X1

https://www.gigahertz-optik.com/en-us/product/x1/

Product tags: Multi-Channel , Handheld device

Description

Hand-held Meter

X1 Hand-held meter

The X1 optometer is one of the most versatile hand-held light measurement instruments available. It combines a powerful electronic design packaged in a light-weight ergonomic housing. Its compact size makes it ideal for field service applications. A unique feature of the X1 is its capability to operate detector heads housing up to four photodiodes with all four signals displayed on the four line display with on/off backlighting.

Simple to Use

Operating the X1 is simple. The meter set-up is supported by an easy to use menu. The menu allows selection of the operating mode, the detector and measurement parameter. Once set-up all settings are stored and recalled on next power-up unless reinitialized. Measurement values are displayed in absolute quantities for the particular detector connected.

X1 detector compatibility

The X1-1 optometer is compatible with all Gigahertz Optik detectors fitted with a type -4 connector. This includes devices incorporating up to 4 photodiodes. The calibration data for detectors with type -4 connectors is programmed into the X1-1 optometer. Therefore, X1-1 optometers are matched with specific detectors.

The X1-5 optometer is compatible with all Gigahertz Optik detectors fitted with a type -5 connector. Only single-photodiode based detectors can be supplied with a type -5 connector. The calibration data is stored in an EEPROM within the -5 connector. The X1-5 optometer reads this calibration data automatically. All detectors with -5 connectors are fully interchangeable with any X1-5 meter.

The X1-6 optometer is for use with the Gigahertz Optik MDC4-xxx range of smart detectors only.

Battery or USB powered

For on-site applications the X1 is operated with two standard 1.5 V AA batteries. In remote control operation the X1 is powered through the USB interface.

Four-channel Meter

The unique feature of the X1-1 is the capability to operate multi-cell detector heads with up to four photodiodes with all four signals displayed or read-out via the USB interface.

Multipurpose Light Measurement Instrument

The X1 can be combined with most of the Gigahertz-Optik single cell or multi cell light detector heads for use in a wide application range of radiometric, photometric and colorimetric measurements

Interfaces

The X1 features a USB interfaces.

Specifications

General	
Short description	Optometer for the individual configuration as photometer, RGB-luminous Color meter, Radiometer, UV-radiometer, LASER-powermeter etc. with the detector heads supplied.
Main features	Compact gauge in ergonomic design for one Hand control. Four measurement chanels in multiplex operation for use with single and multi-chanel detectors heads. Back illuminated Display with four lines. Battery powered with two AA cells. USB-Interface. User Software and Software development kit available.
Measurement range	Wide dynamic current measurement range from 0.1 pA (noise equivalent signal) up to 200 µA. Seven gain ranges with manual or automatic selection. Measurement range in absolute units with given by the detector heads resonivity and calibration.
typical applications	Measurement device for mobile use: measuremen of the illuminance condition, measurement of lamp aging, etc. Because of ist USB Interface and the Software development kit the device can be integrated in remote applications.
Calibration	Calibration and comparison of the current responsivity in each of the seven gain ranges. Memory for calibration data of several detector heads for measuremen in the absolute unit of the selected detector head.
Product	
Detector interface	9pin MDSM9 socket, 4 inputs
Measurement range	Seven (200 µA to 0.1 pA) manual or auto range which can be set by the user. The default setting depends on the customer specific configuration.

Range Nr.	Range max.	Slew-Rate (10 - 90)%	Resolution ± calibration uncertainty *) (at 24 °C)	Permissible detector capacity	Typical linearity error	Typ. temperature coefficient
0	200.0 µA ***)	3 ms	±0.1 µA ± 0.3%	2 nF	< ±0.5%	< ±0.03%/°C
1	20.00 µA	3 ms	±0.01 µA ± 0.3%	2 nF	< ±0.2%	< ±0.03%/°C
2	2.000 µA	3 ms	±0.001 µA ± 0.3%	2 nF	< ±0.2%	< ±0.03%/°C
3	200.0 nA	3 ms	±0.1 nA ± 0.3%	10 nF	< ±0.2%	< ±0.03%/°C
4	20.00 nA	3 ms	±0.01 nA ± 0.3%	10 nF	< ±0.2%	< ±0.03%/°C
5	2.000 nA	30 ms	±0.001 nA ± 0.4%	10 nF	< ±0.3%	< ±0.1%/°C
6	200.0 pA	30 ms	±0.1 pA ± 0.4% ±Bias current (max.1,0pA) **)	10 nF	< ±0.6% ****)	< ±0.3%/°C

*) The measurement uncertainty is usually below the calibration uncertainty, but must also be considered. At very low currents, a detailed examination of the measurement uncertainty analysis is recommended, because in this case the measurement uncertainty can predominate.

