SSL
RESOURCE
Photometric Testing Efficiency

LIGHT MEASUREMENT SYSTEM FOR LED MODULES

✓ Accurate characterization of spatial photometric, colorimetric and spectrometric features of LED modules and small luminaires

✓ Luminous flux and efficacy

✓ Input power and power factor

✓ Spatial color uniformity (SDCM)

✓ Total correlated color temperature (CCT), color rendering index (CRI) and spectral radiant flux distribution

✓ No need for integrating spheres
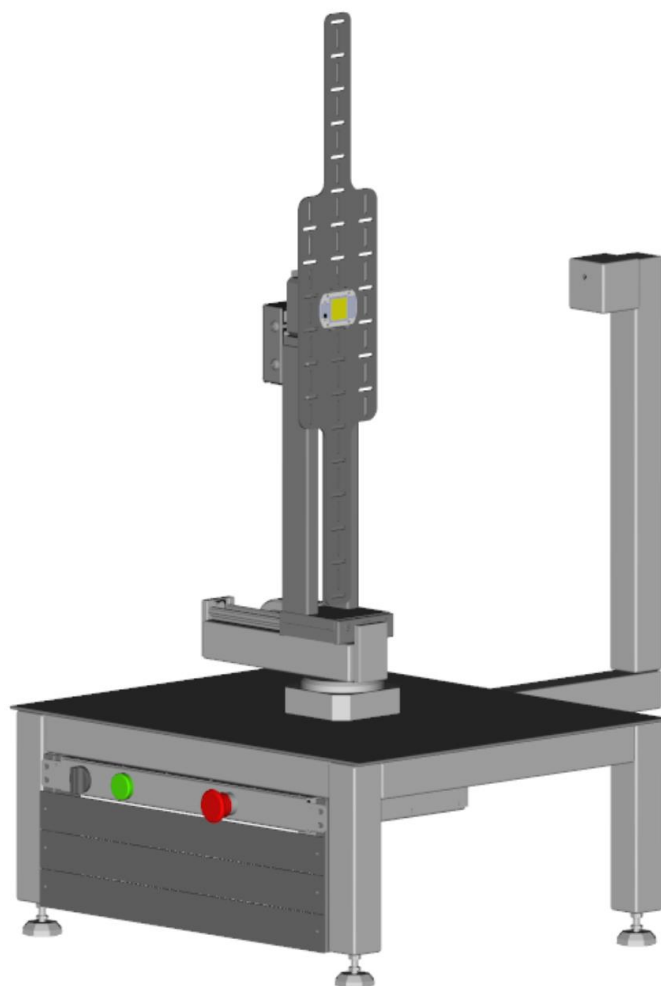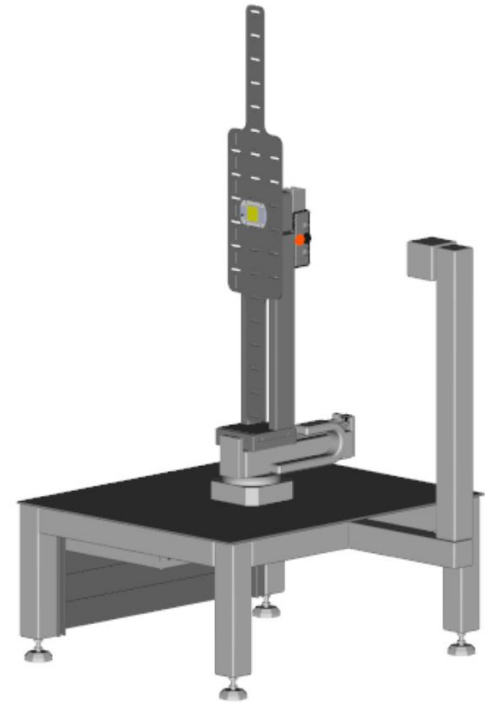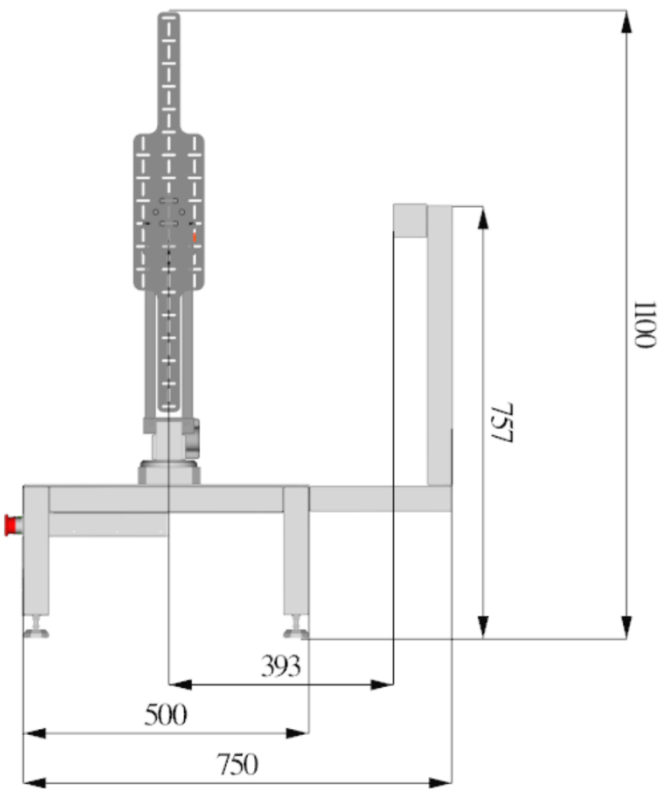
Optimal for testing LED modules <700 mm.
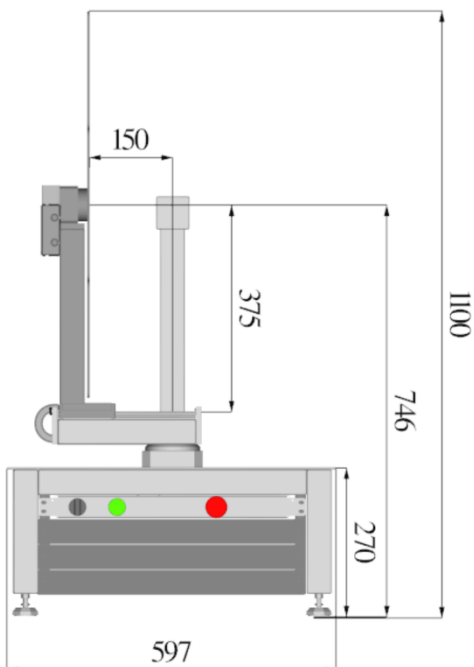
SAVE TIME, SPACE AND MONEY

