



PSI (Photon Systems Instruments), spol. s r.o.  
Czech Republic  
[www.psi.cz](http://www.psi.cz)

Welcome to Issue 13 of the PSI NEWS

This issue is dedicated to:

# SpectraPen SP-100

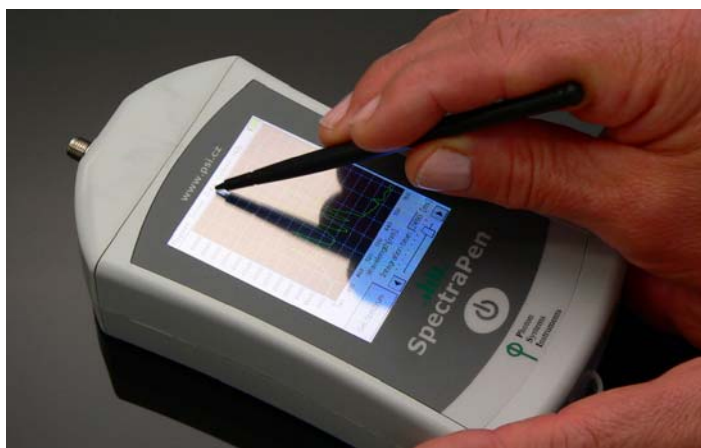
## Compact and Low-Cost Spectrometer

### Features:

- Handheld and lightweight
- Durable and low-cost
- Wide spectral response range

### Two Standard Versions:

- (1) UV/Vis: 340 – 780 nm
- (2) NIR: 640 – 1050 nm
- Optional modules for:  
Fluorescence (LED light source + clip + cuvette)  
Reflectance (LED light source + clip)



### Applications:

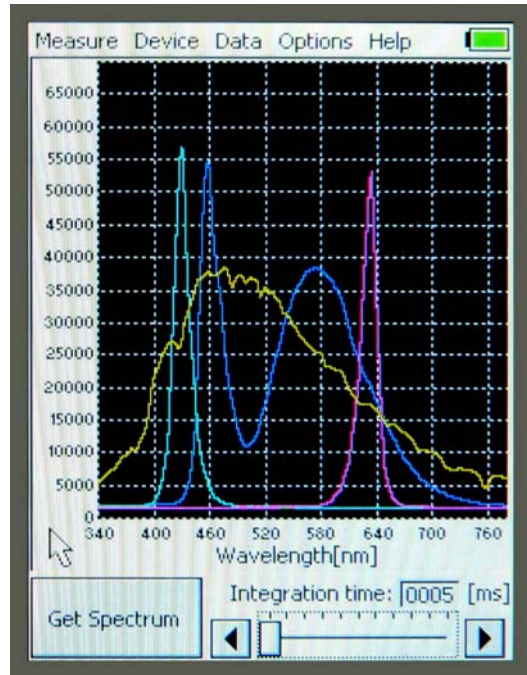
- Visible light source testing
- Color measurement
- Chemical measurement

### Other Benefits:

- No PC needed
- Intuitive touch-screen use
- Flexibility in measurement setups
- Battery-powered
- USB connectivity

### Software:

- Different operation modes: scope, absorbance, transmittance
- Different tools: zoom, marker, auto scale, curve smoothing
- Automated setting of the integration time
- Data browsing
- Data averaging



### PC Connectivity:

- Spectrum data collection
- Export to Excel
- Online control
- Firmware update

### Technical Specification:

<b>Optical entrance</b>	SMA 905 to 0.22 numerical aperture single-strand optical fiber	
<b>Spectral response range</b>	Version 1: 340 nm - 780 nm	Version 2: 640 nm - 1050 nm
<b>Spectral response half width *</b>	Version 1: 9	Version 2: 8
<b>Spectral straylight *</b>	-30 dB	
<b>Wavelength reproducibility</b>	+/- 0.5 nm	

<b>Integration time</b>	5 ms – 10 s
<b>Number of pixel</b>	256
<b>Dimension of pixel</b>	0.5 x 15.8 mm
<b>Touch screen</b>	240 x 320 pixel; 65535 colors
<b>Memory capacity</b>	32 Mbit (up to 8000 measurements)
<b>System data</b>	16 bit AD conversion
<b>Dynamic range</b>	High gain: 1:4300 Low gain: 1:13000
<b>Communication</b>	USB
<b>Dimensions</b>	15 x 7.5 x 4 cm
<b>Weight</b>	300 g
<b>Case</b>	Splash-proof
<b>Battery</b>	Li-ion; rechargeable via USB port of a PC
<b>Battery life</b>	48 hours (continuous operation)
<b>Operating temperature</b>	0 to +50 °C
<b>Storage temperature</b>	-20 to +70 °C

\* When monochromatic light of  $\lambda = 550 \text{ nm}$  or  $\lambda = 850 \text{ nm}$  is input, spectral stray light is defined as the ratio of the count measured at the input wavelength, to the count measured at a wavelength 40 nm longer or shorter than the input wavelength.

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