**) internal zero adjustment can reduce the bias current. Maximum zero adjusted bias current = ±0,2pA.

***) only for instrument versions with 7 measuring ranges

****) valid for currents above 10pA

CW integration time	1 ms – 1 s
sampling rate	internal sampling rate ADC 250 µs
Offset correction	Correction range transcending
Parameter adjustment	Remote control or front panel buttons (menu), set values permanently stored (EEPROM)
Calibration	X1-1: max. 256 data sets (one data set can include up to 4 channel entries) total stored in device EEPROM X1-5: max. 64 entries for one channel stored in detector EEPROM

Menu guide	**Menu item**	**Submenu item**	**Function**
	1. Mode	**CW**	Measures respective of any offset and calibration factors programmed
		Dose	Accumulates the single readings as exposure for measured quantity
		CIE Yxy & T	Measures the CIE Color Values Yxy and T
		CIE Yuv & T	Measures the CIE Color Values Yuv and T
	2. Setup	**Zero Adjust**	Performs a zero adjustment of the internal amplifier and ADC
		Integration	Sets the measurement (integration) time
		Dose Time	Sets max. dose measurement time
	3. Detector	Selects calibration data to calculate the measurement result	
	4. Offset	Performs an automatic offset adjustment ("Offset = CW" or "Offset = 0")	
	5. Range	Sets the measurement range (auto, manual)	
Dose	• The maximum dose to be displayed on the X1-5/1 device is 99999 TJ/cm² (for W/cm²) or 99999 TJ/m² (for W/m²) • Maximum time to be set for dose measurement: 255h 59min 59s		
Miscellaneous			
Power Supply	Two AA batteries ~ 250 hrs. operation time - backlit display off Powered by USB-Interface		
Interface	USB V1.1 (HID Device)		
temperature range	Operating: (5 to 40) °C Storage: (-10 to 50) ° C		
Humidity	<80%, non-condensing		
Display	LCD graphic display 97 x 32 pixel Display area 14.3 mm x 35.8 mm Switchable LED-backlight Text display 4 rows each 14 characters		
Front panel control	3 buttons, menu system		
Dimensions	145 mm x 63 mm x 30 mm		
	compatibel		
Weight	150 g		
Info	Regular recalibration of the current calibration is recommended. Especially when very small measurement currents have to be measured. In the case of very high humidity, fault currents of the radiometer are possible at low measuring currents and should be taken into account.		

