

UV Radiometer UVpad



New:
software control

UVpad

The UVpad is the world's thinnest spectral measuring and autonomous UV radiometer. It combines scientific measurement technology with a compact and user-friendly instrument. With its innovative measuring principle, it doesn't use optical filters. UV light is spectrally detected and analyzed in the UVpad. Thus, measurements are traceable to national standards. Since it works without a filter, it is particularly suitable for the measurement and comparison of different lamps.

All measurement data are displayed on the device immediately; 50 measurements are stored in the UVpad and can be read via USB. The supplied PC software evaluates the irradiance intensity profiles measured separately for UVA, UVB, UVC, and VIS. Spectrum and measurement data can be exported and saved.

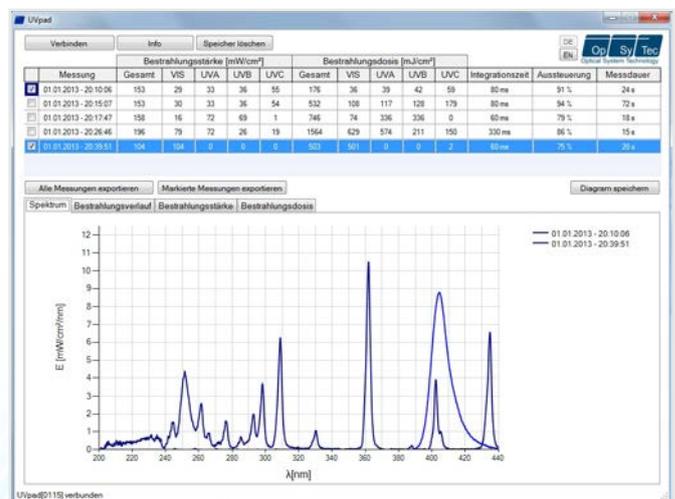
Optionally, UV systems can be optimized due to saved operating functions such as, for example, the absorption spectra of photo initiators. Thus, the operation costs can be reduced and the product quality can be ensured.

Applications:

- Control of UV curing belts
- Measurement of spotlight sources and UV-LEDs

HIGHLIGHTS

- Spectral radiometric measurements without a PC
- 200 - 440 nm (total UV spectral range)
- 512 photo diodes
- Battery operated
- Height only 14,4 mm
- USB for data export
- Internal memory for 50 measurements



Software UVpad Viewer

TECHNICAL DATA

Spectral range	200 - 440 nm ± 5 nm
Spectral bandwidth	2 nm
Irradiance meas. range	2 - 5000 mW/cm ²
Dose measurement range	1 mJ/cm ² - 600 J/cm ²
Resolution	0,1 mW/cm ² / 1 mWcm ²
Calibration	traceable to PTB/NIST
calibration uncertainty typ.	5,0% - 9,5%
Cosine correction	yes
Data storage rate	100 Hz to 1 Hz, adjustable
Measurement time	5 s to 8 min depending on data storage rate
Sampling rate	10 ms - 1000 ms
Display	graphical, 128 x 64 px
Dimensions	160 x 100 x 14,4 mm ³
Sensor position	at the rear side
Weight	~ 375 g
Operation temperature	10 - 70 °C briefly for up to 60s at 120°C ambient temperature
Batteries	internal Lilon accu
Memory	50 measurements
Interface	USB
System requirements	Windows 10 or 11

DID YOU KNOW?

Broadband and spectral radiometers are used in the UV measurement technology to monitor lamp performance. However, broadband radiometers are only calibrated to one lamp type and differ in their sensitivity to each other. This makes comparisons between the measurements of different manufacturers and comparisons between systems with different lamps (e.g., Hg, Ga, Fe) or UV LEDs impossible. In contrast, by means of spectral radiometers, all UV lamps can be measured.

For example, as doped radiation sources age, the spectrum changes. UV systems and aging of the radiation sources can be conveniently monitored and documented with the UVpad.

In spectral radiometers, the actual measuring range depends on the spectrum and can be exceeded or reduced by it. We specify the measuring range for measurements of common medium pressure lamps.

For optimum measurement results, we offer the three versions of the UVpad - standard, high power or high sensitivity.

With a measurement range of up to 5000 mW/cm², the standard UVpad is already ideal for belt systems with medium pressure lamps and for applications in the fields adhesive bonding and sealing. Even modern UV-LED lamps can normally be measured.

For UV-LED lamps with the highest power density, we recommend the high power option. Please note that the irradiation in UV-LEDs strongly decreases in curing systems to some extent with an increasing distance. We will happily advise you on the choice of the appropriate measurement range.

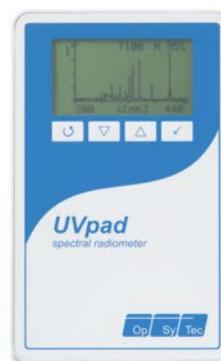
For fluorescent UV lamps, sun simulators or applications with a low irradiance, the UVpad with the option "high sensitivity" is well suited.

