

BN-0001

<http://www.gigahertz-optik.de/en-us/product/BN-0001>

Product tags: UV , VIS , NIR



Description

Calibration standards

Calibration standards enable the calibration and correction 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 comparison the measurement instrument accordingly.

Spectral irradiance

The spectral irradiance [$\text{W}/\text{m}^2\cdot\text{nm}^{-1}$] is important for qualification of the incident radiant flux of a reference plane. Spectralradiometers are the typical measurement devices for the spectral irradiance. Calibration of the spectralradiometer is done using a calibration standard lamp for the irradiance.

BN-0001 calibration standard lamp

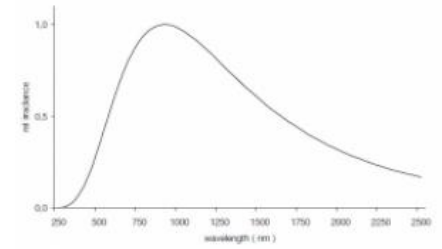
Gigahertz-Optik GmbH offers the BN-0001 calibration standard lamp for applications where vertical alignment of the calibrating device is required. This has a 1000W DXW quartz halogen bulb for the usable spectral range between 250 and 2500nm. The lamp is firmly fixed into the socket. The electrical contact is installed through braze-welding. This sophisticated mounting and electrical connection ensures maximum position accuracy of the lamp and maintains a constant electrical resistance at the contacts. The standard lamp connection is done using robust ceramic terminal strips. Each standard lamp is burned-in before it is calibrated. The suitability of the lamp as a calibration standard is assessed based on its burn-in behavior.

BN-001Z-01 crosshair

The BN-0001Z-01 crosshair is fastened onto the socket of the standard lamp using dowel pins. It enables precise alignment of the measurement instrument during calibration of the standard lamp and the calibrating measurement devices to the same point of the lamp filament.

Traceable factory calibrations

The factory calibrations of the spectral irradiance from 250 to 1100nm are performed by Gigahertz-Optik's calibration laboratory for optical radiation measurement quantities. The calibrations are traceable to calibration



Typical emission spectrum



BN-0001 with BN-0001Z-01 crosshair

standards of Gigahertz-Optik's calibration laboratory that is accredited by ISO/IEC 17025 (D-K-15047-01-00). Calibration and results of the calibration are confirmed by a calibration certificate conforming to the ISO 17025 specifications.

Specifications

Specification	
Light Source	DXW quartz halogen lamp @ 3100 K
Power Supply	1000 W
Power Supply	115 V
current	8.000 A
typical irradiance	measurement distance 50 cm @ 250 nm 0.18 mW/m ² @ 1100 nm 219 mW/m ² @ 2500 nm No calibration offered from 1100 nm to 2500 nm
operation position	lying
Dimensions	PDF on request

Purchasing information

Article-Nr	Modell	Description
Product		
15295602	BN-0001-1	Calibration standard lamp, 1000 W lamp, burn-in certificate.
15295603	BN-0001Z-01	Transparent target.
15296233	BHO-09	Universal hard-top casing for BN-0001. Required for shipping of the BN-9101!
Calibration		
15309549	K-BN0001-E-S-V01	Calibration of the spectral irradiance 250 nm - 1100 nm, factory certificate.
15309550	K-BN0001-E-S-V02	Calibration of the spectral irradiance 250 nm - 1700 nm, factory certificate.
15310615	K-BN0001-E-S-V03	Calibration of the spectral irradiance 250 nm - 2500 nm, factory certificate.
15310614	KK-BN0001-E-S-V01	Calibration of the spectral irradiance 250 nm - 1100 nm, DAkkS certificate.
15310616	KK-BN0001-E-S-V02	Calibration of the spectral irradiance 250 nm - 1700 nm, DAkkS certificate.
15310617	KK-BN0001-E-S-V03	Calibration of the spectral irradiance 250 nm - 2500 nm, DAkkS certificate.