Configurable with

Product Name	Product Image	Description	Go to product
LP-9901		Detector head to measure LASER radiant power in W and LASER irradiance in W/m². Features: Low height detector with 7mm dia active area, 400 to 1100nm, for the usage with optometers and signal amplifiers, calibration certificate.	https://www.gigahertz-optik.com/en-us/product/lp-9901/
VL-3701		Detector head for the measurement of photopic illuminance in Lux [lx]	https://www.gigahertz-optik.com/en-us/product/vl-3701/
VL-3702		Detector head for the measurement of photopic illuminance in Lux [lx]	https://www.gigahertz-optik.com/en-us/product/vl-3702/
VL-3704		Detector head for the measurement of photopic illuminance in Lux [lx]	https://www.gigahertz-optik.com/en-us/product/vl-3704/
VL-3705		Detector head for the measurement of scotopic illuminance in Lux [lx]	https://www.gigahertz-optik.com/en-us/product/vl-3705/
PD-9310A		High sensitive detector head for the measurement of photopic illuminance in Lux [lx]. Features: f1 ≤ 3 %, 2.8nA/lx, 20mm diffuser, for the usage with optometers and amplifiers, calibration certificate	https://www.gigahertz-optik.com/en-us/product/pd-9310a/
PD-9310B		High sensitive detector head for the measurement of photopic illuminance in Lux [lx]. Features: f1 ≤ 6 %, 2.8nA/lx, 20mm diffuser, for the usage with optometers and amplifiers, calibration	https://www.gigahertz-optik.com/en-us/product/pd-9310b/
PD-9310B-N		Very high sensitive detector head for the measurement of photopic illuminance in Lux [lx]. Features: f1 ≤ 3 %, 28nA/lx, no diffuser, for the usage with optometers and amplifiers, calibration	https://www.gigahertz-optik.com/en-us/product/pd-9310b-n/
VL-3701 with SRT-M37-L		Detector head to measure the photopic illuminance in lx and the luminance in cd/m²	https://www.gigahertz-optik.com/en-us/product/vl-3701 with srt-m37-l/
PD-9310 with SRT-M37-L		High sensitive detector head to measure the photopic luminance in cd/m². Features: front lense for 1°, 2°, 5° or 10° viewing angle, for the usage with Optometers and amplifiers, calibration certificate	https://www.gigahertz-optik.com/en-us/product/pd-9310 with srt-m37-l/

Product Name	Product Image	Description	Go to product
CT-4501		RGB detector head for photopic illuminance and luminous color. Features: four sensor design, xy, u'v', CCT, for the usage with X1 and P-9801 Optometer, part of HCT-99D, calibration certificate, for polychromatic light,	https://www.gigahertz-optik.com/en-us/product/ct-4501/
LDM-9810		Detector head to measure the photopic spot luminance in cd/m². Features: selectable 20', 1° and 6° viewing angles, view finder, focus able achromatic lens, for the usage with Optometers and amplifiers, calibration certificate.	https://www.gigahertz-optik.com/en-us/product/ldm-9810/
VL-1101		Photometric detector head with VL-11 mount. Features: modular detector for use with integrating spheres, front lenses etc. For use with optometers and signal amplifiers	https://www.gigahertz-optik.com/en-us/product/vl-1101/
LDM-9901		Detector head to measure the photopic spot luminance in cd/m²	https://www.gigahertz-optik.com/en-us/product/ldm-9901/
S-SDK-X20		Software Development Kit for X20 variants (X1 and HCT99).	https://www.gigahertz-optik.com/en-us/product/s-sdk-x20/
S-X1		Application software for X1 variants.	https://www.gigahertz-optik.com/en-us/product/s-x1/
VL-1101 + UMPA-0.5-11-RD Detector head		Module detector head for the measurement of photopic illuminance in Lux [lx]. Features: UMPA adapter for usage with integrating spheres, for the usage with optometers and amplifiers, calibration certificate	https://www.gigahertz-optik.com/en-us/product/vl-1101uumpa-05-11-rd/
ISD-5-VL		Integrating sphere detector for luminous flux (lm) of 2π spot sources	https://www.gigahertz-optik.com/en-us/product/isd-5-vl/
ISD-10-VL		Integrating sphere detector for luminous flux (lm) of 2π spot sources	https://www.gigahertz-optik.com/en-us/product/isd-10-vl/