✓ Straightforward setup (no measurement rail needed)

✓ User-friendly and versatile test software

✓ Easy-to-use Sample holder, installation and training service, etc.
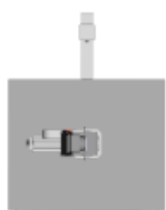
✓ Fast colorimetric measurements

STRAY LIGHT TUBE

With the attaching the photodetector to a stray light tube, the laboratory preparation is much easier. The stray light from the side wall, ceiling and floor is eliminated by a stray light tube having a couple of apertures with a knife edge land. The photometer can see reflections only from the back-wall behind the goniometer station, so only it needs to be covered by a special black surface. The stray light tube also allows use of roof lighting in the photometer end of the gonio lab making more more comfortable working area in the lab. The stray light tube is assembled at a fixed photometric distance according to the largest possible test sample. This reduces the risk of erroneous distance setting.

LABORATORY SETUP

The arrangement of the goniometer station, photometer and spectrometer (option) is shown in figure below. The software has feature to setup the angles and distances of each sensor, then the measurements are made automatically with both sensors.

Spectrometer

Photometer
C400 / L200

SPECIFICATION

Goniometer	SSL LEDI **70**
Item	SSL C-1.3-70
Application area	For LED modules and short lightweight lighting fixtures
Goniometer type	C type with horizontal optical axis.
Gonio driver and controller	2 axis Stepper motor controller with RS-232 / USB interface, Worm gear drive system with deep groove ball bearings. Emergency stop switch.
Goniometer arrangement	Goniometer station and the electrical device rack holder are in separate units. The rack holder is of size 19" rack integration (unoccupied 8U for AC/DC power supply / meter)
Alignment laser	Red cross-line laser (1mW, 635 nm) portable laser distance meter (measurement range 0.5-25m)
Height, Width, and Length	60 cm, 75 cm, 110 cm
Height of optical axis	Approximately 75 cm
Max length, depth and mass of DUT	750 mm, 150 mm, 3kg
Resolution	<0.01° (C and γ axis)
Reproducibility / Accuracy	<0.1° (C and γ axis)
Minimum room space	0.8 m (width) x 1.5 m (height) x 6 m (length)
Min. luminous intensity accuracy	>± 2.5% (k=2), depends on the angular beam shape of DUT
Luminous flux accuracy	± 3% (k=2)
Luminous intensity range (measurement distance 5m)	0.0025 – 2 500 000 cd (L-200 photometer[*]) 2.5 – 250 000 cd (C-400 Tristimulus colorimeter[*])

Luminous flux range (distance = 5 m)	Photometer/ Radiation type of the sample	Isotropic radiation (uniform over the γ range ±180°)	Lambertian radiation, γ range ±90°	Narrow beam radiation with 40° beam angle [$\cos^n(\theta)$ type beam], γ range ±90°
	L200 photometer[*] C400 colorimeter[*]	0.8 – 80 000 000 lm 31 – 3 000 000 lm	2.0 – 20 000 000 lm 79 – 780 000 lm	0.4 – 3 200 000 lm 13 – 120 000 lm

Viewing angle of stray light tube (photometer)	±9.7°

[*] C-400 is tristimulus colorimeter (measurement quantities: Illuminance, color coordinates xy, u'v', color temperature CCT), USB bus
L-200 is accurate illuminance meter (measurement quantities: Illuminance), RS-232 bus

OPTIONS
- ✓ Computer controllable DC / AC Power supply
- ✓ Spectrometer / colorimeter