DX 6x1

Digital photo-radiometric probes



- Fast and accurate
- Interchangeable
- Low power
- Solid stand due to aluminum construction
- Optional ACCREDIA certification available

DESCRIPTION

DX 6x1 is a series of digital photo-radiometric probes for PRO D01 / PRO D05 handheld meters.

The probes measure:

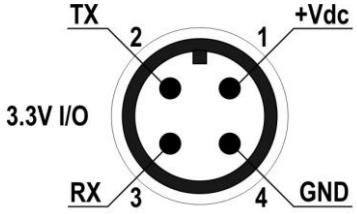
- Illuminance
- Luminance
- Irradiance (specific probes for UVA, UVB, UVC, UVBC and Blue light ranges available)
- PAR (Photosynthetically Active Radiation)

The probes are supplied factory-calibrated, and they are ready to use. The probes can be optionally supplied with an ACCREDIA calibration certificate.

The calibration data are stored in the probe, allowing for interchangeability without the need for recalibration.

Optionally available with integrated bubble level to facilitate horizontal positioning.

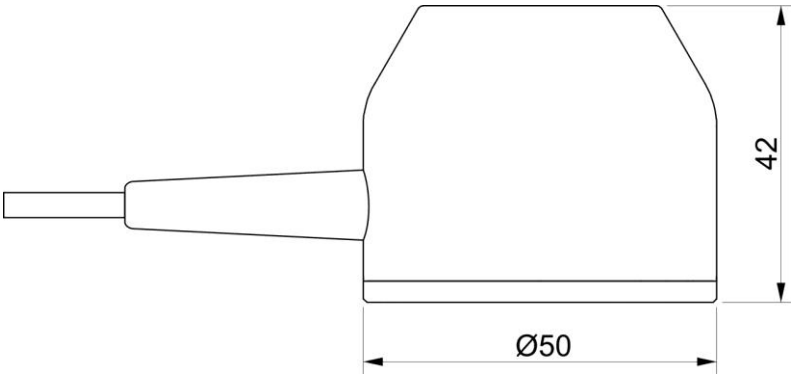
Equipped with 4-pin M12 connector.



M12 DX 6x1 sensor pin out

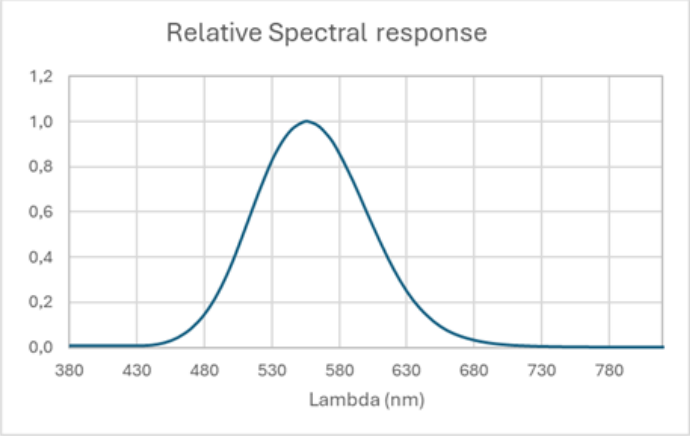
TECHNICAL SPECIFICATIONS

General characteristics	
Output	Fully digital DX sensor interface
Power supply	3.3…6 Vdc
Power consumption	< 1 mA typ.
Connection	Fixed cable ending with M12 connector 2m (alternatively 1 or 5 m on request)
Operating temperature	0…+50 °C
Dimensions	∅50 x 42 mm
Weight	200 g approx.
Material	Anodized aluminium
Protection degree	IP 54

