



2026 Catalog
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Leader in Lighting and Electrical Test Instruments



Leader in Lighting and Electrical Test Instruments

Lisun Group (Hong Kong) Limited

Add: Room 926, Sing Win Factory Building, 15-17 Shing Yip Street, Kwun Tong, Kowloon, Hong Kong
Tel: 00852-68852050 Fax: 00852-30785638
Email: SalesHK@Lisungroup.com

Lisun Instruments Limited

Add: 113-114, No.1 Building, Nanxiang Zhidi Industry Park, No. 1101, Huyi Road, Jiading District, Shanghai, China
Tel: +86(21)51083341 Fax: +86(21)51083342
Email: SalesSH@Lisungroup.com

Lisun Sales Rep & Show Room (Korea)

Add: 2F, 20, Guui-ro, Gwangjin-gu, Seoul, Korea
Email: Sales@Lisungroup.com



Sales & Service Wechat



Sales & Service WhatsApp



Sales & Service Wechat



Sales & Service WhatsApp



www.Lisungroup.com

www.Lisungroup.com
Email: Sales@Lisungroup.com

COMPANY PROFILE



Lisun Instruments Limited was found by LISUN GROUP in 2003. We have sales and service offices in China, Russia, India and Korea. In 2012, we built a high level products show room and Accreditation lab in Shanghai. LISUN has setup a new manufactory in China to design & produce the lighting and electrical test instruments. Its quality system has been strictly certified by ISO9001:2015. As a CIE Membership, LISUN products are designed based on CIE, IEC and other international or national standards. All products passed CE certificate and authenticated by the third party lab.

Our main products are Goniophotometer, Integrating Sphere, Spectroradiometer, Surge Generator, ESD Simulator, EMI Receiver, EMC Test Equipment, Electrical Safety Tester, Environmental Chamber, Temperature Chamber, Clima

LISUN products have been sold to more than 150 countries and regions all over the world. Its quality is well accepted by many world famous companies such as UL, SGS, NIST, NIM, UNDP, Philips, OSRAM and so on. LISUN wins thousands of customers' trust with motto "Right Product, Right Price and Right Service". We will continue presenting more and more high quality products to our customers in the future. Chamber, Thermal Chamber, Salt Spray Test, Dust Test Chamber, IP Waterproof Test, RoHS Test (EDXRF), Glow Wire Test and Needle Flame Test, Plug and Switch Testing, AC and DC Power Supply.

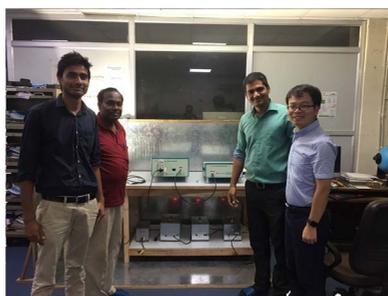
- **RIGHT PRODUCT**
- **RIGHT PRICE**
- **RIGHT SERVICE**



Our Customers



LM 79 Type C Goniophotometer in USA



EMI and EMC Install & Training in India



LSG 1890B Goniophotometer in Germany



3m Integrating Sphere in Spain



IP Waterproof Test System in Costa Rica



IP Waterproof Test System in Costa Rica

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LM-79 MIRROR TYPE C GONIOPHOTOMETER SYSTEM (LSG-6000)

Product Introduction

The LSG-6000 Moving Detector Goniophotometer (Mirror Type C) is designed according to IES LM-79-24, IES LM-79-19 clause 8.1 refer to LM-75-01/R12, EN13032-1 clause 6.1.1.3 type 4, CIE, IEC and GB. It is an automatic light distribution intensity 3D curve testing system. The darkroom can be designed according to the customer's existing room size.

The LSG-6000 can measure all types of lighting sources, CFL, HID or LED luminaires such as indoor and outdoor luminaires, Plant lighting (horticulture), roadway luminaires, street lamps, flood lights and other kinds of luminaires.

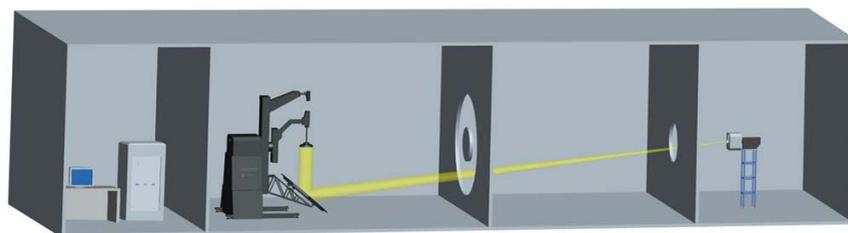
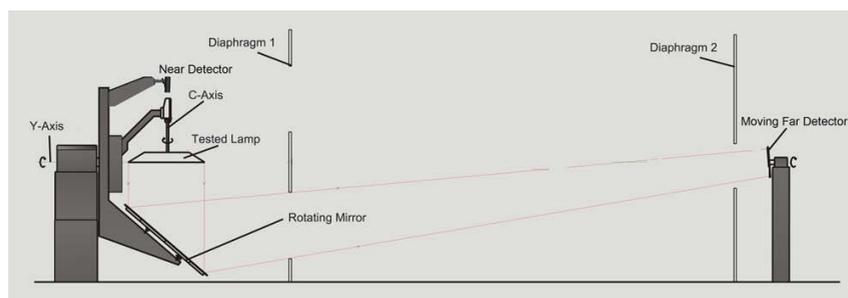


Japan MITSUBISHI Motors
Germany Angle Decode System
Constant Temperature Class L Photo Detector

