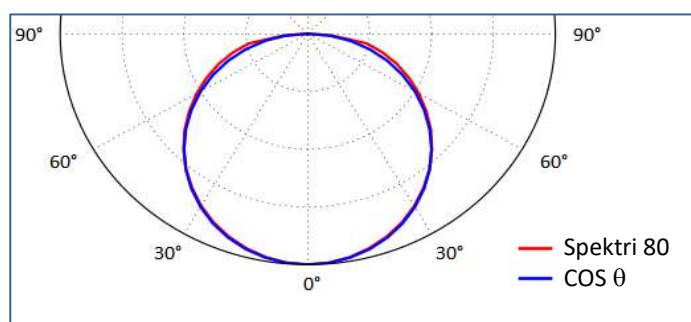


SPECTRORADIOMETER SPEKTRI 80

SPEKTRI-80 the Spectroradiometer for Field and Laboratory



Calibration	Factory calibration traceable to MIKES / NIST
Meter Class	Directional response conforms to DIN 5032 Part 7 Class B



SPECTRORADIOMETER

SPEKTRI 80 – Android App

SPEKTRI 80 Android App features

Main	Color evaluation	Spectral radiation	PAR	Conf
- Illuminance Ev [lx] - Correlated color temperature CCT [K] - Chromaticity coordinates CIE1931 (x,y), CIE1964 (u,v), CIE1976 (u',v')	- Color rendering index CRI: Ra, R1 to R14 - Standard deviation color matching SDCM	- Spectral irradiance [W/nm/m²] - Irradiance [mW/cm²] - Effective wavelength λ_{eff} [nm] - Peak wavelength λ_p [nm]	- unit: [mmol/m²/s] - PPFD 400-700nm - PFD-B 400-500nm - PFD-G 500-600nm - PFD-R 600-700nm - PFD-UV 380-400nm - PFD-FR 700-780nm	- Measuring mode Lv/Ev - WL range selection - Result comparison - Test name edition - Data saving



SPECTRORADIOMETER

SPEKTRI 80 Selection Guide

Product family	SPEKTRI 80 (SSL S-80)				
Product Code	S-80.PAR	S-80.Ee	S-80.ColorLux	S-80.Lv	S-80.Lab
Product Name	SPEKTRI 80, Horti	SPEKTRI 80, Irradiance	SPEKTRI 80, Colorlux	SPEKTRI 80, Luminance	SPEKTRI 80, Advanced
Application Areas	Horticulture, Agriculture	Medical, Dental	General lighting	Display, Automotive	General spectroscopy
Measuring Parameters					
Illuminance Ev	✓		✓	✓	✓
Irradiance Ee	✓	✓	✓	✓	✓
Radiance Le				✓	✓
Luminance Lv				✓	✓
Flicker (MI, FI, f)			✓		
CCT, ccxy, ccu'v'	✓		✓	✓	✓
SDCM			✓	✓	✓
CRI / TM30			✓	✓	✓
Spectrum	✓	✓	✓	✓	✓
PAR	✓		✓		✓
Battery operated	✓	✓	✓	✓	
BT connection	✓	✓	✓	✓	
USB data readout					✓
Android App	✓	✓	✓	✓	
PC software (SSL SRM sw)	Optional	Optional	Optional	Optional	✓
Export to Excel	✓	✓	✓	✓	✓

SPECTRORADIOMETER SPEKTRI 80, Horti



Application examples:

- ✓ Horticultural and Agricultural Lighting

SPECTRORADIOMETER

SPEKTRI 80, Horti

DEVICE CODE		S-80.PAR	
Measurement scope	Main	PAR	
Parameters	- Illuminance Ev - Correlated color temperature CCT - CIE Chromaticity coordinates (x,y) - Total PPFD - Spectrum graph - PPFD graph as a function of time	unit: [mmol/m²/s] - PPFD 400-700nm - PFD-B 400-500nm - PFD-G 500-600nm - PFD-R 600-700nm - PFD-UV 380-400nm - PFD-FR 700-780nm - Chrolophyll A/B - Betacarotene - Phytochrome red / far red	
SPECTRAL SENSOR			
Ev range	25 – 100 000 lx	Optical Bandwidth	9 – 11 nm
PPFD range	0.5 – 2000 μmol/s/m ²	WL resolution	1 nm
Sensor	CMOS diode array	Wavelength (WL) range	380-780 nm
Signal to noise	1000 : 1	Integration time	10 ms – 30 s
Accuracy	Ev 3%, CCT 3%, PPFD 4%	Digital resolution	16 bits
OTHER			
Measuring head	Outer diameter 42mm, height 10mm, PTFE diffuser 2mm thick		
Data readout	Android app through Bluetooth, PC software through USB-B 2.0		
Dimensions	118mm x 78mm x 42mm		
Weight	230 g		

