



spec'3

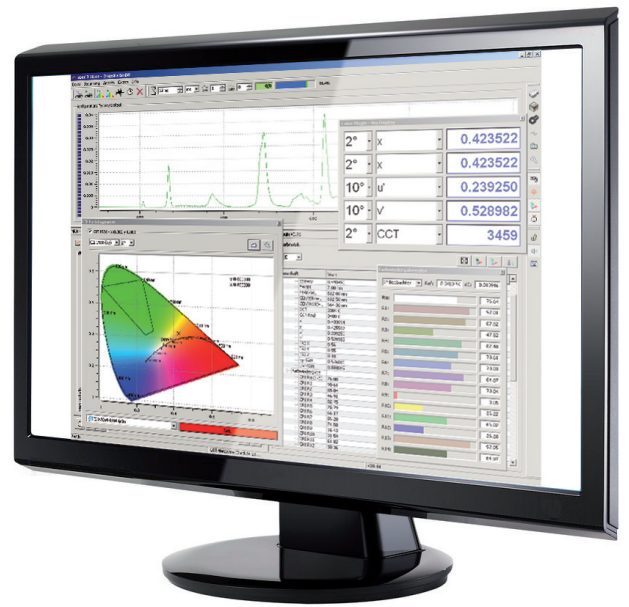
Convenient measurement of spectral distributions

The spectral measurement system spec'3 by opsira allows the measurement of spectral distributions from UV to NIR. Within the visible spectral region the colorimetric values are displayed directly by the spec software package according to CIE. A continuous live mode display is possible whereby timely changes can easily be observed or adjustments facilitated sensibly. The color rendering values according to CIE are updated permanently in the live mode. At the push of a button the color-rendering diagram provides an overview of all values - from R_1 to R_{14} - in a fast and easy way. For a sensible evaluation of the measuring values, the chromaticity coordinates as well as the corresponding correlated color temperature with respect to the ΔC value to the Planck's curve is delivered as well.

Color tolerance can be easily defined in the evaluation software to enable a quick test in accordance with test specifications. By means of the automated adjustment of the integration time and of the integrated automatic shutter for the dark correction, the system is being stabilized in an ideal working point and thus assures a complete usage of the digitalization depth. Measurements of emission, reflection or transmission characteristics round off the extensive spec'3 spectrum. By means of the TCP/IP add-on spec'remote the system can be integrated into any test environment. Furthermore, the operation of several spectrometers simultaneously with the same or even different wavelength bands is possible.

opsira

www.opsira.com/spec3



Measuring quantities

Spectral distribution	$S(\lambda)$
Chromaticity coordinates	$x, y / u', v' / L^*a^*b^*$
Correlated color temperature	T, T_n [K]
Color rendering indices	$R_1 - R_8, R_a, R_9 - R_{14}$
Color saturation	S [%]
Hue angle	h° [°]
Dominant wavelength	λ_d
Transmission rate	$T(\lambda)$ [%] (specular, diffuse)
Reflection rate	$R(\lambda)$ [%] (specular, diffuse)

Specifications

Wavelength band	any region from 180 nm to 2500 nm possible
Number of detector pixels	approx. 2048
AD converter	16 Bit / 1 MHz
Wavelength resolution	0.03 nm to 10 nm FWHM
Measuring dynamics	2×10^8 (system), 1300:1 (single measurement)
Linearity	>99,8%
Stray light elimination	0.05%@600 nm / 0.10%@435 nm
Integration times	1 ms to 65 s

Accessories

• Reflection standard	• Integrating spheres
• Shutter	• Diffusors (COS-weighting)
• Various measurement fibres	• Light sources
• Absolute sensors	• Software Plug-in MED
• Software add-on spec'remote	• USB2LAN Ethernet Interface