Measurement

Luminous Intensity Data, Luminous Intensity Distribution, Zonal Luminous Flux, Luminaires Efficiency, Luminance Distribution (Option), Coefficient Of Utilization, Luminance Limitation Curves Glare, Maximum Ratio of Distance to Height, Equal Illuminance Diagrams, Curves of Luminaires VS Lighting Area, Isocandela Diagrams, Efficient Luminescence Angle, EEL, UGR, CCT, CRI, Color Temperature Distribution, Spectrum, (x, y)/(u, v), PAR, PPF, PPFD 3D distribution test and etc

Test Principle

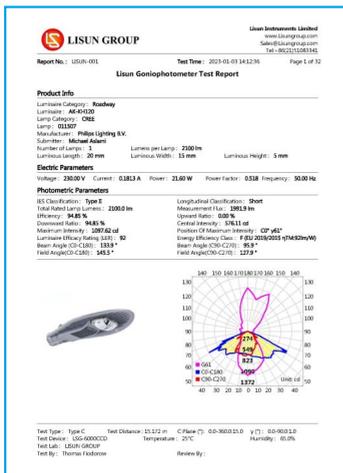


LSG-6000 Moving Detector Goniophotometer - Mirror Type C

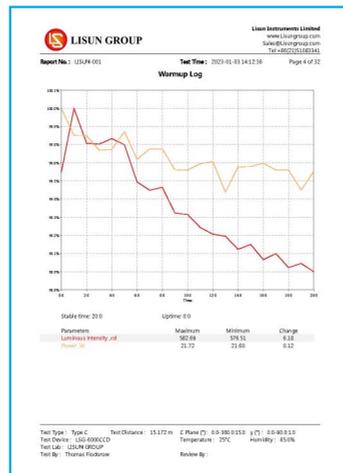
Specification

- The accuracy of angle: 0.05°, Resolution of angle: 0.001°
- The test result can be exported as CIE, IES, LDT and other format files. This kind of format files can be transferred by other illumination and luminaire design software such as Dialux
- It can work with a USB CCD Spectroradiometer to test spatial CCT and Spectral Distribution. We call this system as LSG-6000CCD Goniospectroradiometer. The LSG-6000CCD software and hardware support the plant lighting PAR, PPF and PPFD spatial distribution test

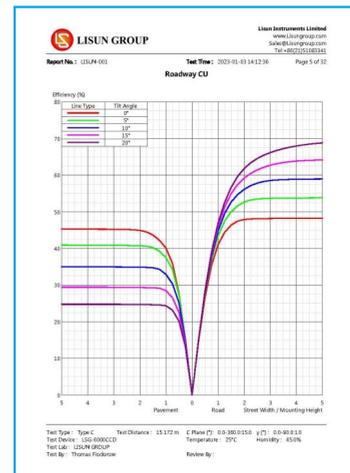
LISUN Model	Testing Lamp Size (Diameter E*Depth F)	Measuring Power (Maximum)	Dark room Height (Minimum)
LSG-6000/LSG-6000CCD	1600*600mm, 50kg	600V/10A, AC/DC	4100mm
LSG-6000L/LSG-6000LCCD	2000*900mm, 80kg	600V/10A, AC/DC	5200mm
LSG-6000B/LSG-6000BCCD	1800*800mm, 60kg	600V/10A, AC/DC	4700mm
LSG-6000S/LSG-6000SCCD	1200*500mm, 40kg	600V/10A, AC/DC	3000mm



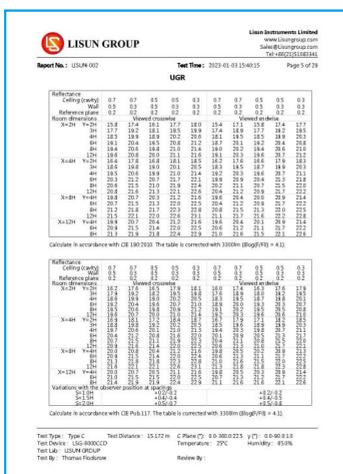
Main Report



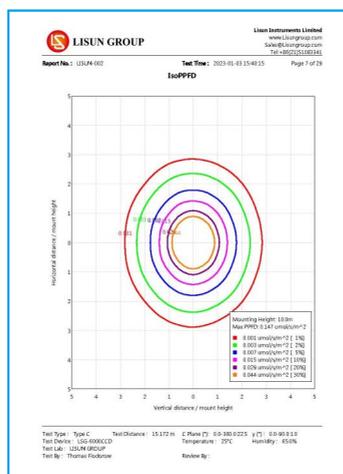
Pre-Burn & Stabilization



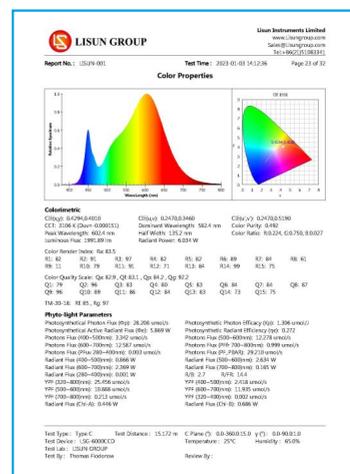
Roadway CU



UGR Report



ISO PPFD Report



3D Spectrum Distribution

GONIOPHOTOMETER FOR AUTOMOTIVE AND SIGNAL LAMPS (LSG-1950, LSG-1950S)

Measurement

LSG-1950/LSG-1950S is the CIE A-α Goniophotometer which used to test automotive lighting, traffic signal, bus, train, ship, and aircraft lighting. The photometer head keeps static and faces to the test sample while the test sample rotates around both horizontal axis and vertical axis, so the luminous intensity and illuminance of the tested lamp or luminaires can be tested.



