gonio'2pi

The state-of-the-art and versatile measurement system

gonio'2pi enables the professional and precise measurement of light source and luminaire characteristics (source imaging goniometer) as well as the scatter behavior (BSDF measurements) of materials and surfaces combined with a very high measurement dynamics. The goniometer is available in a source imaging (si) configuration, a scatter measurement configuration (bsdf) and in a complete version combining both approaches. si can be easily upgraded to bsdf or vice versa at a later stage. Compared to similar devices the opsira goniometers benefit from their very robust construction paired with a very high precision in the mechanical setup and from the reliable concept of zero backlash drives.

The goniometer software provides control to adjust multiple arbitrary solid angle regions with specific angular resolutions for the measurements. The ray data obtained from the SI goniometer measurements can be converted to all established optics simulation programs via the luca'rayset software package. From BSDF measurements the gonio software creates data in an easy ASCII format or in an XML structure. Converters to most of the professional optics development programs are available. Thus the spectrum of this unique gonio'2pi comprises the smallest light source as well as large luminaire systems as well as the analysis of material properties.

opsira

www.opsira.com/gonio2

Specifications

	si version	bsdf version
Dimensions (max. gonio arm positions)	l 1500 mm x w 875 mm x h 2070 mm*1	
Total footprint	l 2215 mm x w 875 mm (approx. 2 m²)*1	
Dimensions electrical cabinet	l 600 mm x w 550 mm x h 1300 mm	
Weight	approx. 350 kg (gonio)*1	
	approx. 100 kg (cabinet)	
DUT to detector distance	typ. 700 mm (adjustable)	
	typ. 850 mm (adjustable) XL version	
Angular resolution	10^{-4} degree internally, 10^{-2} degree externally*2	
Detectors	luca luminance camera system (monochrome and colour version)	Hamamatsu PMT
Dynamics	12 Bit / 18 Bit*3	approx. 11 orders*4
Additional detectors	spec'3 – spectrometer	
	spr'3 – spectroradiometer	
	frc'3 – radiometer / photometer	
Spectral weighting	high-quality V(λ)-adjustment of the measuring camera RGB or any polychromatic ray data files are available as well	
Light source		white light source diode laser
Spatial deviation	≤ 0,03 mm	

gonio'2pi configurations

- f:	goniophotometer (far field)
- spr:	spectroradiometer
- si:	light source measuring camera (near field)
- sic:	light source measuring camera (polychromatic)
- bsdf:	scatter light configuration
Extended version for measurement of large luminaires*1	
Example:	gonio'2pi-sic-spr

*1 XXL version has larger dimensions. *2 Axes 1 to 3. *3 14, 16 or 18 Bit in the HighDyn mode by multiple exposure. *4 3.5 by PMT and approx 8 by ND-filter wheel.

Typical values of a standard configuration. Changes are possible depending on the system configuration. Variations to the technical data may occur due to the permanent improvement and development of our measurement systems. We do not assume any juristic responsibility or liability whatsoever for such variations or misprints. The General Terms and Conditions of Trade of the opsira GmbH are valid. gonio'2pi · E · V00263114 · © opsira GmbH · www.koellekunter.de