

BN-LHSF-2P-20

<http://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.

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.

2π radiation characteristics

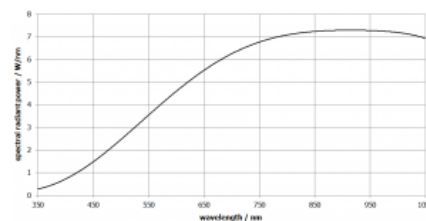
Calibration standard lamps with 2π radiation distribution characteristics are preferred for calibration of integrating sphere spectrometers that are used in measurement of lamps such as LEDs and spot lamps with hemispherical light distribution. By use of 2π standard lamps calibration is done under similar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

BN-LHSF-2P-20

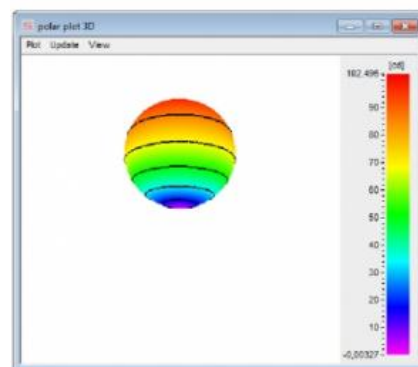
A special feature of the BN-LHSF-2P-20 calibration standard lamp is its 2π radiation characteristics which make it ideal for calibration of integrating sphere spectrometers used for measurement of LEDs and spot lamps. The calibration standard has a quartz halogen lamp that is characterized by its continuous 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.

Traceable calibration

The calibration of the spectral irradiance is performed by Gigahertz-Optik's



Typical emission spectrum



3D illustration of the luminous intensity distribution



The BN-LHSF-2P-20 calibration standard lamp can be directly mounted on the measurement port of the integrating sphere with an UMPF-1.0-HL port frame.

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 calibration certificate which includes all specification and information as ISO 17025 conform certificates.

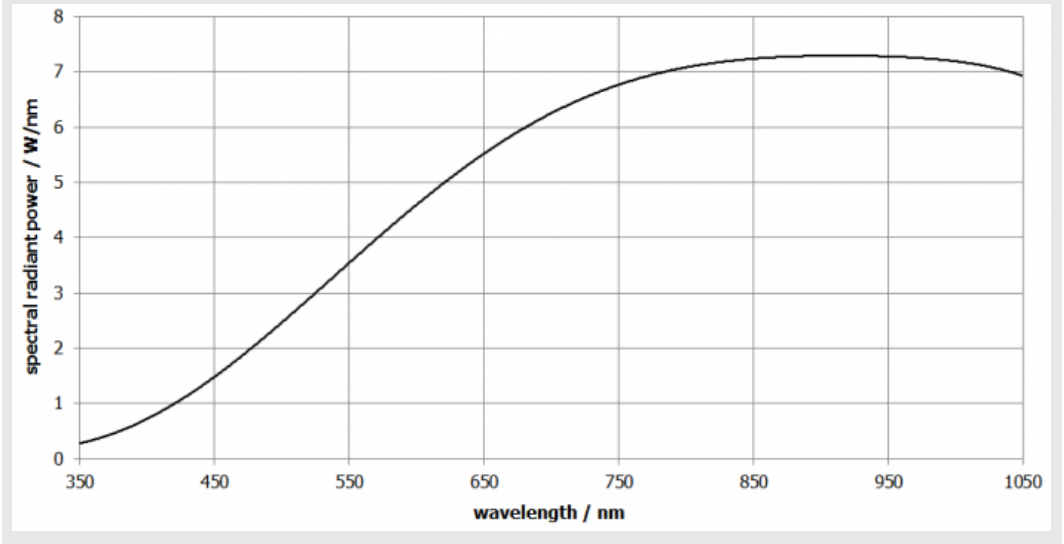
Accessories

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	360 nm to 830 nm (optional 280 nm to 1100 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	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	http://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>	http://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>	http://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>	http://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>	http://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>	http://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>	http://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, power supply unit, calibration certificate
Re-calibration		
15300767	K-BNLHSF2P-20-SD	Recalibration of the spectral radiant flux - 360 to 830nm. 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
101217	BPC-2	Laboratory cables - 2m long (2 pcs. required)