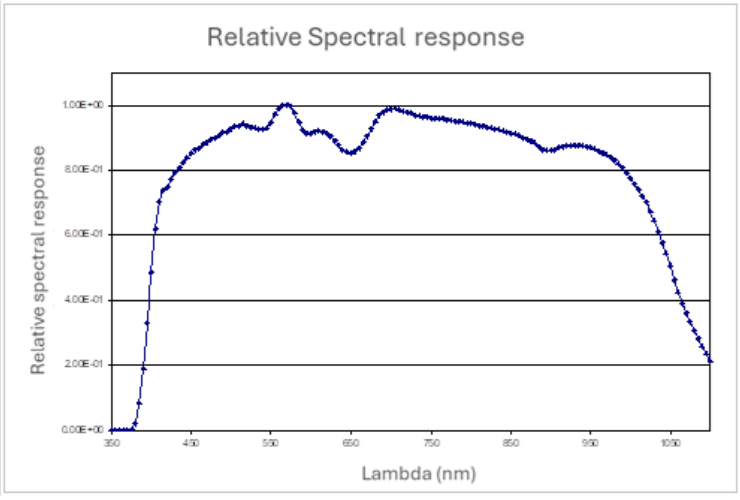


MEASUREMENT SPECIFICATIONS

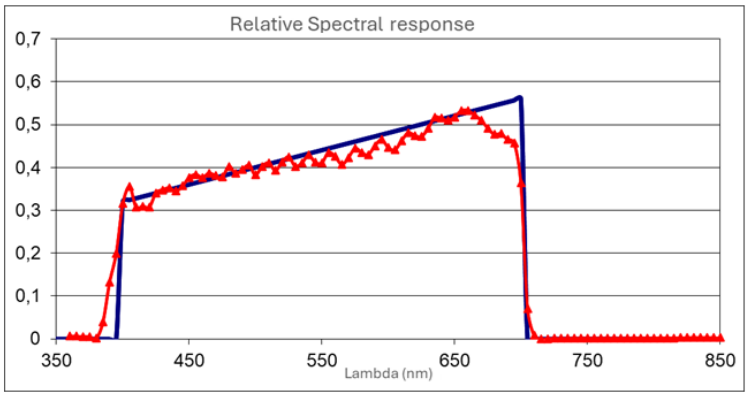
DX 611 (Illuminance)				
Measuring range (lux)	0.10…199.99	200.0…1999.9	2000…19999	20000…400000
Resolution (lux)	0.01	0.1	1	10
Spectral range	in accordance with standard photopic curve V(λ)			
α (temperature coefficient) $f_6(T)$	<0.05% K			
Calibration uncertainty	<4%			
f'_1 (accordance with photopic response V(λ))	<6%			
f_2 (response as law of cosines)	<3%			
f_3 (linearity)	<1%			
f_4 (error in instrument reading)	<0.5%			
f_5 (fatigue)	<0.5%			
Class	B			
1 year drift	<1%			
Reference standard	CIE n°69 – UNI 11142			



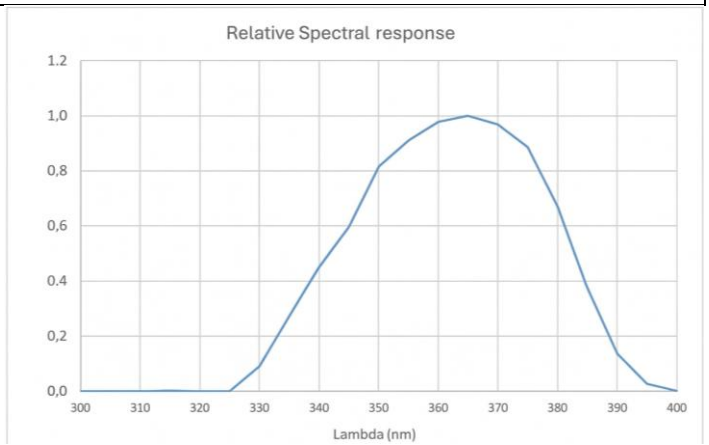
DX 621 (Irradiance)				
Measuring range (W/m²)	0.0010…1.9999	2.000…19.999	20.00…199.99	200.0…1999.9
Resolution (W/m²)	0.0001	0.001	0.01	0.1
Spectral range	400…1050 nm			
Calibration uncertainty	<5%			
f_2 (response as law of cosines)	<6%			
f_3 (linearity)	<1%			
f_4 (error in instrument reading)	±1digit			
f_5 (fatigue)	<0.5%			
1 year drift	<1%			