LSG-1950 Standard Version



LSG-1950S Economic Version

Specification

- It is designed according to EN, IEC, GB, ECE, SAE and FMVSS108
- The accuracy of angle: 0.01°(LSG-1950) or 0.1° (LSG-1950S), Resolution of angle: 0.001°
- Accuracy of photometry: CIE Class A (Class L is option)
- Testing Accuracy: 2% (Under Standard lamp); Stray Light: less than 0.1%
- English version software can be run in Win7, Win8 and Win10, Win11
- It can test lamp weighing up to 35kg



Measurement Wizard

Step 2: Press 'Start' button after confirming your settings.

VH (cd)	0	5	10	15	30	45	60	90	135	180	225	270
min	170	170	170	170	170	170	170	170	170	170	170	170
8	---	---	---	---	---	---	---	---	---	---	---	---
max	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
min	---	---	---	---	---	---	---	---	---	---	---	---
2	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
max	---	---	---	---	---	---	---	---	---	---	---	---
min	230	230	230	230	230	230	230	230	230	230	230	230
0	---	---	---	---	---	---	---	---	---	---	---	---
max	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
min	---	---	---	---	---	---	---	---	---	---	---	---
-2	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
max	---	---	---	---	---	---	---	---	---	---	---	---
min	170	170	170	170	170	170	170	170	170	170	170	170
8	---	---	---	---	---	---	---	---	---	---	---	---
max	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500

Test Speed:

Electric Parameter

Voltage (V): Power (W):

Current (A): Power factor:

For Flash Lamp and Flash Period (s):

Preheat, Duration(min):

The Horizontal axis back to zero after test

Horizontal: Vertical:

Preheating...[Time left 14:57]

Folder: Browse

File: Add suffix automatically

< Back Next > Start Cancel

ROTATION LUMINAIRE GONIOPHOTOMETER (LSG-1890B, LSG-1800A)

The Rotation Luminaire Goniophotometer is an automatic goniophotometric measurement system for measuring photometric parameters of luminaires, such as LED road lighting fixture, indoor lighting fixture and projecting lighting fixture. The measured data meets IES standard format and can be applied in lighting design by lighting design software. The measurement system is fully satisfied the requirements of lighting design work.

Measurement

Luminous Intensity Data, Luminous Intensity Distribution, Zonal Luminous Flux, Luminaires Efficiency, Luminance Distribution (Option), Coefficient Of Utilization, Luminance Limitation Curves Glare, Maximum Ratio of Distance to Height, Equal Illuminance Diagrams, Curves of Luminaires VS Lighting Area, Isocandela Diagrams, Efficient Luminescence Angle, EEL, UGR and so on.



LSG-1890B uses Japanese MITSUBISHI servo motors and German angle decode

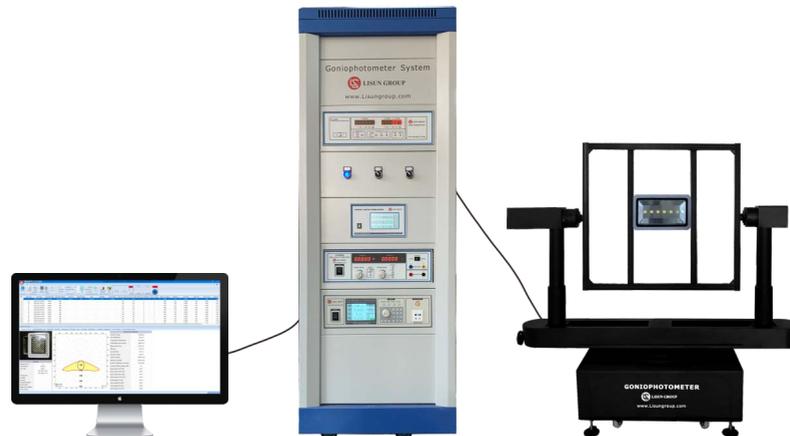
Specification

- Fully meet the EN13032-1 clause 6.1.1.3 type 1, CIE-70, CIE-121, IES LM-79, LM-75, IEC & GB
- The goniphotometers do the B-β test with the two pillars and the C-γ test with single pillar & multi-function jigs.
- Test Max luminaires size and weight: LSG-1890B is 2000mm and LSG-1800A is 1600mm
- The tested luminaires rotate around an angle of $(\gamma)\pm 180^\circ$ (or $0\sim 360^\circ$) and the tested luminaire rotates around itself with an angle of $(C)\pm 180^\circ$ (or $0\sim 360^\circ$)
- The accuracy of angle: 0.1° (LSG-1890B) and 0.2° (LSG-1800A)
- Accuracy of photometry: Class A Constant Temperature Photo Detector (Class L is option)
- Testing accuracy: 2%; Stray Light: less than 0.1%
- English version software can run in Win7, Win8, Win10, Win11
- This system can export data files as following formats: ies, ldt, cie, cib, tm4, cen, excel and so on. These kinds of format files can be transferred to luminaire design software such as Dialux
- The following Photo Detectors are optional to test UV light: PHOTO-UVA-A to test UVA 320-400nm; PHOTO-UVB-A to test UVB 275-320nm; PHOTO-UVC-A to test UVC 200-275nm.

