

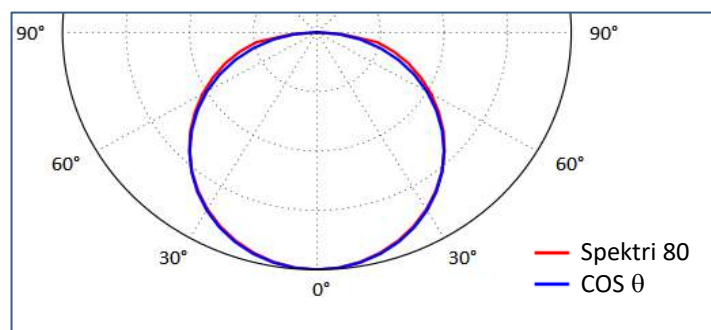
SPECTRORADIOMETER SPEKTRI 80

[Back to Contents](#)

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



Instruments for light measurement - Content

- ❑ Spectroradiometers
 - ❑ SSL SPEKTRI 80 spectroradiometer product family
 - ❑ SPEKTRI 80 Selection guide
 - ❑ SPEKTRI 80 Horti
 - ❑ SPEKTRI 80 Irradiance
 - ❑ SPEKTRI 80 Color
 - ❑ SPEKTRI 80 ColorLux
 - ❑ SPEKTRI 80 Luminance
 - ❑ SPEKTRI 80 Laboratory

SPECTRORADIOMETER

SPEKTRI 80 – Android App

SPEKTRI 80 Android App features

[Back to Contents](#)

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: [$\mu\text{mol}/\text{m}^2/\text{s}$] - 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

[Back to Contents](#)

Product family	SPEKTRI 80 (SSL S-80)					
Product Code	S-80.PAR	S-80.Ee	S-80.Color	S-80.ColorLux	S-80.Lv	S-80.Lab
Product Name	SPEKTRI 80, Horti	SPEKTRI 80, Irradiance	SPEKTRI 80, Color	SPEKTRI 80, Colorlux	SPEKTRI 80, Luminance	SPEKTRI 80, Laboratory
Application Areas	Horticulture, Agriculture	Medical, Dental	General lighting	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	Optional	✓
Export to Excel	✓	✓	✓	✓	✓	✓

SPECTRORADIOMETER SPEKTRI 80, Horti

[Back to Contents](#)



Application examples:

- ✓ Horticultural and Agricultural Lighting

SPECTRORADIOMETER

SPEKTRI 80, Horti

DEVICE CODE	S-80.PAR		Back to Contents
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: [$\mu\text{mol}/\text{m}^2/\text{s}$] - 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	65 – 250 000 lx	Optical Bandwidth	9 – 11 nm
PPFD range	1 – 5000 $\mu\text{mol}/\text{s}/\text{m}^2$ (white LEDs) 0.2 – 1000 $\mu\text{mol}/\text{s}/\text{m}^2$ (single color LEDs)	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

[Back to Contents](#)



Application examples:

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

SPECTRORADIOMETER SPEKTRI 80, Irradiance

[Back to Contents](#)

[Back to](#)

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 - Color

[Back to Contents](#)

SPEKTRI 80 spectroradiometer for colorimetry



Application examples:

- ✓ General lighting
- ✓ Colorimetry

SPECTRORADIOMETER

SPEKTRI 80 - Color

DEVICE CODE	S-80.Color				Back to Contents
Measurement scope	Main	Color evaluation	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	- Spectral irradiance [W/nm/m²] - Irradiance [mW/cm²] - λ _{eff} [nm] - λ _p [nm]	unit: [μmol/m²/s] - PPFD - PFD-B - PFD-G - PFD-R - PFD-UV - PFD-FR	
SPECTRAL SENSOR					
Measurement range	Illuminance (lx)	PPFD (μmol/s/m²)	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	
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 - ColorLux

[Back to Contents](#)

SPEKTRI 80 spectroradiometer + Flicker sensor



Application examples:

- ✓ General lighting
- ✓ Colorimetry
- ✓ Flicker

SPECTRORADIOMETER

SPEKTRI 80 - ColorLux

DEVICE CODE	S-80.ColorLux					Back to Contents
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/m²] - Irradiance [mW/cm²] - λ _{eff} [nm] - λ _p [nm]	unit: [μmol/m²/s] - PPFD - PFD-B - PFD-G - PFD-R - PFD-UV - PFD-FR	
SPECTRAL SENSOR						
Measurement range	Illuminance (lx)	PPFD (μmol/s/m²)	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