SPECTRORADIOMETER SPEKTRI 80, Irradiance



Application examples:

- ✓ General lighting (quick and easy check)
- ✓ Occupational health

SPECTRORADIOMETER

SPEKTRI 80, Irradiance

DEVICE CODE	S-80.Ee		
Measurement scope	Main	Spectral radiation	
Parameters	- Irradiance Ee - Measurement statistics	- Spectral irradiance [W/nm/m²] - Irradiance [mW/cm²] - Effective wavelength λ_{eff} [nm] - Peak wavelength λ_p [nm]	
SPECTRAL SENSOR			
Ee range	0.0001 – 18 mW/cm ² (*)	Optical Bandwidth	9 – 11 nm
		WL resolution	1 nm
Sensor	CMOS diode array	WL range	380 - 780 nm
Signal to noise	1000 : 1	Integration time	10 ms – 30 s
Accuracy	Ee 3%	Digital resolution	16 bits
OTHER			
Measuring head	Outer diameter 42mm, height 10mm, PTFE diffuser 2mm thick		
Data readout	Android app through Bluetooth, PC software through USB 2.0 (type B USB)		
Dimensions	118mm x 78mm x 42mm		
Weight	230 g		

(*) Depending on the analyzing wavelength.

SPECTRORADIOMETER SPEKTRI 80 - ColorLux

SPEKTRI 80 spectroradiometer + Flicker sensor



Application examples:

- ✓ General lighting
- ✓ Colorimetry
- ✓ Flicker

SPECTRORADIOMETER

SPEKTRI 80 - ColorLux

DEVICE CODE	S-80.ColorLux				
Measurement scope	Main	Color evaluation	Flicker	Spectral radiation	PAR
Parameters	- Ev [lx] - CCT [K] - CIE Chromaticity coordinates (x,y) CIE 1931, (u,v) CIE 1964, (u',v') CIE 1976	- Color rendering index CRI: Ra, R1 to R14 - Standard deviation color matching SDCM	- Percent flicker (%) - Flicker Index - Flicker Frequency - Flicker risk IEEE1789	- Spectral irradiance [W/nm/m ²] - Irradiance [mW/cm ²] - λ_{eff} [nm] - λ_p [nm]	unit: [mmol/m ² /s] - PPFD - PFD-B - PFD-G - PFD-R - PFD-UV - PFD-FR

SPECTRAL SENSOR

Measurement range	Illuminance (lx)	PPFD ($\mu\text{mol/s/m}^2$)	Optical Bandwidth	9 – 11 nm
	25 – 100 000	0.5 – 2000		
Sensor	CMOS diode array		WL resolution	1 nm
Signal to noise	1000 : 1		WL range	380 – 780 nm
Accuracy	Illuminance 3%, CCT 3%, CRI, Ra 2%, WL 1nm		Integration time	10 ms – 30 s
			Digital resolution	16 bits

FLICKER SENSOR

Digital Resolution	12 bits	Sampling rate	200 000 samples/s
Illuminance range	100-200 000 lx	Frequency range	0 – 10 kHz

OTHER

Data readout	Android app through Bluetooth, PC software through USB 2.0 (type B USB)
Dimensions	118mm x 78mm x 42mm
Weight	230 g

SPECTRORADIOMETER SPEKTRI 80 - Luminance

SPEKTRI 80 spectroradiometer + Luminance probe



Luminance mode



Illuminance mode

Application examples:

- ✓ Displays
- ✓ Control buttons and illuminated signs
- ✓ Outdoor illumination

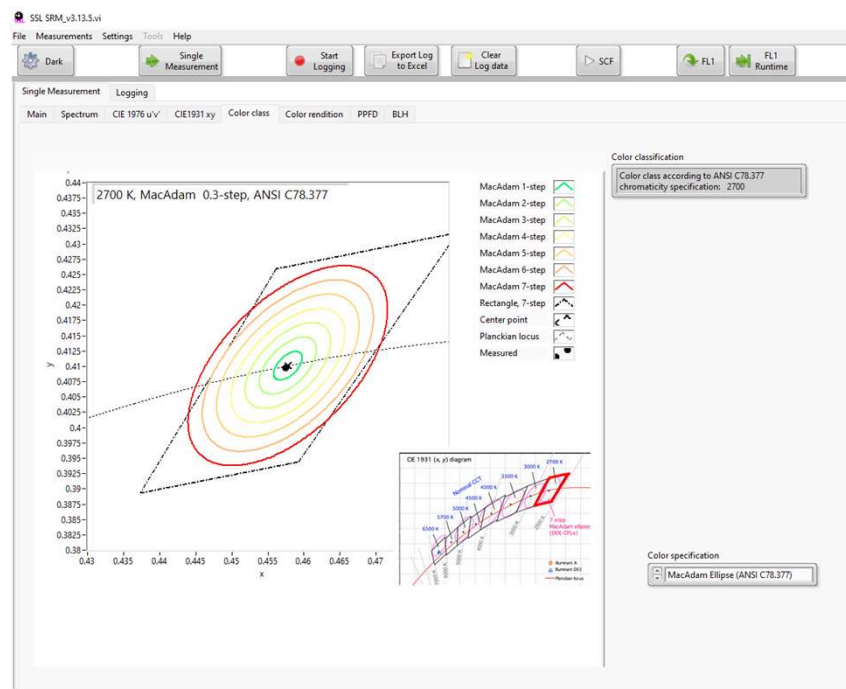
SPECTRORADIOMETER

SPEKTRI 80 - Luminance

DEVICE CODE	SSL S-80.Lv		
Measurement scope	Main	Color evaluation	Spectral radiation
Parameters	- Ev [lx] / Lv [cd/m ²] - Correlated color temperature CCT [K], - CIE Chromaticity coordinates (x,y) CIE 1931, (u,v) CIE 1964, (u',v') CIE 1976	- Color rendering index CRI: Ra, R1 to R14 - TM-30-18: Rf, Rg, color vector graphic, - Standard deviation color matching SDCM	- Spectral irradiance [W/nm/m ²] - Irradiance [mW/cm ²] - Effective wavelength λ _{eff} [nm] - Peak wavelength λ _p [nm]
SPECTRAL SENSOR			
Measurement range	Ev (lx)	Lv (cd/m ²)	Optical Bandwidth 9 – 11 nm
	25 – 100 000	0.8 – 80 000	
Sensor	CMOS diode array		WL resolution 1 nm
Signal to noise	1000 : 1		WL range 380 – 780 nm
Accuracy	Illuminance 3%, CCT 3%, CRI, Ra 2%, WL 1nm		Integration time 10 ms – 30 s
			Digital resolution 16 bits
LUMINANCE PROBE			
Measuring point	Diam. 10 mm	Field of view	1.5°
Spot size	Diam. 20mm @ 1m	Fiber	2m, Core 0.2mm, NA: 0.22
OTHER			
Data readout	Android app through Bluetooth, PC software through USB 2.0 (type B USB)		
Dimensions	118mm x 78mm x 42mm		
Weight	230 g + 100g (luminance probe)		