LISUN Model	The max size for the Testing Lamp (Unit: mm)		Max Weight
	C-Gamma Test with one Pillar	B-Beta Test with Two Pillars	
LSG-1890B	$\Phi 2000*600$ (Diameter*Depth)	$600*600$ (Length*Width)	60kg
LSG-1800A	$\Phi 1600*600$ (Diameter*Depth)	$600*600$ (Length*Width)	50kg

GONIOSPECTRORADIOMETER (LSG-1890BCCD, LSG-1800ACCD)

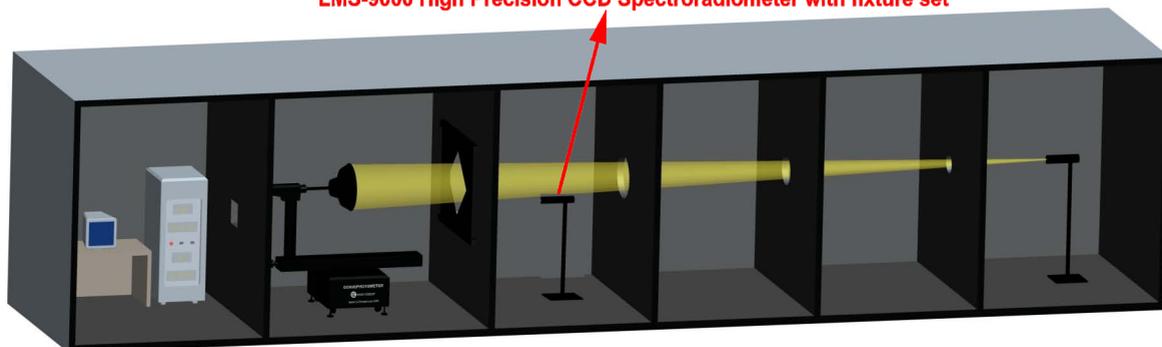
The Goniospectroradiometer System can do the spatial CCT, CRI and other Spectrum parameters test as well as the intensity distribution test. It is for industrial laboratory measurements the photometric data of luminaires such as LED luminaires, Plant Lighting, HID lamps, fluorescent lamps and so on.



Specification

- Fully meet the EN13032-1 clause 6.1.1.3 type 1, CIE-70, CIE-121, IES LM-79, LM-75, IEC & GB
- It can do the B- β test with two pillars and the C- γ test with single pillar & multi-function jigs
- Test Max Luminaires size and weight: LSG-1890BCCD is 2000mm and LSG-1800ACCD is 1600mm
- The tested luminaires rotate around an angle of (γ) \pm 180°(or 0~360°) and the tested luminaire rotates around itself with an angle of (C) \pm 180° (or 0~360°)
- The accuracy of angle: LSG-1890BCCD is 0.1° and LSG-1800ACCD is 0.2°
- Accuracy of photometry: High Precision Class A Constant Temperature Photo Detector (Class L is option)
- Testing Accuracy: 2%; Stray Light: less than 0.1%
- Testing Accuracy: 2%(Under Standard lamp); Stray Light: less than 0.1%
- English version software can be run in Win7, Win8 and Win10, Win11
- This system can export data files as following formats: ies, ldt, cie, cib, tm4, cen, excel and so on. These kinds of format files can be transferred by luminaire design software such as Dialux
- Work with High Accuracy and quick CCD Spectroradiometer to measure spatial color parameters.
- Accuracy of chromaticity coordinate: \pm 0.0015 or \pm 0.0005(under standard A lamp)
- Spectral Range Wavelength: 350nm~800nm; Accuracy of wavelength: \pm 0.5nm
- Accuracy of photometry: CIE Class A (Class L is for option)
- The Hardware and Software can do the PAR, PPF and PPF 3D distribution test

LMS-9000 High Precision CCD Spectroradiometer with fixture set



Goniospectroradiometer Test System

COMPACT GONIOPHOTOMETER (LSG-1200A)

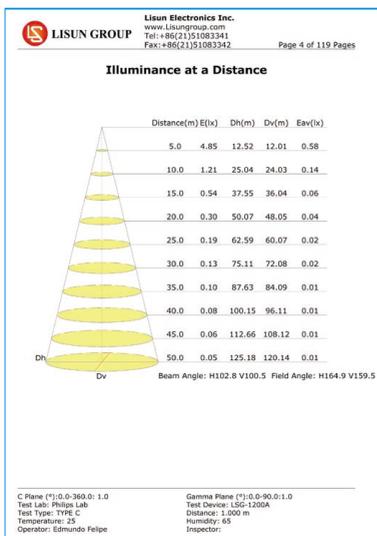
The compact goniophotometer LSG-1200A is applied to measure the luminous intensity distribution curve, intensity data, spread angle and other parameters for chip LED, LED module, LED spotlight and all other lights whose beam angle is no more than 180 degrees.

Optional Function: The LSG-1200A can work with Digital Power Meter (LS2012 DC & AC Power Meter or LS2050B High Accuracy Power Meter), LSP Series AC Power Source or DC Series DC Power Source.