Product Name	Product Image	Description	Go to product
ISD-15P-VL		Integrating sphere detector for luminous flux (lm) of 2π sources	https://www.gigahertz-optik.com/en-us/product/isd-15p-vl/
TD-11VL01		Photometric, temperature stabilized detector with DP-11 mount	https://www.gigahertz-optik.com/en-us/product/td-11vl01/
RW-3701		Detector head for the measurement of irradiance in W/m²	https://www.gigahertz-optik.com/en-us/product/rw-3701/
RW-3702		Detector head for the measurement of irradiance in W/m²	https://www.gigahertz-optik.com/en-us/product/rw-3702/
RW-3703		Detector head for the measurement of irradiance in W/m²	https://www.gigahertz-optik.com/en-us/product/rw-3703/
RW-3704		Detector head for the measurement of irradiance in W/m²	https://www.gigahertz-optik.com/en-us/product/rw-3704/
RW-3705		Detector head for the measurement of irradiance in W/m²	https://www.gigahertz-optik.com/en-us/product/rw-3705/
RW-3708		Detector head for the measurement of irradiance in W/m²	https://www.gigahertz-optik.com/en-us/product/rw-3708/
UV-3701		Detector head for the measurement of irradiance of UV radiation in W/m². Features: spectral responsivity from 315-400nm (UV-A), cosine field-of-view, for the usage with optometers and amplifiers, calibration certificate.	https://www.gigahertz-optik.com/en-us/product/uv-3701/
UV-3702		Detector head for the measurement of irradiance of UV radiation in W/m². Features: spectral responsivity from 280-315nm (UV-B), cosine field-of-view, for the usage with optometers and amplifiers, calibration certificate.	https://www.gigahertz-optik.com/en-us/product/uv-3702/
UV-3703		Detector head for the measurement of irradiance of UV radiation in W/m². Features: spectral responsivity from 200/250-280nm (UV-C), cosine field-of-view, for the usage with optometers and amplifiers, calibration certificate.	https://www.gigahertz-optik.com/en-us/product/uv-3703/

Product Name	Product Image	Description	Go to product
UV-3710		Detector head for the measurement of irradiance of UV radiation in W/m². Features: spectral responsivity from 320-400nm (UV-A), cosine field-of-view, for the usage with optometers and amplifiers, calibration certificate.	https://www.gigahertz-optik.com/en-us/product/uv-3710/
UV-3711		Detector head for the measurement of irradiance of UV radiation in W/m². Features: spectral responsivity from 280-320nm (UV-B), cosine field-of-view, for the usage with optometers and amplifiers, calibration certificate.	https://www.gigahertz-optik.com/en-us/product/uv-3711/
UV-3716		Detector head for the measurement of irradiance of UV radiation in W/m². Features: spectral responsivity from 305-400nm (UV-A), cosine field-of-view, for the usage with optometers and amplifiers, calibration certificate.	https://www.gigahertz-optik.com/en-us/product/uv-3716/
UV-3717		Detector head for the measurement of irradiance of UV radiation in W/m². Features: spectral responsivity from 315-400nm (UV-A), low cross talk from radiation > 400 nm, cosine field-of-view, for the usage with optometers and amplifiers, calibration certificate.	https://www.gigahertz-optik.com/en-us/product/uv-3717/
UV-3719		Detector head for the measurement of irradiance of UV radiation in W/m². Features: spectral responsivity from 250-400nm (UV), cosine field-of-view, for the usage with optometers and amplifiers, calibration certificate.	https://www.gigahertz-optik.com/en-us/product/uv-3719/
UV-3720		Detector head for the measurement of irradiance of UV radiation in W/m². Features: spectral responsivity from 240-320nm (UV), cosine field-of-view, for the usage with optometers and amplifiers, calibration certificate.	https://www.gigahertz-optik.com/en-us/product/uv-3720/
UV-3721		Detector head for the measurement of irradiance of UV radiation in W/m². Features: spectral responsivity from 350-400nm (UV-A), cosine field-of-view, for the usage with optometers and amplifiers, calibration certificate.	https://www.gigahertz-optik.com/en-us/product/uv-3721/
UV-3711-308		Detector head for the measurement of irradiance of 308nm Eximer Lasers in W/m². Features: flat spectral responsivity besite 308nm. cosine field-of-view, dose measurement in conjuntion with P-9710-2 optometer, calibration certificate	https://www.gigahertz-optik.com/en-us/product/uv-3711-308/
UV-3718		Detector head for the measurement of high irradiance of UV-C 254nm radiation in W/m²	https://www.gigahertz-optik.com/en-us/product/uv-3718/
ISD-5-VISNIR		Integrating sphere detector for radiant power in W of 2π sources	https://www.gigahertz-optik.com/en-us/product/isd-5-visnir/
ISD-3P-Si		Integrating sphere detector for Laser power in W	https://www.gigahertz-optik.com/en-us/product/isd-3p-si/