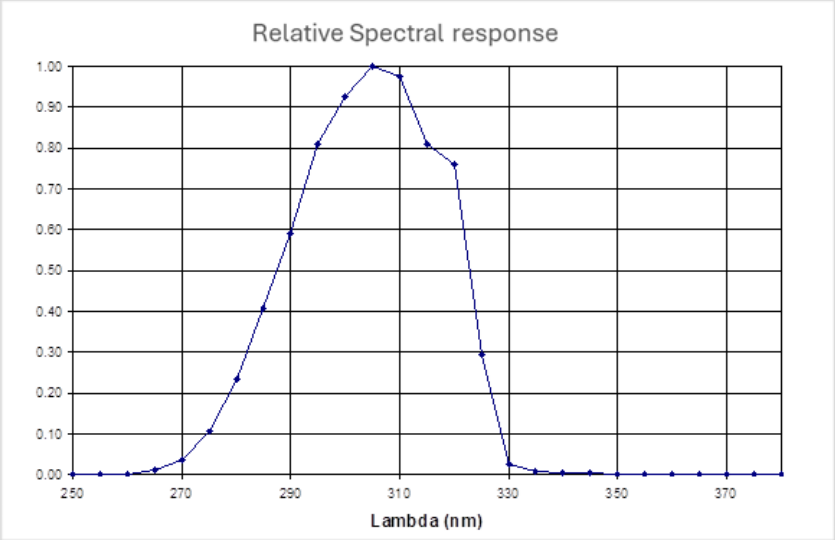
DX 631 (PHOTON FLOW in the chlorophyll field PAR)			
Measuring range (µmol/m^{2}s)	0.1... 199.99	200.0...1999.9	2000...10000
Resolution (µmol/m^{2}s)	0.01	0.1	1
Spectral range	400...700 nm		
Calibration uncertainty	<5%		
f_2 (response as law of cosines)	<6%		
f_3 (linearity)	<1%		
f_4 (error in instrument reading)	±1digit		
f_5 (fatigue)	<0.5%		
1 year drift	<1%		



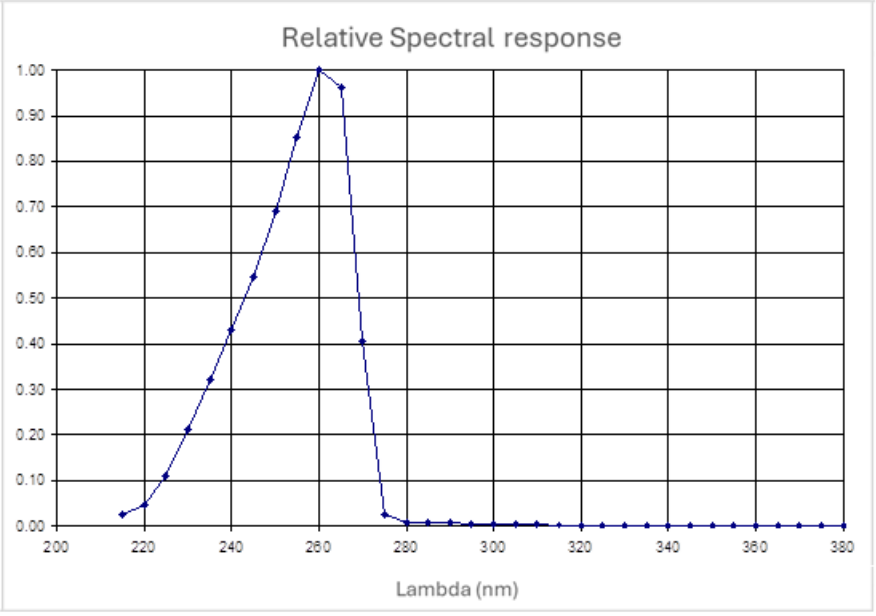
DX 641-UVA (UVA irradiance)				
Measuring range (W/m^2)	0.0010...1.9999	2.000...19.999	20.00...199.99	200.0...1999.9
Resolution (W/m^2)	0.0001	0.001	0.01	0.1
Spectral range	315...400 nm (Peak 365 nm)			
Calibration uncertainty	<5%			
f_3 (linearity)	<1%			
f_4 (error in instrument reading)	±1digit			
f_5 (fatigue)	<0.5%			
1 year drift	<2%			



