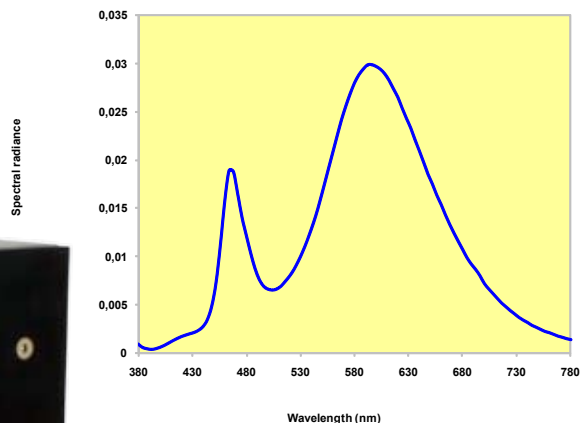


Calibrated Source Series



LEDSource

NEW



**High radiance
Homogeneous
Unpolarized
Quasi Lambertian emitter**

宇宏企業股份有限公司

台北：三重區重新路五段 609巷 16號 5樓之7

TEL:02-22782269 FAX:02-22782059

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TEL:03-552-6779 FAX:03-552-6739

<http://www.radiotek.com.tw/>

E-mail : salesmag1@radiotek.com.tw

Lambertian & homogeneous calibrated source

White LEDSource's benefits

Quasi Lambertian source with continuous radiance from 400 to 700nm

Homogeneous all over the surface

Excellent source stability with real time monitoring

Easy luminance setting between 70 and 1400 cd/m²

Easy software automation with ActiveX control

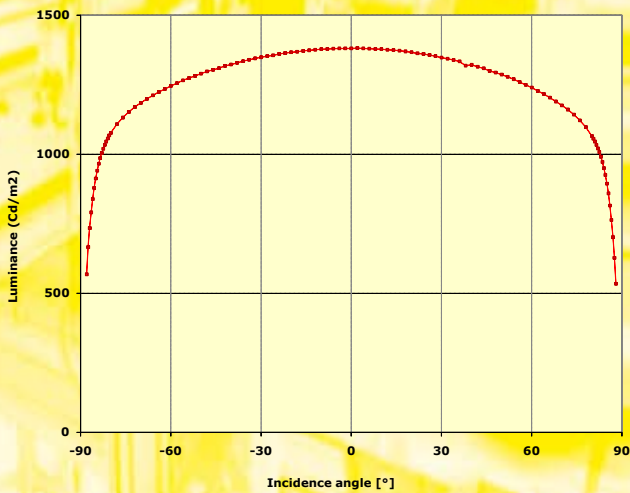
Ideal for film transmittance measurements

LEDSource description

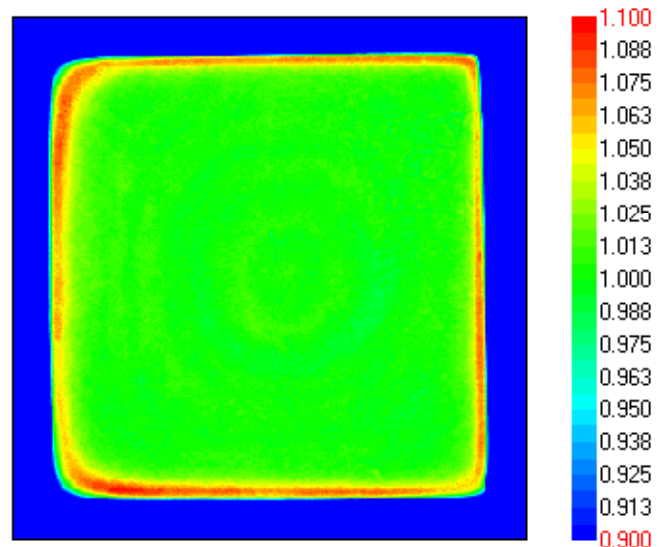
WHITE LEDSource includes a great number of white and violet LEDs regularly distributed on an integrated circuit on all the emissive surface. White LEDs provide the essential of the radiance between 440 and 700nm. The violet LEDs provide radiance between 400 and 440nm. An internal photodiode gives a reference signal to stabilize the emission in real time. Proprietary method is used to homogenize the emissive surface and provide angular emission near Lambertian source.

LEDSource calibration & specifications

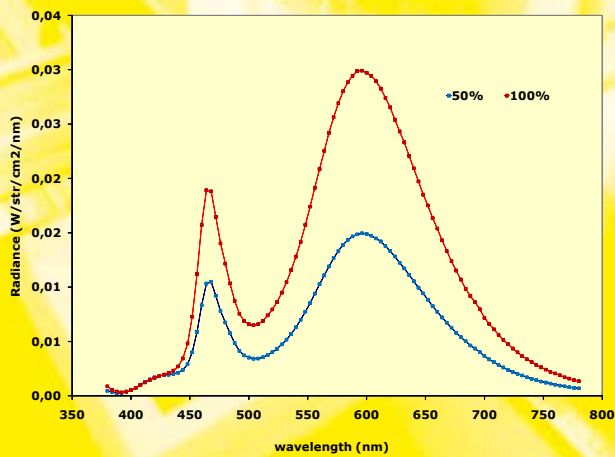
The absolute luminance of the device is measured using a Topcon SR3 system mounted on a reference goniometer. The emission is azimuth independent but depends on the incidence angle (see below). It is not far to be Lambertian except at very grazing angle. Internal calibration ensures excellent luminance linearity. Each system is provided with all its calibrated angular and spectral characteristics.