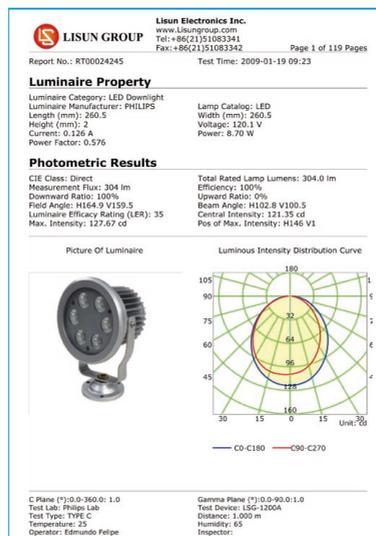


Specification

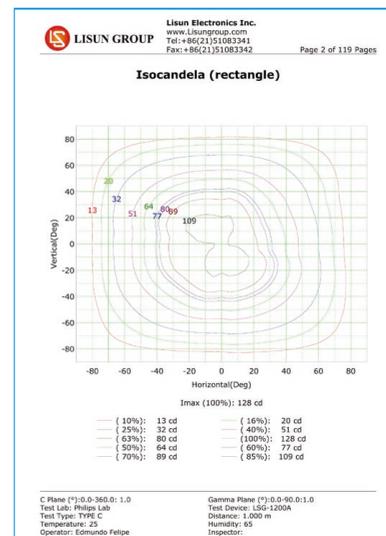
- Meet the requirements of IEC, CIE and LM-79 standards
- Measure beam angle automatically: standard half intensity angle as well as 1/4 intensity angle, 3/4 intensity angle and 1/10 intensity angle which meets the special requirements.
- Measured data are matched with international standard form (IES, etc) and applied be applied for lighting design by other lighting design software such as DiaLux
- LSG-1200A includes a dark chamber, measures the maximum size of lamps: 180mm
- Test range of candela: 0.1~30,000cd. Test accuracy of detector: Class A
- The distance between the tested lamp and detector is 316mm/1000mm
- Angle interval: Horizontal angle: 1°/5°/10°/15°/22.5°/30°/45°/90°, Vertical angle: 0.5°/2°/1.5°
- The LSG-1200A horizontal automatic rotating on 0°~360° and Vertical automatic rotating on -90°~+90°
- Test accuracy of angle: ±0.2°



Illuminance



Photometric



Isocandela

SCIENTIFIC GRADE CCD SPECTRORADIOMETER (LMS-9500C)

LMS-9500C Scientific Grade CCD Spectroradiometer fully meets Energy Star IESNA LM-79 and GB/T24824 standards etc. It is used to test CFL, HID, Plasma Light, Tungsten Halogen Lamps, which can reach the scientific grade measurement accuracy. LMS-9500C is composed of Concave Average Diffraction Grating and Scientific Grade CCD, and uses unique stray light control technology, wide dynamic linear technology, precision CCD electronic drive technology and complex matrix software technology. The instrument can be traceable to the Chinese National Institute of Metrology(NIM) and the USA NIST standards.



Specification

- CCD detector: Hamamatsu TE-cooled (Temp: $-10^{\circ}\text{C} \pm 0.05^{\circ}\text{C}$) high sensitivity back-thinned detector (LMS-9500CSWIR used InGaAs)
- Spectral wavelength accuracy: $\pm 0.2\text{nm}$, Resolution: $\pm 0.1\text{nm}$, Sample scanning steps: $\pm 0.1\text{nm}$
- Accuracy of chromaticity coordinate (Δx , Δy): ± 0.0015 (under Standard A Lamp)
- Correlated color temperature CCT: 1, 500K-100, 000K, CCT accuracy: $\pm 0.2\%$
- Color Rendering Index Range: 0-100.0, Accuracy: $\pm(0.3\% \text{rd} \pm 0.3)$
- Photometric linear: $\pm 0.2\%$, Stray light: $< 0.015\%$ (600nm) and $< 0.03\%$ (435nm)
- Time of integration: 0.1ms to 60s
- It can measure the temperatures inside and outside of integrating sphere
- Flux testing method: spectrum, photometric and spectrum with photometric revision
- Spectrum sensors: SMA905 optical fiber and Class A Photo detector

LISUN Model	LMS-9500C	LMS-9500CUV-VIS	LMS-9500CVIS-NIR	LMS-9500CSWIR
Wavelength	350~800nm	200~800nm	350~1050nm	800~1700nm

HIGH PRECISION CCD SPECTRORADIOMETER (LMS-9000C)

LMS-9000C adopts the world advanced Holographic grating with flat-field correction, precision optical system and the electronic shutter control technology. The test speed can be in milliseconds and the test accuracy is in the laboratory level. It has the lowest value of stray light. LMS-9000C has high repeatability and stability testing. It fully meets CIE127-1997, IES LM-79-19, IES LM-80 and IES LM-82.



Specification

- Spectral Wavelength Accuracy: $\pm 0.3\text{nm}$, Resolution: $\pm 0.1\text{nm}$, Sample Scanning Steps: $\pm 0.1\text{nm}$
- Accuracy of Chromaticity Coordinate (Δx , Δy): ± 0.002
- Correlated Color Temperature CCT: 1,500K-100,000K, CCT Accuracy: $\pm 0.3\%$
- Color Rendering Index Range: 0-100.0, Accuracy: $\pm(0.3\% \text{rd} \pm 0.3)$
- Photometric linear: $\pm 0.3\%$, Stray light: $< 0.015\%$ (600nm) and $< 0.03\%$ (435nm)
- Time of integration: 0.1ms to 10,000ms
- Total flux testing method: Spectrum, Photometric and Spectrum with Photometric revision
- Spectrum sensors: SMA905 optical fiber and Class A Photo detector
- It can measure the temperature inside and outside of integrating sphere

LMS-9000C uses the Band pass-filter Wheel Correcting Technique, Spectrometer & Broadband-radiometer & photometer Combined Technique, and modified with NIST stray light correction technology, the LMS-9000C can realize ultra low stray light and super photometry linearity in overall dynamic range.