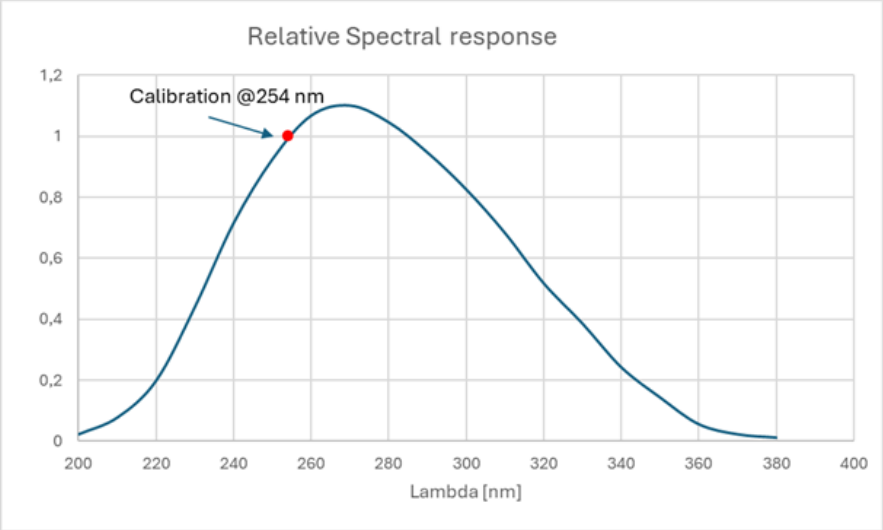
DX 641-UVB (UVB irradiance)				
Measuring range (W/m^2)	0.0010…1.9999	2.000…19.999	20.00…199.99	200.0…1999.9
Resolution (W/m^2)	0.0001	0.001	0.01	0.1
Spectral range	280…315 nm (Peak 305 nm)			
Calibration uncertainty	<5%			
f_3 (linearity)	<2%			
f_4 (error in instrument reading)	±1digit			
f_5 (fatigue)	<0.5%			
1 year drift	<2%			



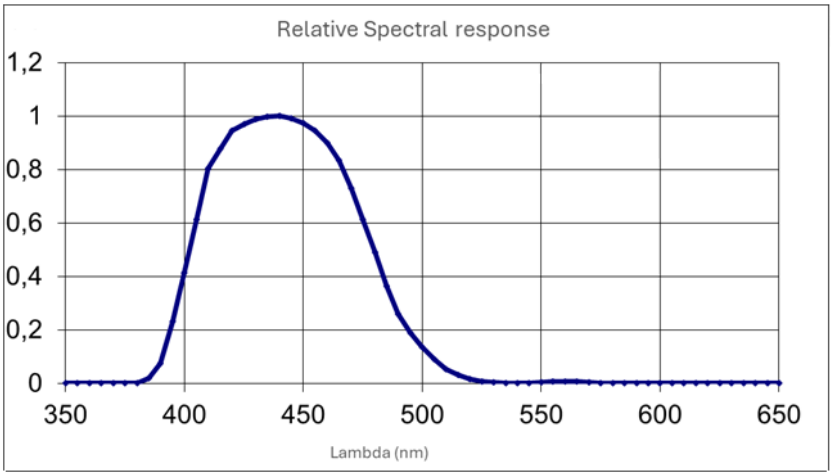
DX 641-UVC (UVC irradiance)				
Measuring range (W/m^2)	0.0010…1.9999	2.000…19.999	20.00…199.99	200.0…1999.9
Resolution (W/m^2)	0.0001	0.001	0.01	0.1
Spectral range	220…280 nm (Peak 260 nm)			
Calibration uncertainty	<5%			
f_3 (linearity)	<1%			
f_4 (error in instrument reading)	±1digit			
f_5 (fatigue)	<0.5%			
1 year drift	<2%			



DX 641-UVBC (UVBC irradiance)				
Measuring range (W/m^2)	0.0010…1.9999	2.000…19.999	20.00…199.99	200.0…1999.9
Resolution (W/m^2)	0.0001	0.001	0.01	0.1
Spectral range	210…355 nm (Peak 265 nm)			
Calibration uncertainty	<7% (calibration at 254 nm)			
f_3 (linearity)	<2%			
f_4 (error in instrument reading)	±1digit			
f_5 (fatigue)	<0.5%			
1 year drift	<2%			



DX 681 (Irradiance in the blue light spectral range)				
Measuring range (W/m^2)	0.0010…1.9999	2.000…19.999	20.00…199.99	200.0…1999.9
Resolution (W/m^2)	0.0001	0.001	0.01	0.1
Spectral range	380…550 nm. action curve for blue-light induced damage B(λ)			
Calibration uncertainty	<10%			
f_2 (response as law of cosines)	<6%			
f_3 (linearity)	<3%			
f_4 (error in instrument reading)	±1digit			
f_5 (fatigue)	<0.5%			
1 year drift	<2%			



ORDERING CODES

DX 611-L02 Digital photometric probe for the measurement of illuminance, spectral response according to standard photopic vision, diffuser for cosine correction, incl. 2 m M12 connection cable.