Product Name	Product Image	Description	Go to product
UV-3706		Detector head to measure irradiance W/m² in Bilirubin phototherapy. Features: Bilirubin actinic responsivity, cosine field-of-view, for usewith optometers, calibration certificate.	https://www.gigahertz-optik.com/en-us/product/uv-3706/
UV-3711-308		Detector head for the measurement of irradiance of 308nm Eximer Lasers in W/m². Features: flat spectral responsivity besite 308nm. cosine field-of-view, dose measurement in conjuntion with P-9710-2 optometer, calibration certificate	https://www.gigahertz-optik.com/en-us/product/uv-3711-2/
UV-3709		Detector for Blue-light hazard measurements. Features: Single-cell detector, BLH actinic irradiance, for the use with optometer, calibration certificate	https://www.gigahertz-optik.com/en-us/product/uv-3709/
UV-3725		Detector for the measurement of UV-C 254 nm irradiance in air disinfection applications	https://www.gigahertz-optik.com/en-us/product/uv-3725/
ISD-3P-IGA		Integrating sphere detector with InGaAs photodiode and 30 mm sphere for Laser power in W.	https://www.gigahertz-optik.com/en-us/product/isd-3p-iga-2/
ISD-5-Si		Integrating sphere detector for Laser power in W	https://www.gigahertz-optik.com/en-us/product/isd-5-si/
RCH-102		Detector head for high intensity irradiation in UVA and blue light curing processes with rigid fiber	https://www.gigahertz-optik.com/en-us/product/rch-1/
RCH-116		Detector head for high intensity UV and BLUE LED sources.	https://www.gigahertz-optik.com/en-us/product/rch-2/
ISD-5P-Si		Integrating sphere detector for Laser power in W	https://www.gigahertz-optik.com/en-us/product/isd-5p-si/
ISD-10-Si		Integrating sphere detector for Laser power in W	https://www.gigahertz-optik.com/en-us/product/isd-10-si/
ISD-15-Si		Integrating sphere detector for Laser power in W	https://www.gigahertz-optik.com/en-us/product/isd-15-si/

Product Name	Product Image	Description	Go to product
RCH-006		Detector head for high intensity irradiation in UV wide range curing processes	https://www.gigahertz-optik.com/en-us/product/rch-006/
RCH-008		Detector Head for High-Intensity Irradiation in UV-A Curing Processes	https://www.gigahertz-optik.com/en-us/product/rch-008/
RCH-009		Detector Head for High-Intensity Irradiation in Blue Light Curing Processes	https://www.gigahertz-optik.com/en-us/product/rch-3/
RCH-010		Detector head for high intensity irradiation in UV H-type light curing processes.	https://www.gigahertz-optik.com/en-us/product/rch-4/
RCH-011		Detector head for high intensity irradiation in UVA peak light curing processes.	https://www.gigahertz-optik.com/en-us/product/rch-5/
RCH-012		Detector head for high intensity irradiation in blue light curing processes.	https://www.gigahertz-optik.com/en-us/product/rch-6/
RCH-013		Irradiance Detector for UV or Blue light curing processes	https://www.gigahertz-optik.com/en-us/product/rch-7/
RCH-014		Detector head for high intensity irradiation in UV or blue light curing processes. Features: Separate light integrator and detector with flexible fiber coupling, 400nm+436nm BLUE responsivity, wide viewing angle, for the usage with optometers and amplifiers, calibration certificate.	https://www.gigahertz-optik.com/en-us/product/rch-8/
RCH-015		Detector head for high intensity irradiation in UV or blue light curing processes. Features: Separate light integrator and detector with flexible fiber coupling, light, 436nm BLUE-Peak responsivity, wide viewing angle, for the usage with optometers and amplifiers, calibration certificate.	https://www.gigahertz-optik.com/en-us/product/rch-9/
RCH-106		Detector head for high intensity irradiation in UV wide range curing processes	https://www.gigahertz-optik.com/en-us/product/rch-10/
PD-11 Series		Detector head with DP-11 mount	https://www.gigahertz-optik.com/en-us/product/pd-11-serie/