LISUN Model	LMS-9000C	LMS-9000CUV-VIS	LMS-9000CVIS-NIR	LMS-9000CUV
Wavelength	350~800nm	200~800nm	350~1050nm	200~400nm

TEST REPORT OF LMS-9500C AND LMS-9000C

Test Report

LISUN GROUP
www.Lisungroup.com
Sales@Lisungroup.com
Tel:+86(21)51083341

Lightsources Test Report

Report No: 47 **Test Time:** 2022-11-25 10:19:40
Category: Type: **Type:** **Number:** 47
Spec: LED Bulb **Manufacturer:** Philips Lighting B.V. **Submitter:**

CIE Colorimetric Parameters
CIE(x,y): 0.3438,0.3555 CIE(u,v): 0.2090,0.3243 CIE(u',v'): 0.2090,0.4864
CCT: 5064 K (Duv=0.002485) Dominant Wavelength: 569.4 nm Color Purity: 0.099
Peak Wavelength: 455.5 nm Half Width: 27.7 nm Color Ratio: R:0.157, G:0.792, B:0.051

Color Render Index: Ra:84.1, avgR(1-14):77.7, avgR(1-15):77.8
R1: 83 R2: 91 R3: 95 R4: 81 R5: 82 R6: 86 R7: 87 R8: 68
R9: 13 R10: 77 R11: 80 R12: 62 R13: 85 R14: 97 R15: 78

Color Quality Scale: Qa:81.9, Qb:82.2, Qc:81.3, Qd:91.6
Q1: 82 Q2: 98 Q3: 80 Q4: 73 Q5: 78 Q6: 80 Q7: 85 Q8: 89
Q9: 97 Q10: 89 Q11: 84 Q12: 83 Q13: 83 Q14: 73 Q15: 77

TM-30-18: Rf:84, Rg:94 Gamut Area Index (GAI): GAL_EES:80.9, GAL_BB:8.914, GAL_BB_15:97.3

Photometric Parameters
Luminous Flux: 4105.49 lm Radiant Power: 12.940 W Efficiency: 112.09 lm/W
Energy Efficiency Class:E (EU 2019/2015)ηTM:112.09lm/W S/P: 2.007
M/P Ratio (WELL): 0.856 Kmelv: 1.028 mW/lm Kmelv(D65): 0.775

Pupil Flux: 7069.12 Plm (Kp=1.722) Pupil Lumens per Watt: 193.01 Plm/W
Circipic Flux: 16583.41 lm Mesopic Flux (CIE R.): 5383.41 lm (Lp=0.100)
Mesopic Flux (USP): 6325.51 lm (Lp=0.100) Mesopic Flux (MOVE): 5599.07 lm (Lp=0.100)

Electric Parameters
Voltage: 220.068 V Current: 0.1745 A Power: 36.527 W
Power Factor: 0.9535 Frequency: 50.00 Hz Displacement Factor: 0.9635

TMF Temperature Data
Welding foot T1: 23.7°C Aluminum plate T2: 83.8°C Upper the outer wall T3: 23.1°C Middle the outer wall T4: 23.4°C
Under the outer walls: 22.8°C Lamp holder T6: 22.7°C

Geometry: An: 1.5m Self-absorption Factor: 1.000 Photometric Method: sphere-spectroradiometer
Warmup Time: 5 Minutes Integration Time: 68 ms Peak of Signal: 4.773
Spectral Irradiance: LMS-9000C Digital Power Meter: LS2050C Power Source: LSP-Series

Test Lab: LISUN Testing Environment: Ts:20.5°C, Ta:20.6°C,65%
Operator: Michael Aslami Approver:

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LISUN GROUP
www.Lisungroup.com
Sales@Lisungroup.com
Tel:+86(21)51083341

Spectral Power Distribution Data

Report No: 47 **Test Time:** 2022-11-25 10:19:40
Category: Type: **Type:** **Number:** 47
Spec: LED Bulb **Manufacturer:** Philips Lighting B.V. **Submitter:**

WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0014	0.1437	525	0.5402	53.7655	670	0.1972	19.6254
385	0.0004	0.0445	530	0.5603	55.7659	675	0.1737	17.2924
390	0.0012	0.1146	535	0.5748	57.2066	680	0.1524	15.1665
395	0.0010	0.1024	540	0.5872	58.4446	685	0.1331	13.2497
400	0.0015	0.1460	545	0.5988	59.6005	690	0.1164	11.5804
405	0.0030	0.2994	550	0.6088	60.5930	695	0.1003	9.9811
410	0.0065	0.6435	555	0.6166	61.3672	700	0.0874	8.6959
415	0.0163	1.6187	560	0.6260	62.3093	705	0.0751	7.4716
420	0.0351	3.4980	565	0.6353	63.2297	710	0.0643	6.3966
425	0.0690	6.8628	570	0.6409	63.7923	715	0.0560	5.5768
430	0.1230	12.2378	575	0.6452	64.2171	720	0.0475	4.7288
435	0.2098	20.8846	580	0.6484	64.5314	725	0.0416	4.1419
440	0.3403	33.8736	585	0.6471	64.4023	730	0.0353	3.5154
445	0.5380	53.5468	590	0.6430	63.9992	735	0.0301	2.9983
450	0.8215	81.7637	595	0.6357	63.2668	740	0.0261	2.6022
455	1.0000	99.5307	600	0.6219	61.8965	745	0.0225	2.2418
460	0.8763	87.2176	605	0.6052	60.2368	750	0.0195	1.9440
465	0.6693	66.6114	610	0.5835	58.0796	755	0.0169	1.6864
470	0.5411	53.8593	615	0.5566	55.4001	760	0.0147	1.4601
475	0.4326	43.0572	620	0.5249	52.2461	765	0.0127	1.2640
480	0.3487	34.7096	625	0.4927	49.0342	770	0.0112	1.1143
485	0.3173	31.5910	630	0.4555	45.3321	775	0.0094	0.9370
490	0.3195	31.7999	635	0.4195	41.7575	780	0.0083	0.8255
495	0.3390	33.7362	640	0.3822	38.0436	785	0.0080	0.7957
500	0.3735	37.1746	645	0.3477	34.6086	790	0.0068	0.6580
505	0.4144	41.2466	650	0.3137	31.2203	795	0.0052	0.5186
510	0.4545	45.2355	655	0.2825	28.1159	800	0.0049	0.4912
515	0.4979	48.5637	660	0.2510	24.9860			
520	0.5171	51.4675	665	0.2239	22.2821			

