P-20

A special feature of the BN-LHSF-2P-20 calibration standard lamp is its 2π radiation characteristics which make it ideal for calibration of integrating sphere spectrometers used for measurement of LEDs and spot lamps. The calibration standard has a quartz halogen lamp that is characterized by its continuous emission spectrum. The socket of the lamp itself is active air flowed using a fan to maintain emission stability. This standard lamp can be directly mounted at the measurement port of an integrating sphere with an UMPF-1.0-HL port frame. Adapters are also offered for larger frames.

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Optional traceable factory calibration

The optional calibration of the spectral irradiance is performed by

Gigahertz-Optik's calibration laboratory for optical radiation measurement quantities. The calibration is traceable to a reference standard that was calibrated by the national measurement laboratory. Calibration and results of the calibration are confirmed by a factory calibration certificate.

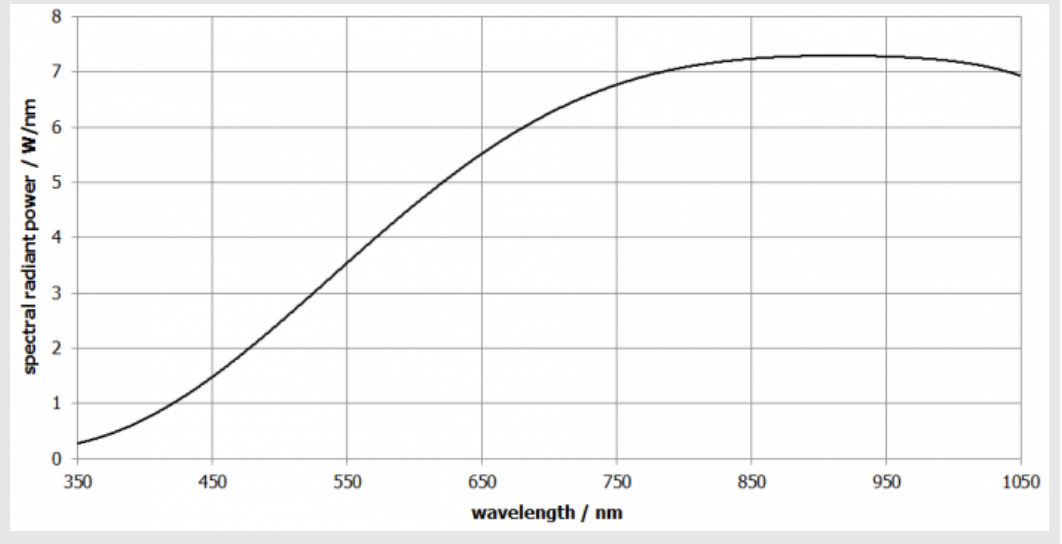
Accessories

Gigahertz-Optik GmbH offers lamp power supplies for operation of the calibration standard lamps.

Specifications

| Specification | |
|---------------------------|--|
| Radiant Flux | typ. 266 lm (BN-LHSF-2P-20 with 100 W lamp) |
| temperature range | 3100 K |
| Spectral radiant flux | Typ. 0.245 mW @ 360 nm (BN-LHSF-2P-20 with 100 W lamp) Typ. 5.440 mW @ 830 nm |
| spectral range | Optional calibration from 360 nm to 830 nm (alternatively from 350 nm to 1050 nm). |
| Light Output Port | 20 mm diameter |
| Radiation characteristics | 2π |
| Housing | Aluminium |
| Dimensions | see download section |
| Light Source | Quartz halogen lamp with diffuse reflector |
| Power Supply | 12 V |
| Operating mode | Constant current |
| Cooling | Active air flow at the lamp socket through exhaust and pressure fans |
| Electrical connection | Two sockets for the lamp current. Jack plug for the fans |
| Mounting | UMPA-1.0-HL adapter for direct mounting onto the UMPF-1.0-HL port frame |
| Calibration | Optional calibration of the spectral luminous flux with calibration certificate |
| temperature range | +5 °C to +40 °C |

Spectral radiant flux






Downloads

| Type | Description | File-Type | Download |
|----------|--------------------------|-----------|---|
| Dataseet | Dimensions BN-LHSF-2P-20 | pdf | https://www.gigahertz-optik.de/assets/Uploads/103077-bn-lhsf-2p-20.pdf |