Product Name	Product Image	Description	Go to product
RCH-108		Detector head for high intensity irradiation in UVA Peak light curing processes	https://www.gigahertz-optik.com/en-us/product/rch-11/
RCH-109		Detector head for high intensity irradiation in blue-peak light curing processes	https://www.gigahertz-optik.com/en-us/product/rch-12/
RCH-110		Detector head for high intensity irradiation in H-Type light curing processes	https://www.gigahertz-optik.com/en-us/product/rch-13/
RCH-111		Detector head for high intensity irradiation in UVA light curing processes	https://www.gigahertz-optik.com/en-us/product/rch-14/
RCH-112		Detector head for high intensity irradiation blue light curing processes.	https://www.gigahertz-optik.com/en-us/product/rch-15/
RCH-113		Detector head for high intensity irradiation in UV or blue light curing processes	https://www.gigahertz-optik.com/en-us/product/rch-16/
RCH-114		Detector head for high intensity irradiation in UV or blue light curing processes. Features: Separate light integrator and detector with rigid fiber coupling, 400nm+436nm BLUE responsivity, wide viewing angle, for the usage with optometers and amplifiers, calibration certificate.	https://www.gigahertz-optik.com/en-us/product/rch-17/
RCH-115		Detector head for high intensity irradiation in UV or blue light curing processes. Features: Separate light integrator and detector with rigid fiber coupling, light, 436nm BLUE-Peak responsivity, wide viewing angle, for the usage with optometers and amplifiers, calibration certificate.	https://www.gigahertz-optik.com/en-us/product/rch-18/
XD-9501		UV-A and UV-B detector head for use in phototherapy	https://www.gigahertz-optik.com/en-us/product/xd-9501/
XD-9503		UV-A and UV-B Detector Head for use in Phototherapy	https://www.gigahertz-optik.com/en-us/product/xd-9503/
XD-9506		Detector Head for use in UV Photo-biological Hazard Measurements	https://www.gigahertz-optik.com/en-us/product/xd-9506/

Product Name	Product Image	Description	Go to product
XD-9509		Detector head for use in UV radiation protection measurements	https://www.gigahertz-optik.com/en-us/product/xd-9509/
XD-9510		Detector head for use in UV radiation protection measurements in accordance with DIN EN 12198 Safety of machinery - Assessment and reduction of risks arising from radiation emitted by machinery	https://www.gigahertz-optik.com/en-us/product/xd-9510/
XD-9502		Photostability Light & UV Meter	https://www.gigahertz-optik.com/en-us/product/xd-9502/
PS-3701		Detector head for plant growth	https://www.gigahertz-optik.com/en-us/product/ps-3701/
PS-3702		Detector head for plant growth	https://www.gigahertz-optik.com/en-us/product/ps-3702/
PS-3703		Detector head for plant growth	https://www.gigahertz-optik.com/en-us/product/ps-3703/
TP-4501		Detector head for plant growth. Features: PAR, phototropism and photomorphogenesis actinic irradiance, illuminance, for use with X1 optometers, calibration certificate.	https://www.gigahertz-optik.com/en-us/product/tp-4501/
RW-37 with SRT-M37-L		Detector heads to measure the irradiance in W/m² and the radiance in W/(m²sr)	https://www.gigahertz-optik.com/en-us/product/rw-37usrt-m37-l/
RCH-002		Detector Head for High-Intensity Irradiation in UVA or Blue Light Curing Processes	https://www.gigahertz-optik.com/en-us/product/rch-002/
RCH-005		Detector head for high intensity irradiation in UV or blue light curing processes. Features: Separate light integrator and detector with rigid fiber coupling, (320-460)nm UVABLUE responsivity, wide viewing angle, for the usage with optometers and amplifiers, calibration certificate.	https://www.gigahertz-optik.com/en-us/product/rch-005/