[Back to Contents](#)

SPEKTRI 80 spectroradiometer + Luminance probe



Luminance mode



Illuminance mode

Application examples:

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

SPECTRORADIOMETER

SPEKTRI 80 - Luminance

[Back to Contents](#)

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 1 nm		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

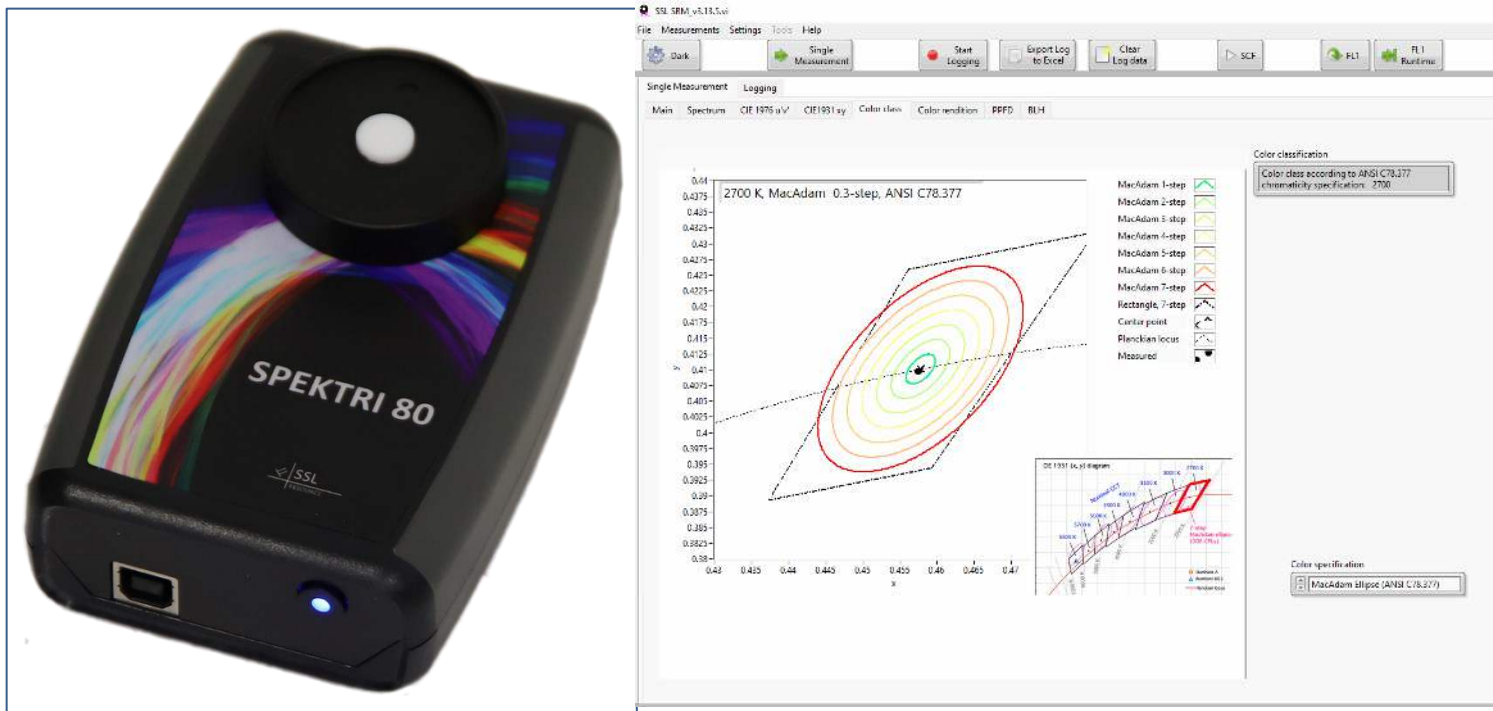
OTHER

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

[Back to Contents](#)

SPEKTRI 80 spectroradiometer + advanced software



Application examples:

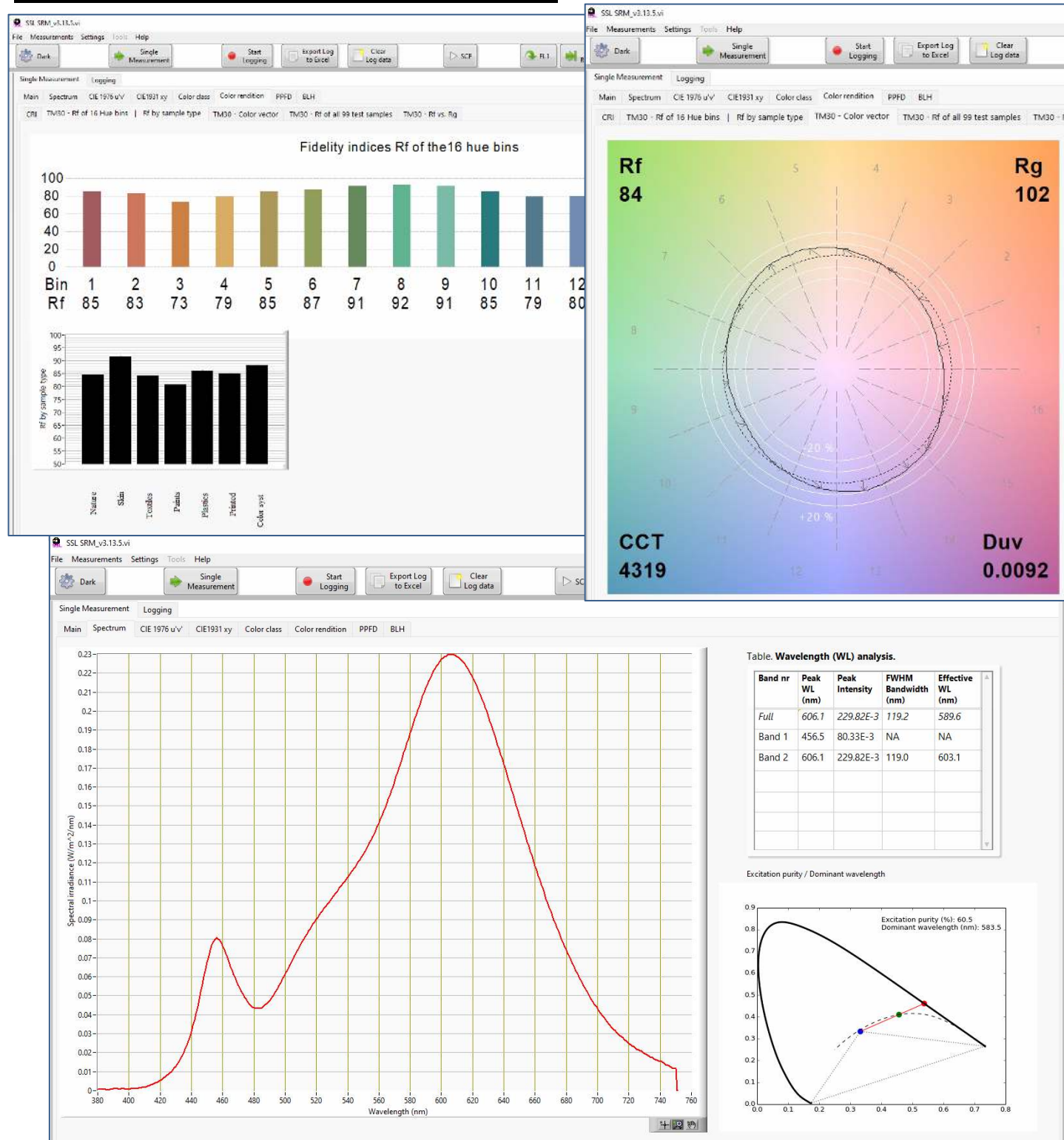
- General spectroscopy
- Displays
- General lighting

SPECTRORADIOMETER SOFTWARE

SSL SRM

[Back to Contents](#)

PC software SSL SRM.Ee sw



SPECTRORADIOMETER

SPEKTRI 80 - Laboratory

[Back to Contents](#)

DEVICE CODE	SSL S-80.Lab			
Parameters	- Ev [lx] / Lv [cd/m ²] - 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 - Color class	- Spectral irradiance [W/nm/m ²] - Irradiance [mW/cm ²] - λ_{eff} [nm] - λ_p [nm]	unit: [μmol/m ² /s] - PPFD - PFD-B - PFD-G - PFD-R - PFD-UV - PFD-FR

SPECTRAL SENSOR

Measurement range	Ev (lx) 25 – 100 000	PPFD (μmol/s/m ²) 0.5 – 2000	Lv (cd/m ²) 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 – 11 nm	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)

SSL Resource Instruments for light measurement



SSL Resource

Myllyojankatu 2A, 24100 Salo, Finland

www.sslresource.com

sales@sslresource.com | +358 44 360 81 99