SPECTRORADIOMETER SPEKTRI 80 - Laboratory

SPEKTRI 80 spectroradiometer + advanced software

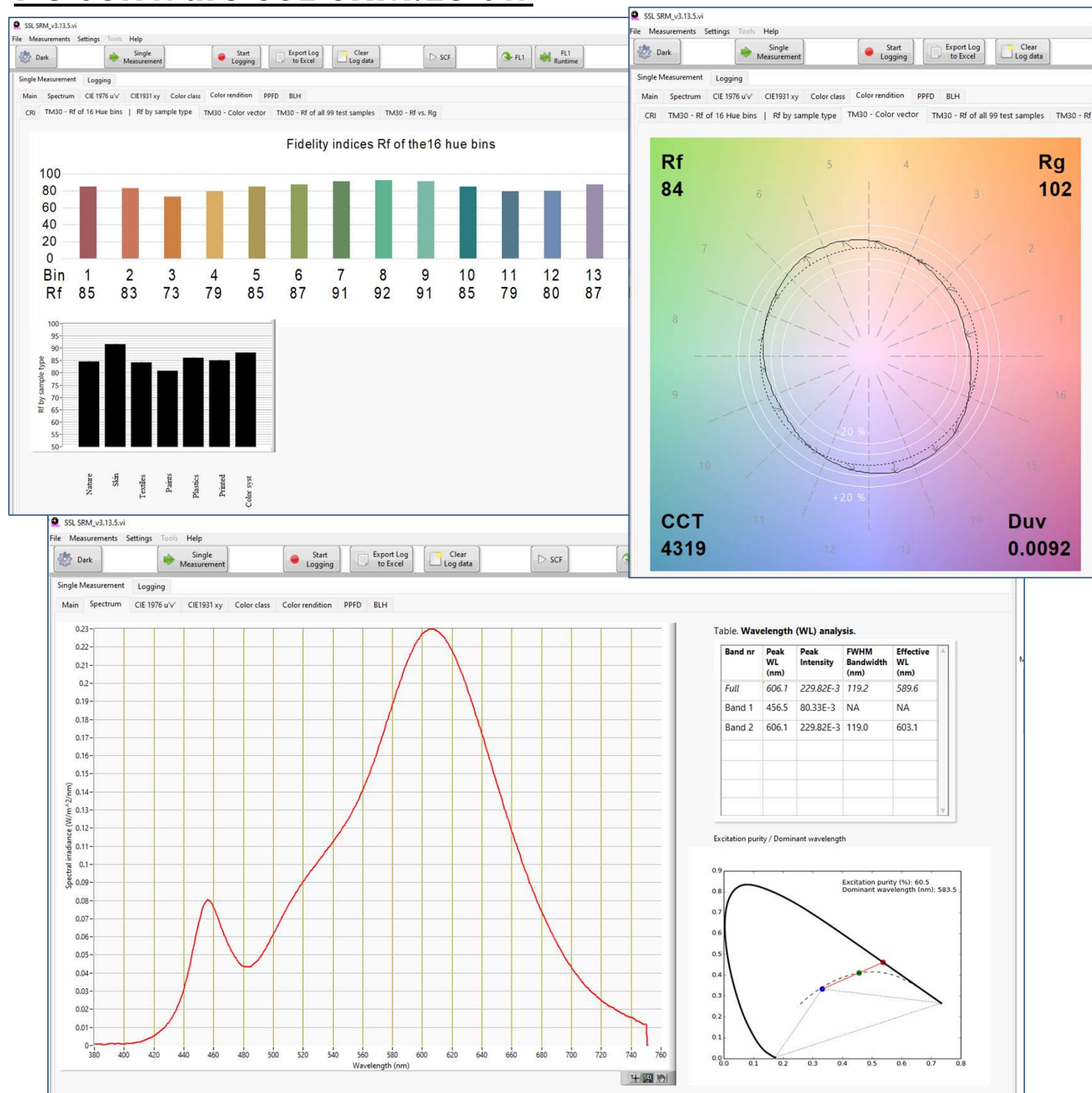


Application examples:

- General spectroscopy
- Displays
- General lighting

SPECTRORADIOMETER SPEKTRI 80 - Laboratory

PC software SSL SRM.Ee sw



SPECTRORADIOMETER

SPEKTRI 80 - Laboratory

DEVICE CODE		SSL S-80.Lab		
Parameters	- Ev [lx] / Lv [cd/m2]	- Color rendering index CRI: Ra, R1 to R14	- Spectral irradiance [W/nm/m²]	unit: [mmol/m²/s]
	- CCT [K]	- TM-30-18: Rf, Rg, color vector graphic	- Irradiance [mW/cm²]	- PPFD
	- CIE Chromaticity coordinates (x,y)	- Standard deviation color matching SDCM	- λ _{eff} [nm]	- PFD-B
	CIE 1931, (u,v) CIE 1964, (u',v') CIE 1976	- Color class	- λ _p [nm]	- PFD-G
				- PFD-R
				- PFD-UV
				- PFD-FR
SPECTRAL SENSOR				
Measurement range	Ev (lx)	PPFD (μmol/s/m²)		Lv (cd/m2)
	25 – 100 000	0.5 – 2000		0.8 – 80 000
Sensor	CMOS diode array		WL resolution	1 nm
Signal to noise	1000 : 1		WL range	380 – 780 nm
Accuracy	Ev 3%, CCT 3%, CRI 2%, WL 1nm		Integration time	10 – 30 000 ms
Optical Bandwidth	9 – 11nm		Digital resolution	16 bits
OTHER				
Data readout	PC software through USB 2.0 (type B USB)			
Dimensions	118mm x 78mm x 42mm			
Weight	200 g + 100g (Luminance probe)			