Product Name	Product Image	Description	Go to product
K-xx-C		Calibration of the signal current sensitivity of optometers. Features: calibration of all gain stages, traceable calibrated current source, calibration certificate	https://www.gigahertz-optik.com/en-us/product/k-xx-c/
ISD-5P-SiUV		Integrating sphere detector with UV-enhanced Si photodiode and 50 mm sphere for Laser power in W	https://www.gigahertz-optik.com/en-us/product/isd-5p-siuv-2/
UV-37 with SRT-M37-L-UV		Detector heads to measure the UV irradiance in W/m² and the UV-radiance in W/(m²sr)	https://www.gigahertz-optik.com/en-us/product/uv-37usrt-m37-l-uv/
UV-3726		UV detector for UV-C LEDs and low-pressure Hg germicidal lamps	https://www.gigahertz-optik.com/en-us/product/uv-3726/
RCH-xxx Series		UV Detectors for measuring the UV Curing Irradiance	https://www.gigahertz-optik.com/en-us/product/rch-xxx-series/
UV-3727		UV detector for germicidal lamps	https://www.gigahertz-optik.com/en-us/product/uv-3727/
ISD-5P-IGA		Integrating sphere detector with InGaAs photodiode and 50 mm sphere for Laser power in W	https://www.gigahertz-optik.com/en-us/product/isd-5p-iga-2/
LCR-20		Light-reflection hand-held meter for flat samples	https://www.gigahertz-optik.com/en-us/product/lcr-20/
MDC4-1-UVBLUE		Smart integral detector for UV to Blue LEDs with wavelength detection	https://www.gigahertz-optik.com/en-us/product/mdc4-uv-blue/
ISS-28P-Xe-V01		Integrating sphere light source with very high light output (sun-like spectra)	https://www.gigahertz-optik.com/en-us/product/iss-28p-xe-v01/
MDC4-1-UV		Smart integral detector for UV LEDs with wavelength detection	https://www.gigahertz-optik.com/en-us/product/mdc4-1-uv/
RCH-016		UV detector for measuring the irradiance of UV curing LEDs	https://www.gigahertz-optik.com/en-us/product/rch-016/

Product Name	Product Image	Description	Go to product
RCH-017		NIR detector for measuring the irradiance of NIR curing LEDs	https://www.gigahertz-optik.com/en-us/product/rch-017/
RCH-117		NIR detector for measuring the irradiance of NIR curing LEDs	https://www.gigahertz-optik.com/en-us/product/rch-117/
RCH-019		UV detector for measuring the irradiance of UV curing LEDs	https://www.gigahertz-optik.com/en-us/product/rch-019/
RCH-119		UV detector for measuring the irradiance of UV curing LEDs	https://www.gigahertz-optik.com/en-us/product/rch-119/

Purchasing information

Article-Nr	Modell	Description
Product		
15298890	X1-1	Meter, 2 x 1.5 V AA batteries, cable, manual. For use with -4 detectors
15312065	X1-5	Optometer, 2 x 1.5 V AA batteries, cable, manual. For use with -5 detectors.
15313179	X1-6	Optometer, 2 x 1.5 V AA batteries, cable, manual. For use with MDC4 Series detectors.
15309641	X1-1-V02	Optometer, 2 x 1.5 V AA batteries, cable, manual. For detector head UV-3726-4
15311738	X1-1-V03	Optometer, 2 x 1.5 V AA batteries, cable, manual. For detector head UV-3718-4
Re-calibration		
15300671	K-X11-C	Current calibration at all amplification levels. DIN EN ISO/IEC 17025 DAkkS Test Certificate in combination with different detector heads can be requested optionally.
Options		
	Light Detectors	Please check the light detector datasheets for specification and purchasing information or see tab configurable with.
Software		
15298071	S-SDK-X20	For software implementation of the X20 optometer board or X1 device into custome made software. Supply of .dll's and LabView VI's for device communication.
15298167	S-X1	User software for the X1
Accessories		

Article-Nr	Modell	Description
15296381	X1-Z02	Adapter cable (2m) to connect light detectors with BNC (-1) connector to the -4
15296387	X1-Z03	Adapter to connect up to four detectors with BNC connector to X1
15297973	X1-Z04	Adapter cable 12 inch with ITT (-4) connector for X1. Al box with -4 socket
15298036	X1-Z05	Adapter cable to connect light detectors with -2 calibration data connector to the ITT (-4) socket of the optometer X1 1. Cable length 0.2 m.
15295292	BHO-04	Hard case for meter and accessories
15295239	BHO-05	Hard case for meter and accessories
15295680	BHO-06	Hard case for meter and accessories
15297539	BHO-11	Hard case for meter and accessories
15298236	BHO-15	Hard case for meter and accessories