Art no. 486775

DX 621-L02 Digital radiometric probe for the measurement of irradiance in the spectral range 400…1050 nm, diffuser for cosine correction, incl. 2 m M12 connection cable.

Art no. 486776

DX 631-L02 Digital quantum-radiometric probe for the measurement of photon flux in the PAR range (photosynthetically Active Radiation 400…700 nm), diffuser for cosine correction, incl. 2 m M12 connection cable.

Art no. 486777

DX 641-UVA-L02 Digital radiometric probe for the measurement of irradiance in the 315…400 nm UVA spectral range, peak at 365 nm, quartz diffuser for cosine correction, incl. 2 m M12 connection cable.

Art no. 486778

DX 641-UVB-L02 Digital radiometric probe for the measurement of irradiance in the 280…315 nm UVB spectral range, peak at 305 nm, quartz diffuser for cosine correction, incl. 2 m M12 connection cable.

Art no. 486779

DX 641-UVC-L02 Digital radiometric probe for the measurement of irradiance in the 220…280 nm UVC spectral range, peak at 260 nm, quartz diffuser for cosine correction, incl. 2 m M12 connection cable.

Art no. 486780

DX 641-UVBC-L02 Digital radiometric probe for the measurement of irradiance in the 210…355 nm UVBC spectral range, peak at 265 nm, quartz diffuser for cosine correction, incl. 2 m M12 connection cable.

Art no. 486785

DX 681-L02 Digital radiometric probe for the measurement of effective irradiance in the Blue light spectral band. Spectral range 380…550 nm, diffuser for cosine correction, incl. 2 m M12 connection cable.

Art no. 486782

All probes may optionally be equipped with integrated bubble level and tripod connection thread on request.

Other cable lengths of 1 or 5 m can be realized on request.

CALIBRATION SERVICE

Thanks to our ISO 17025 accredited calibration laboratory, we can offer the following calibration services for sensors, for example:

ILLUMINANCE LUX 2,5 ÷ 200 lux	7 fixed points near: 2.5 – 5 – 10 – 20 – 50 – 100 - 200	**ACCREDIA-L1**
ILLUMINANCE LUX 50 ÷ 4000 lux	7 fixed points near: 50 – 100 – 200 – 400 – 800 – 1600 - 4000	**ACCREDIA-L1.50**
ILLUMINANCE LUX 2,5 ÷ 4000 lux	11 fixed points near: 2.5 – 5 – 10 – 20 – 50 – 100 – 200 – 400 – 800 – 1600 - 4000	**ACCREDIA-L1.25**
UV-A 1 ÷ 10 W m-2 (Xenon Mercury lamp, filter 365 nm)	3 fixed points near: 1 – 5 - 10	**ACCREDIA-L2**
UV-B 1 W m-2 (Mercury lamp, filter 311 nm)	1 fixed point near 1	**ACCREDIA-L5**
UV-C 1 W m-2 (Xenon Mercury lamp, filter 254 nm)	1 fixed point near 1	**ACCREDIA-L6**

If the sensor is to be equipped with a calibration certificate ex works, we can offer an attractive discount. Further information available on request.

SUITABLE INSTRUMENTS

PRO D01 1-channel handheld meter for digital probes. Supplied with 4 x AA alkaline batteries
Art no. 486134

PRO D05.2 2-channel handheld data logger for digital probes. Supplied with 4 NiMH rechargeable batteries, USB cable and software downloadable from Senseca website.
Art no. 486136

PRO D05.3 3-channel handheld data logger for digital probes. Supplied with 4 NiMH rechargeable batteries, USB cable and software downloadable from Senseca website.
Art no. 486137

PRO 921 Multifunctional handheld data logger for digital probes and 2 thermo couple probes Type K, Supplied with 4 x AA alkaline batteries **Art no. 488743**

PRO 925 Multifunctional handheld handheld meter for digital probes and 2 thermo couple probes Type K. Supplied with 4 x AA alkaline batteries, USB cable and software downloadable from Senseca website. **Art no. 488744**