Test Lab: LISUN Testing Environment: Ts:20.5°C, Ta:20.6°C,65%
Operator: Michael Aslami Approver:

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Light Source Test Report

Spectral Power Distribution Data

LISUN GROUP
www.Lisungroup.com
Sales@Lisungroup.com
Tel:+86(21)51083341

Plant Growth Lamp Test Report

Report No: 1763 **Test Time:** 2023-08-29 12:34:25
Category: LED **Type:** Downlight
Spec: PHILIPS **Number:** 1763 **Submitter:** Jady

CIE Colorimetric Parameters
CIE(x,y): 0.3623,0.3781 CIE(u,v): 0.2228,0.3288 CIE(u',v'): 0.2228,0.5028
CCT: 5959 K (Duv=0.00090) Dominant Wavelength: 579.2 nm Color Purity: 0.282
Peak Wavelength: 595.5 nm Half Width: 149.3 nm Color Ratio: R:0.184, G:0.779, B:0.037

Color Render Index: Ra:82.1, avgR(1-14):78.8, avgR(1-15):76.7
R1: 81 R2: 80 R3: 85 R4: 82 R5: 82 R6: 88 R7: 88 R8: 64
R9: 8 R10: 75 R11: 80 R12: 56 R13: 83 R14: 98 R15: 75

Photometric Parameters
Luminous Flux: 1776.07 lm Efficacy: 89.61 lm/W Radiant Efficiency (η): 0.274
Radiant Power: 6.420 W Photometric Power Efficiency (ηp): 1.252 umol/J
Photometric Radiant Flux (Φp): 24.807 umol/s Photometric Radiant Efficiency (ηp): 0.268
Photon Flux (Φp): 14.895 umol/s Photon Flux (Φp): 12.847 umol/s
Photon Flux (Φp): 1.696 umol/s Photon Flux (Φp): 0.876 umol/s
Photon Flux (Φp): 280-400nm): 0.002 umol/s Photon Flux (Φp): 280-400nm): 0.002 umol/s
Photon Flux (Φp): 400-700nm): 1.894 umol/s Photon Flux (Φp): 400-700nm): 1.894 umol/s
Photon Flux (Φp): 700-800nm): 0.028 umol/s Photon Flux (Φp): 700-800nm): 0.127 W
Photon Flux (Φp): 800-900nm): 0.028 umol/s Photon Flux (Φp): 800-900nm): 0.028 umol/s
YpF (320-700nm): 21.980 umol/s YpF (400-500nm): 3.240 umol/s
YpF (500-600nm): 3.868 umol/s YpF (600-700nm): 8.829 umol/s
YpF (700-800nm): 0.181 umol/s YpF (800-900nm): 0.001 umol/s
Radiant Flux (Φr): 12.288 W Radiant Flux (Φr): 0.020 W

Electric Parameters
Voltage: 220.068 V Current: 0.0303 A Power: 18.820 W
Power Factor: 0.8840 Frequency: 49.95 Hz

Geometry: An: 1.5m Self-absorption Factor: 1.000 Photometric Method: sphere-spectroradiometer (NIC,NI)
Warmup Time: 24 Minutes Peak of Signal: 4.773 Power Source: LSP-Series
Spectral Irradiance: LMS-9500C Digital Power Meter: LS2050C Power Source: LSP-Series

Test Lab: LISUN GROUP Testing Environment: Tc:20°C, Ta:20°C,65%
Operator: Jady Approver:

LED Plant Lamp Test Report

LISUN GROUP
www.Lisungroup.com
Sales@Lisungroup.com
Tel:+86(21)51083341

ANSI/IES TM-30-24 Color Rendition Report

Report No: 1763 **Test Time:** 2023-08-29 12:34:25
Category: LED **Type:** Downlight
Spec: PHILIPS **Number:** 1763 **Submitter:** Jady

Color Rendition Index: Ra:84.1, Rf:84.1, Rg:94.1, Rm:84.1, Rn:84.1
R1: 84 R2: 84 R3: 84 R4: 84 R5: 84 R6: 84 R7: 84 R8: 84
R9: 84 R10: 84 R11: 84 R12: 84 R13: 84 R14: 84 R15: 84

Test Lab: LISUN GROUP Testing Environment: Tc:20°C, Ta:20°C,65%
Operator: Jady Approver:

TM-30-24 Color Test Report

LISUN GROUP
www.Lisungroup.com
Sales@Lisungroup.com
Tel:+86(21)51083341

Warmup Curve

Report No: 1763 **Test Time:** 2023-08-29 12:34:25
Category: LED **Type:** Downlight
Spec: PHILIPS **Number:** 1763 **Submitter:** Jady

Parameters	Minimum	Maximum	Change
Luminous Flux (lm)	1772.40	1776.07	0.046
Power (W)	18.820	18.820	0.000
Efficacy (lm/W)	89.61	89.61	0.000
CRI	82.0	82.0	0.000
CRI +	0.1850	0.1850	0.0000
YpF	3.8792	3.8792	0.0000
YpF	88.4	88.4	0.0

Test Lab: LISUN GROUP Testing Environment: Tc:20°C, Ta:20°C,65%
Operator: Jady Approver:

LED Aging Test Report

CCD SPECTRORADIOMETER (LMS-7000)

The LMS-7000 works with LISUN a-molding integrating sphere as ALL-IN-ONE system. It is used to test photometric, colorimetric and electrical parameters of LED lighting. The test speed is quick and test results are accurate. It fully meets CIE127-1997, IES LM-79-19 and IES LM-80-08. The LMS-7000 is a cost-efficient CCD Spectroradiometer which is widely used by the LED manufacturers.



