

# **UV** curing sensor XT



For adhesive bonding and curing through UV radiation, LED spotlights and gas discharge lamps with liquid light guides, whose high irradiance enables curing and polymerization within seconds, are used.

Exact measurements in order to monitor the irradiance and dose are required for the process control. Here, the UV sensor is exposed to the high irradiances and temperatures, which could lead to an impairment of the measurement results.

The sensor series XT ("eXtrem Temperature") has been developed for this critical application. The XT sensors are suitable for up to 50.000 mW/cm² and operating temperatures of 150°C. At the same time, the XT sensors are compact and thus flexibly usable where needed.

This is possible due to the separation of sensor-head and sensor-electronics. The XT sensor with its excellent cosine correction guides the light through a light guide into the calibrated sensor-electronic, which is integrated in the handpiece. That way, just like with all our high quality radiometers, several sensors can be connected to one hand-held meter.

For your application you can select between four sensor types. The XTR guides the light through a stainless steel

rod into the handpiece and is very quickly usable. Due to the distance between the sensor head and the handpiece, the user is protected from the radiation!

In the XTF, the sensor head is connected with the flexible light guide in order to enable measurements in places that are difficult to access. Both sensors have a height of 10 mm without any impairment of the measuring precision.

The diameter of the XTR and XTF sensors is 40 mm. By the way, sensor and handpiece are flat so that even here the measurement is optimal and reproducible. XTR and XTF are thus the first choice for UV spot bonding.



# RADIOMETER / HAND-HELD UV METER

All XT sensors can be connected to the radiometer RM-12 for the measurement of the irradiance or to the RMD for measurements of irradiance and dose. Compared to the RM-12, the RMD Pro has a higher resolution, an expanded measurement range, data storage in an internal memory of 8 GB, a data interface and the illuminated graphic display.





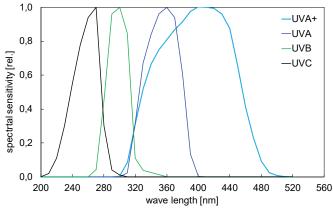
RM-12

RMD Pro

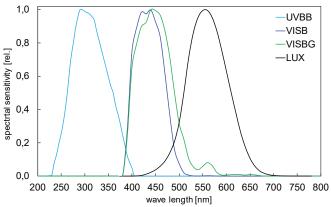
#### **CALIBRATION**

For precise measurements, we calibrate the sensors to the process light source or the used LED wavelength. For this, more than 20 radiation sources are available in our accredited laboratory. Of course, all our sensors are factory-calibrated, long-term stable and precise upon delivery. Optionally we deliver the XT sensors with a DAkkS calibration.

# SENSOR SPECTRAL SENSITIFITY DATA



Spectral sensitivity UVA+, UVA, UVB and UVC XT sensors



Spectral sensitivity UVBB, VISB, VISBG and VISL XT sensors

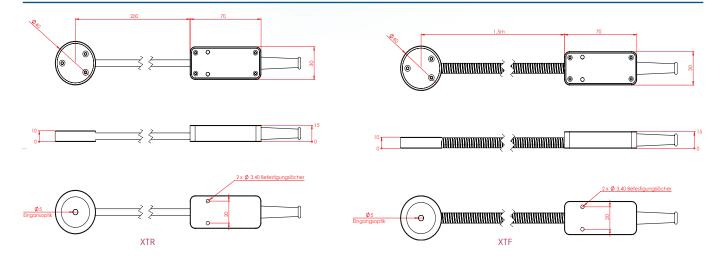
#### **SENSOR SPECTRAL RANGES**

UVC	200 - 280 nm
UVB	280 - 315 nm
UVA	315 - 400 nm
UVA+	330 - 455 nm
UVBB (broad-band)	230 - 400 nm
VISB	400 - 480 nm
VISBG	400 - 570 nm
LUX	380 - 780 nm, V(λ)

#### **TECHNICAL DATA**

Operation temperature	0 to 150 °C	
Storage temperature	-10 to 150 °C	
Humidity	< 80% non-condensing	
Light guide, for radiometer	0,3 m	
Cable length, for radiometer	2 m	
Light guide, for spectrometer	1,5 m	
Measurement range	0 - 20 W/cm <sup>2</sup>	
	0 - 2 W/cm <sup>2</sup> (opt. 2)	
	0 - 50 W/cm² (opt. f. RMD)	
Resolution	0,01 W/cm <sup>2</sup>	
	0,001 W/m² (opt. 2)	
	0,01 W/cm² (opt. f. RMD)	

### **DIMENSIONS**



# **PART NUMBERS**

	XTR	XTF
XT curing sensor UVC	8106X1	8107X1
XT curing sensor UVB	8106X2	8107X2
XT curing sensor UVA	8106X3	8107X3
XT curing sensor UVA+	8106X4	8107X4
XT curing sensorUVBB	8106X0	8107X0
XT curing sensor VISB	8106X5	8107X5
XT curing sensor VISBG	8106X7	8107X7
XT curing sensor LUX	8106X6	8107X6
Radiometer RMD Pro	814400 (X = 4)	
Radiometer RM-12	821200 (X = 1)	
Radiometer RM-22	(X = 2)	
Spectral radiometer SR900	840310 (X = 3)	
Spectral radiometer UVpad E	670027 (X = 3)	
Factory calibration	included	
ISO17025 DAKKS calibration	17025	
carrying case	921002	
UV protection glasses	918800	

# **SCOPE OF DELIVERY**

XT curing sensor, factory calibration certificate

Please indicate the required sensor, radiometer (X) and the measurement range. Unless otherwise indicated we deliver units with a measurement range  $0 - 20 \text{ W/cm}^2$ .