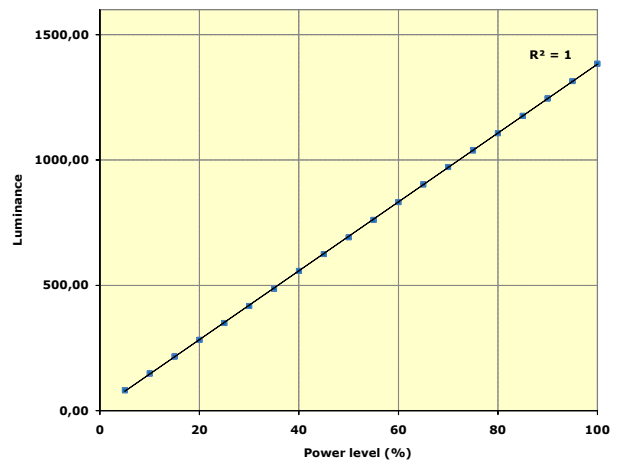
Normal incidence luminance at level 100% versus incidence angle



luminance homogeneity measured by video-luminance meter



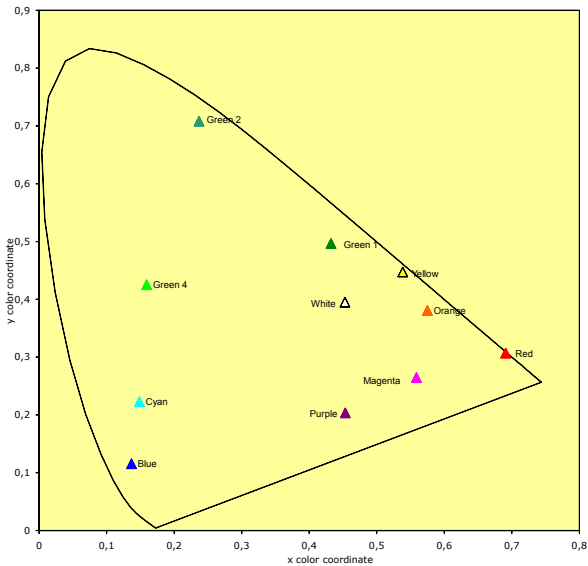
Spectral radiance at two levels 50 and 100%



Calibration of the luminance linearity

Optionnal color filters

The white LEDSource can be provided with an optional set of color filters for precise color calibration. The nine color filters covers a great part of the chromatic plane (see below and the table). Then the color calibration can be made within a great part of the chromatic plane. The color filter set is provided with the different absolute transmittances and the color coordinates measured by reference SR3 spectrophotometer using the LEDSource.

