

Thousand Lights Lighting (Changzhou) Limited or THOUSLITE is a high-tech enterprise, focusing on multi-channel LED lighting technology and light quality management. THOUSLITE is a global LED-based standard lighting environment provider, and we are active in international technical conference and standardization societies.

THOUSLITE offers full range of multi-channel LED lighting products for lighting research, industrial color viewing assessment, and camera & sensor test. We also provide customization services. "36 hours fast response" is the policy we make to better serve customers.

Based on our tremendous technical experience, THOUSLITE are committed to provide customer excellent products, advanced solutions and professional service.

LEDCube ANY SPD SIMULATOR



- High quality daylight simulator
- Blackbody locus simulator
- Any SPD match
- Fast & accurate feedback
- Wireless control

Thousand lights lighting (Changzhou) Limited

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What is LEDCube?

Based on our proprietary optimization algorithm and more than 10 carefully selected high power LEDs, THOUSLITE LEDCube can easily and accurately simulate any lighting environment having different Spectral Power Distribution (SPD). Currently, LEDCube is the best **commercialized spectral tunable lighting apparatus** in the world. The target customers are **lighting research centers** and **R&D department** of lighting companies. It can be widely used in the following applications including daylight simulator, healthy lighting, medical lighting, non-visual effect of light, color rendering, whiteness evaluation etc. In addition, LEDCube can create a **large standard lighting environment** for color visual assessment and camera sensor calibration.



LEDCube Features

• Reproducing high quality daylight illuminant

To reproduce any phase of daylight with highest quality on the market in terms of Color Rendering Index¹ (CRI) 99 and Metamerism Index² (MI) Grade A



• Blackbody locus simulator

To accurately produce a range of sources from tungsten to daylight varying Correlated Color Temperature (CCT) from 2000K to 20000K with user-defined CIE Ra and Duv

• SPD match

To accurately reproduce any measured or imported SPD to record any light you want. It is easy to spread SPD between different locations for light communication

• Luminance adjustable

The light is dimmable while keeping the same light quality

• Faster change between illuminants

Same illuminant properties during illuminant changes

• Single-channel control

Arbitrarily control the intensity of each channel in LEDCube to design any light wanted

• Dynamic lighting

Programmable illuminant light sequence and interval.

• Fast & accurate feedback

Maintain the same light quality, compensating for age and variable environments with external microspectrometer. It is much more consistent over conventional lighting

• User-friendly software

Provide an easy and user-friendly software LEDNavigator-LC, and can be further customized

• No flicking

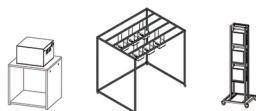
It provides a uniform and flicker free lighting environment

• Longer life time and excellent long term stability

Much longer lifetime compared to fluorescent technology, and optimized heat management resulting in excellent long term stability

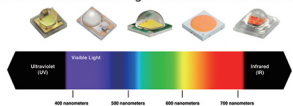
• Flexible installation

Provide flexible installation methods for different applications, such as viewing cabinet, lifting, customized support etc



• LED channel wavelength selection service

Provide LED channel wavelength selection service from UV, VIS to NIR



• Wireless control

Up to 256 LEDCubes can be controlled separately or simultaneously via Zigbee technology, easy to build large standard lighting space

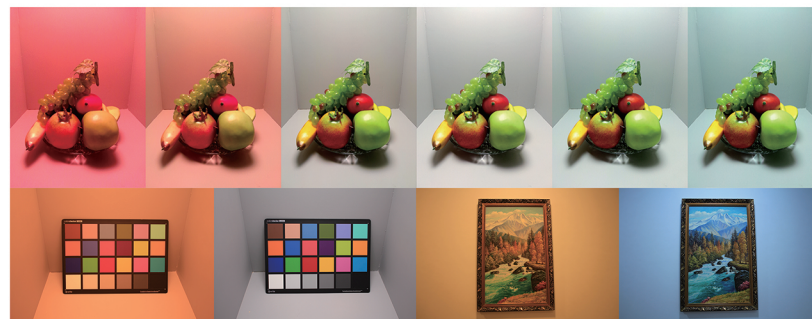


• 36 hours customer response

If customers report any problems or issues related to the products in working day, we will response in 36 hours for both domestic and international customers

1. CIE 13.3-1995, Method of Measuring and Specifying Colour Rendering Properties of Light Sources
2. ISO 23603-2005 / CIE S 012/E, Standard method of assessing the spectral quality of daylight simulators for visual appraisal and measurement of colour

Application of Scene



Specifications

LED channels	Multi-channels (colors+whites), AM driven
Spectral range	400-700 nm
Warm up time	No
Resolution	10 bit (1024 steps dimmable for each channel)
Lifetime	>10,000 hours
Capacity	80 light source with user-defined name
Predefined illuminants	Standard daylight D65, D50 CIE Ra: 99, Mlvis: Grade A (<0.25)
Tunable range	CCT: 2000~20000K CIE Ra: 0~100 Duv: -0.02~+0.02
Max flux and illuminance	D65: 1700lm, 1 meter: 850lux D50: 2400lm, 1 meter: 1250lux
Short-term stability	D65<±10K, D50<±5K Luminance <±0.5%
Long-term stability	D65<±25K, D50<±15K Luminance <±1.5%
Software instrument compatibility	X-Rite i1 Pro 2, Konica Minolta CL500A, AsenseTek Lighting Passport, THOUSLITE FS Spectrometer, Jeti Specbos 1211UV spectroradiometer
Electrical	110/230V, 50/60Hz, 150W Maximum
Operating ambient temperature	0-30°C
Connection	USB cable, wireless control
Dimensions(L/W/H) & Weight	300×300×200 mm, 7kg
Scope of delivery	LEDCube light source, power cord, USB cable, wireless sender, SDK available on request
Supplementary accessories	Ceiling installation kit, measurement device, calibrated white tile, 50×50×60cm Munsell N7 viewing cabinet, customized support, remote controller
Software (optional)	LEDNavigator-LC includes six modules: Blackbody locus simulator, SPD match, Feedback, Dynamic lighting, Single channel control, Single LEDCube control