Configurable with

| Produktname | Product Image | Description | Show product |
|---------------------|---------------|--|---|
| ISD-21-BTS256-LED | | <p>System for the luminous flux and light color measurement of individual 2π light emitting diodes up to 63.5mm.</p> <p>Features: Integrating sphere with 21cm diameter and auxiliary lamp, compact spectral light meter with Bi-Tec sensor for accurate measurement of the luminous flux, spectral radiant power, CCT, CRI, chromaticity coordinates, etc.</p> | https://www.gigahertz-optik.de/en-us/product/BTS256-LED-ISD-21 |
| ISD-50-BTS256-LED | | <p>System for the luminous flux and light color measurement of individual 2π light emitting diodes up to 100mm.</p> <p>Features: Integrating sphere with 50cm diameter and auxiliary lamp, compact spectral light meter with Bi-Tec sensor for accurate measurement of the luminous flux, spectral radiant power, CCT, CRI, chromaticity coordinates, etc.</p> | https://www.gigahertz-optik.de/en-us/product/BTS256-LED-ISD-50-V01 |
| ISD-50HF-BTS256-LED | | <p>System for the luminous flux measurement of 4π (optional 2π and 4π) light fixtures inside a sphere.</p> <p>Features: Integrating sphere with 50cm hemispherical shell for opening and closing and auxiliary lamps. Light meter with Bi-Technology sensor for accurate measurement of luminous flux, spectral radiant power, CCT, CRI, chromaticity coordinates, etc.</p> | https://www.gigahertz-optik.de/en-us/product/ISD-50HF-BTS256-LED |

| Produktname | Product Image | Description | Show product |
|-----------------------|---|--|---|
| ISD-100HFT-BTS256-LED |  | <p>System for the luminous flux measurement of 2π and 4π light fixtures.</p> <p>Features: Turnable Integrating sphere with a 1000 mm diameter, extra measurement ports for 2π luminaires with diameters of up to 254mm and auxiliary lamp. Light meter for accurate measurement of luminous flux, spectral radiant power, CCT, CRI, chromaticity coordinates, User software, etc.</p> | https://www.gigahertz-optik.de/en-us/product/BTS256-LED-ISD-100HFT-V01 |
| ISD-100HFT-BTS2048-VL |  | <p>System for the luminous flux and light color measurement of individual 2π and 4π light sources.</p> <p>Features: Turnable Integrating sphere with 100cm diameter, auxiliary lamp and a hemispherical shell for opening and closing, compact spectral light meter with Bi-Tec sensor for accurate measurement of the luminous flux, spectral radiant power, CCT, CRI, chromaticity coordinates, etc.</p> | https://www.gigahertz-optik.de/en-us/product/BTS2048-VL-ISD-100HFT-V03 |
| LPS-250 |  | <p>Precision power supply for lamps up to 250W.</p> <p>Features: PWM power supply for the precise operation of halogen or LED lamps in constant current mode. The 16 bit D/A converter enables very accurate current setup and adjustment. For stress free switch on/off, the operation current is controlled with adjustable ramps.</p> | https://www.gigahertz-optik.de/en-us/product/LPS-250 |

Purchasing information

| Article-Nr | Modell | Description |
|--------------------|----------------------|---|
| Product | | |
| 15298594 | BN-LHSF-2P-20 | Calibration standard lamp, 100W lamp, fan power supply, no calibration. |
| Calibration | | |
| 15300767 | K-BNLHSF2P20-BTS256 | Calibration of the spectral radiant flux - 360 to 830nm. Calibration certificate |
| 15310531 | K-BNLHSF2P20-BTS2048 | Calibration of the spectral radiant flux from 350 to 1050nm. Calibration certificate |
| Accessories | | |
| 15297683 | LH-100F-UV | Halogen lamp 12V/100W, frozen bulb, burned-in |
| 15298631 | LPS-250-BT | Precision power supply for halogen lamps up to 24V and 250W. Adjustable operation current. Adjustable operating current. On/Off switch, RS232 interface |
| 15305982 | BPC-2.0-RED | High current laboratory cable with banana plugs – red. 2m long. |
| 15305983 | BPC-2.0-BLACK | High current laboratory cable with banana plugs – black. 2m long. |