

Application Notes

Light Measurement of LED Components



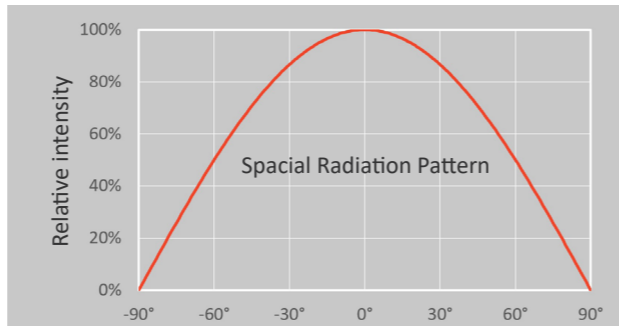
ALL IN ONE MEASUREMENT

Data sheets for LED components (SMD, COB) includes lots of information about the emitted light. Goniometers from Viso Systems capture all information with a single measurement

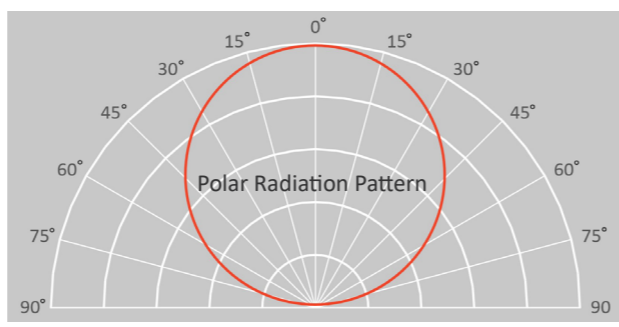
PRODUCT OVERVIEW



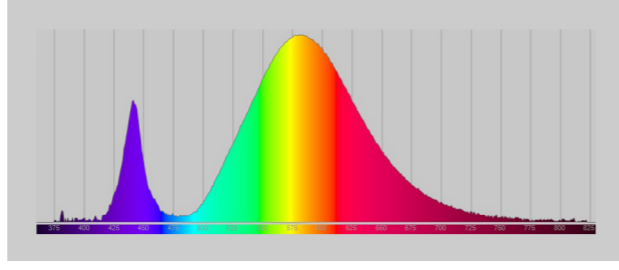
- Flux data**
- Total luminous flux [lumen]
 - Peak intensity [candela]
 - Spatial radiation pattern
 - Polar radiation pattern
 - Performance curves:
 - Flux vs junction or case temperature (with LabTemp)
 - Flux vs forward voltage
 - Flux vs drive current



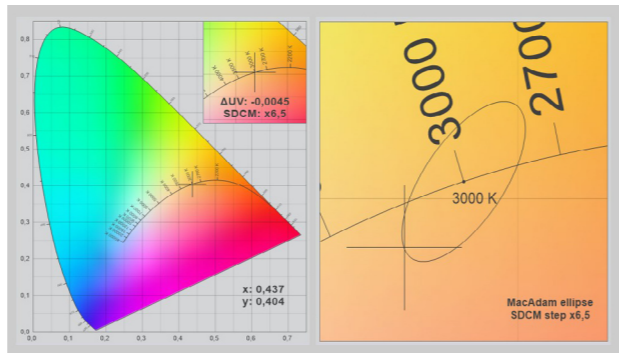
- Color information Spectrum, CCT, CRI, TM30-18**
- Export all measured color data in full resolution [watt/nm/sr]
 - Generates integrated spectrum
 - Generates CCT correlated color temperature (ANSI C78.377-2011)
 - Generates color rendering indices:
 - CRI (CIE 1995)
 - CQS (NIST)
 - TM30-18 (ANSI-IES)



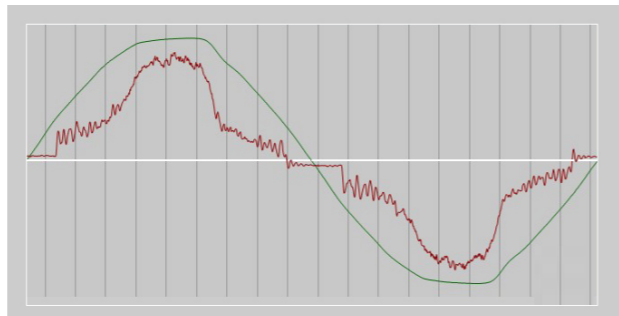
- Chromaticity Color Consistency**
- CIE 1931 color space chromaticity diagram
 - x,y-coordinates and u,v-coordinates
 - MacAdam ellipses, SDCM
 - ANSI binning possible



- DUT temperature**
- Add a LabTemp temperature probe system and measure e.g.:
- Junction temperature
 - Case temperature
 - Solder point temperature



- Color over angle**
- Export all measured color data in full gamma-angle resolution [watt/nm/sr]
 - Gamma resolution down to 0.1°
 - Up to 72 C-planes



- Blue Hazard**
- Blue light hazard EN 62471 risk group (approximation based on uniform luminance distribution on surface).

- Power specs**
- Built-in power analyzer
 - Compatible with external power supplies
 - Outputs voltage, amps, wattage, AC frequency etc.
 - Outputs power factor and THD



Light Inspector
The Light Inspector software works with all Viso systems and makes measurements easier than ever. Fully graphical workflow



LabSpion
For large light sources. Spectrometer sensor with built-in laser distance detector on tripod. Max. 150 cm / 25 kg



LightSpion
Portable measurement laboratory for small light sources. Fold-out spectrometer sensor. Max. 8 cm / 1 kg



LabFlicker
Allows measurement of all contemporary flicker metrics and connects to all Viso goniometers



LabRail
For large light sources. Spectrometer sensor with rail-mounted sensor and distance detector (standard length 12 m). Max. 150 cm / 25 kg



BaseSpion
For small and medium-sized light sources. Spectrometer sensor on table-top rail. Max. 54 cm / 9 kg



Extender
Extension for LightSpion increasing measuring distance up to 180 cm. Max. 22 cm / 4 kg



Viso Accessories
Add a Cali-t50 lamp to make system calibrations. Add a LabTemp 3-port temperature probe and measurement system for monitoring DUT temperature

CHOOSE THE RIGHT SYSTEM

The BaseSpion system is especially well suited to measurement of RGB LEDs, COB LEDs and SMD LEDs. Fast spectrometer sensors is the technology behind all Viso light measurement systems. Hence, all data is based on full-spectrum goniometer measurements. Measuring is fast: One full plane (= two C-planes) in a 5° resolution is measured in just 20 seconds. As all data is generated by the Viso system, there is no need for subsequent integrating sphere measurements. A built-in power analyzer keeps track of DUT warm-up and power feed. The LabTemp accessory connects directly to the power analyzer. All data is stored in the same measurement file.

USER-FRIENDLY SOFTWARE

The Viso Light Inspector software is the strongest and most intuitive light measurement software solution in the market. The user-friendly dashboard provides you with a perfect overview of your measurements - and in real-time. The software handles automatic goniometer setup and measurement. The Light Inspector has extensive output options and connect directly to MATLAB, LabVIEW, etc.

VISO
SYSTEMS



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