HIGH-POWER OPTION

Spectral bandwidth	2 nm
Irradiance meas. range	25 - 35000 mW/cm ² (opt.)
Dose measurement range	25 mJ/cm ² - 4200 J/cm ²
Resolution	1 mW/cm ²

HIGH-SENSITIVITY OPTION

Spectral bandwidth	4 nm
Irradiance meas. range	1 - 5000 W/m ²
Bestrahlungsdosis	0,1 J/m ² - 5000 J/m ²
Resolution	1 W/m ² = 0,1 mW/cm ²



Front view



Rear view

SOFTWARE

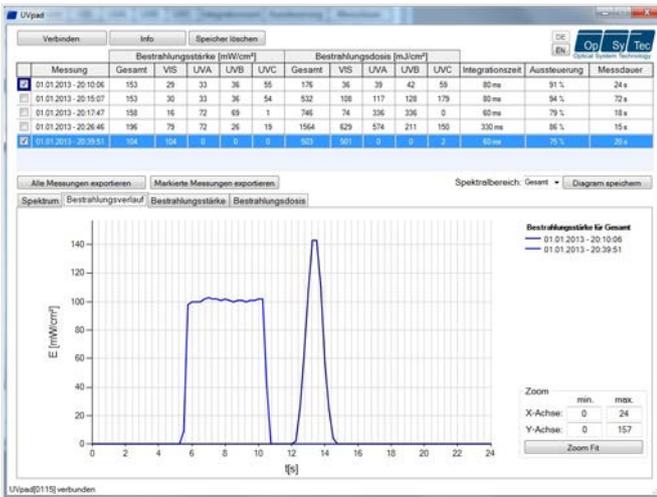
Connect the UVpad to the PC in order to indicate, evaluate and save the measurements. Due to the simple comparison of the measurement data, changes in the spectrum, irradiance or dose are possible at the touch of a button.

With each measurement, the measurement data and time are saved. Measurement parameters and system names can be preset on the PC and are directly available on the measuring device. Due to the addi-

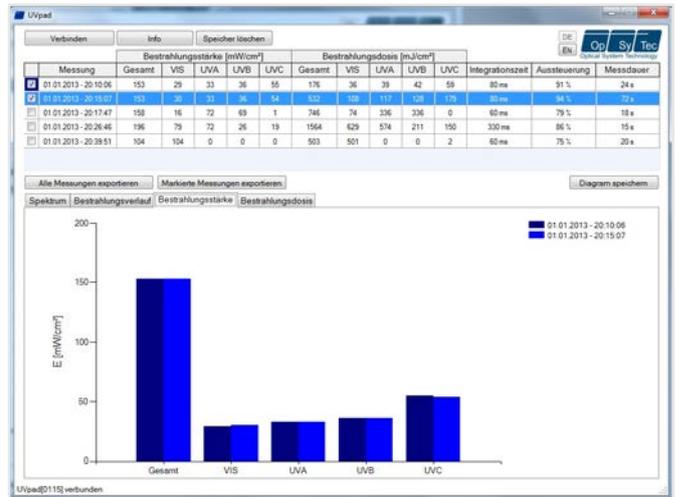
onal possibility to save the measurements directly with comments, you can always keep track of many measu-

System name	Sensitivity	Integration time	Measurement mode	Measurement delay	Recording time	Gain
1 Lab.	automatically	30 ms	mW/cm2	0 s	120 s @ 4 Hz	low
2 LED LedCont.	automatically	200 ms	mW/cm2	0 s	48 s @ 10 Hz	high
3 365 nm LED	high	770 ms	mW/cm2	20 s	24 s @ 20 Hz	high
4 405 nm LED	fixed	10 ms	mW/cm2	10 s	10 s @ 50 Hz	low
5 UV system	fixed	100 ms	mW/cm2	10 s	5 s @ 100 Hz	high
6 HP120	fixed	30 ms	mW/cm2	0 s	8 min @ 1 Hz	high

Software: Parametrization on the PC



Software displays irradiance profiles



Software displays a comparison of different irradiance measurements

FUNCTIONS

Radiometric measurements:

- Spectra at peak irradiance
- Peak irradiance (UVA, UVB, UVC, VIS)
- Irradiance profile (UVA, UVB, UVC, VIS)
- Irradiance dose (UVA, UVB, UVC, VIS)

Settings:

- Sensitivity & measurement mode
- measurement duration (~5 s to 8 min)
- measurement delay (for slow UV belt systems)

Data export:

- 50 measurements with irradiance profile for UVA, UVB, UVC, VIS
- Measurement settings as date / time, duration, settings and saturation

SCOPE OF DELIVERY

UVpad, PC-software, manufacturers certificate of calibration, USB cable and case

Measuring time

Start measurement

Show last measurement

Measurement time

Settings

Information

Scope mode

MAX T 100 M 100%

Irradiance

Total: 1000.00 mW/cm²

VIS: 50.00 mW/cm²

UVA: 250.00 mW/cm²

UVB: 200.00 mW/cm²

UVC: 500.00 mW/cm²

Irradiance dose

Total: 7000.00 mJ/cm²

VIS: 350.00 mJ/cm²

UVA: 1750.00 mJ/cm²

UVB: 1400.00 mJ/cm²

UVC: 3500.00 mJ/cm²

PART NUMBERS

UVpad	670011
opt. meas. range 35 W/cm²	670011-P
opt. meas. range 0,5 W/cm²	670011-H
opt. action / actinic spectra	670011-S