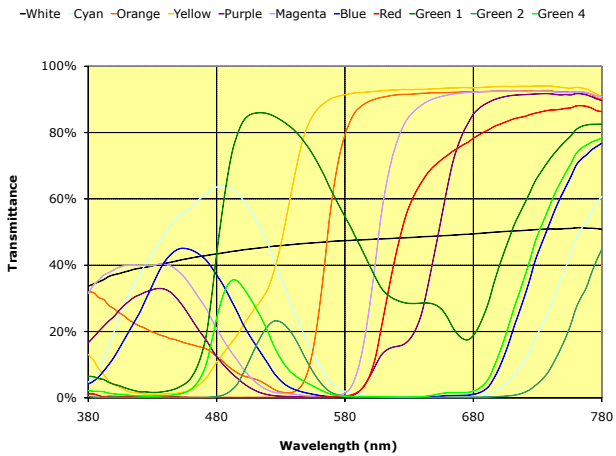


Used with LEDSource color filters cover most of the chromatic plane

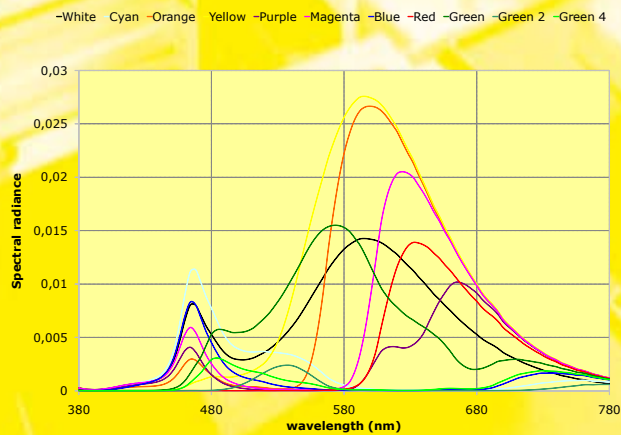


ELDIM's LEDSource color filters

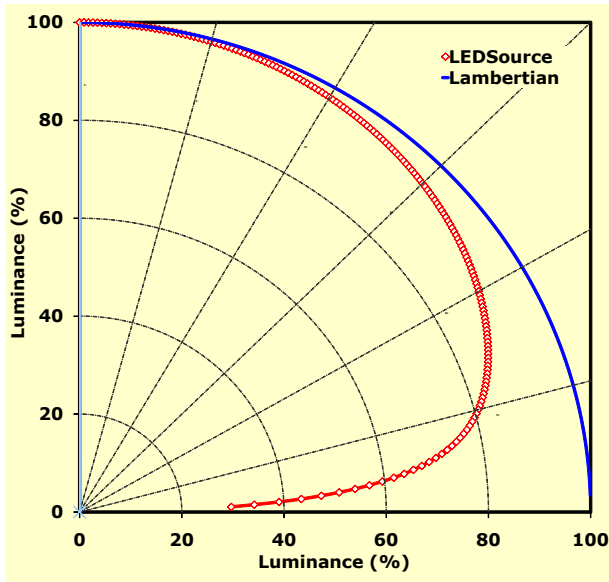
Color Filter	Color Coordinates	
	x	y
None	0.453	0.395
Red	0.691	0.307
Orange	0.575	0.381
Yellow	0.538	0.447
Green 1	0.432	0.496
Green 2	0.237	0.708
Green 4	0.159	0.425
Cyan	0.148	0.223
Blue	0.137	0.115
Magenta	0.559	0.265
Purple	0.453	0.203



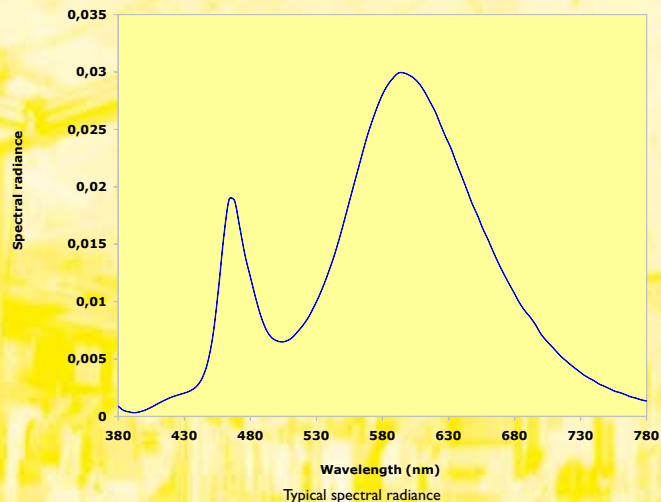
Example of filter transmittance



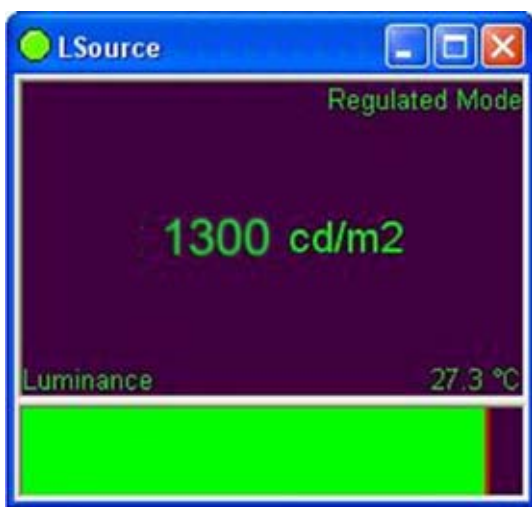
Spectral radiance of LEDSource with some color filters



LEDSource angular response near to Lambertian source



Typical spectral radiance



Easy software interface



RET 宇宏企業股份有限公司

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LEDSource Specifications

Stability	Stability from 5% to 100% of intensity	0.3%
Linearity	Linearity from 5% to 100% of intensity	0.5%
Luminance	Luminance Max Luminance Min	1400cd/m ² 70cd/m ²
Color stability	x color coordinate (±0.001) y color coordinate (±0.001)	0.444 0.390
Uniformity Compliant with vesa 2.0	Luminance uniformity on 90% of diffuse surface Luminance uniformity on 70% of diffuse surface	±4% ±2%
Angular response	Luminance at 10° incidence Luminance at 30° incidence Color variation on 0 to 80° aperture <±0.001	99.7% 97.6%
Non polarized state	Polarization degree	<2%
PC Link	USB connection (full speed)	
Diffuser Size (in mm)	Working area size: total size:	136x136 157x157
Housing Size (in mm)	LxWxH:	294x282x48
Weight		2.5kg