The LMS-7000 system has been certificated by the third CNAS lab, and the test results can be traced to NIM and NIST.

LMS-7000UV	LMS-7000UV-VIS	LMS-7000VIS	LMS-7000VIS-NIR	LMS-7000UV-VIS-NIR
200~400nm	200~950nm	350~950nm	380~1050nm	200~1050nm

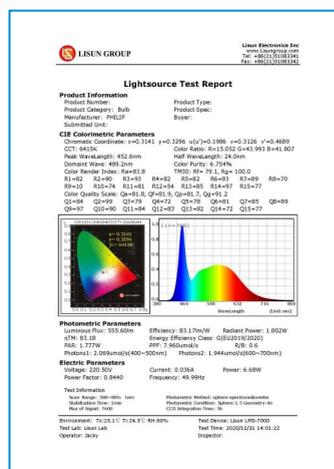
Measurement

- Colorimetric: Chromaticity Coordinate (x, y) and (u, v), Relative Spectral Power Distribution P(λ), Correlated Color Temperature (Tc), Color Rendering Index (Ra, R1 to R15), Color Difference, Dominant Wavelength, Peak Wavelength, Half-bandwidth, Spectral Purity, TM30 (Rf, Rg), CQS
- Photometric: Luminous Flux (Lumen), Luminous Efficiency, Radiant Power, EEI, PAR, PPF
- Electrical: Voltage, Current, Power, Power Factor, Harmonic (Optional)

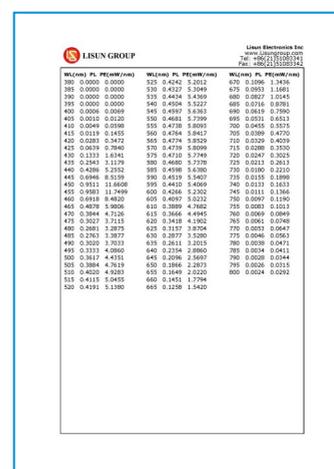
Specification

- Spectral Wavelength Accuracy: ±0.5nm, Resolution: ±0.2nm, Sample Scanning Steps: ±0.1nm
- Accuracy of Chromaticity Coordinate (Δx, Δy): ±0.003
- Correlated Color Temperature CCT: 1,500K~100,000K, CCT Accuracy: ±0.5%
- Color Rendering Index Range: 0~100.0, Accuracy: ±(0.3%rd±0.3)
- Photometric linear: ±0.5%, Stray light: <0.015%(600nm) and <0.03%(435nm)
- Time of integration: 0.5ms to 1,000ms
- Spectrum sensors: SMA905 optical fiber
- Communicate with PC via USB2.0, the software can be run in Win7, Win8, Win10, Win11

Test Report



Light Source Test Report



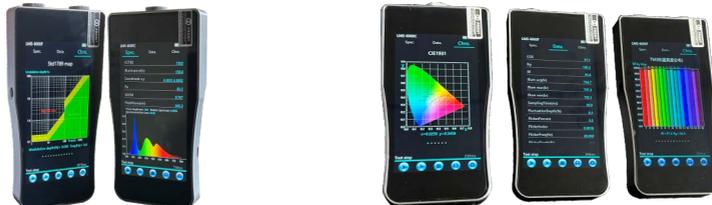
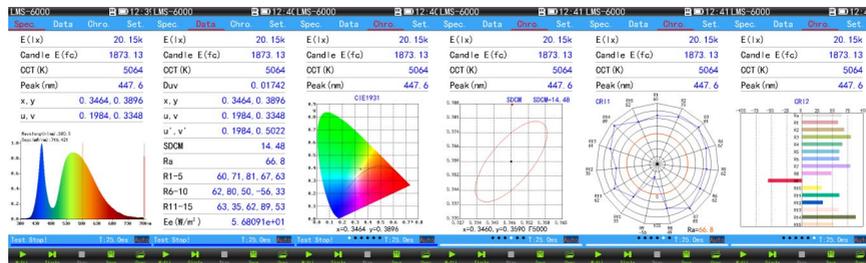
Spectral Power Distribution Data

PORTABLE CCD SPECTRORADIOMETER (LMS-6000)

Specification

- Spectral Wavelength Accuracy: $\pm 0.5\text{nm}$, Resolution: $\pm 0.2\text{nm}$, Sample Scanning Steps: $\pm 0.1\text{nm}$
- Accuracy of Chromaticity Coordinate ($\Delta x, \Delta y$): ± 0.005
- Correlated Color Temperature CCT: 1,500K~100,000K, CCT Accuracy: $\pm 0.6\%$
- Color Rendering Index Range: 0~100.0, Accuracy: $\pm(0.3\%rd\pm 0.3)$
- Photometric linear: $\pm 0.6\%$, Stray light: $< 0.015\%(600\text{nm})$ and $< 0.03\%(435\text{nm})$
- 5inch 480*854 pixel LCD capacitive touch screen with 4000mAh Li-ion battery can work max 20 hours
- Includes a 8GB SD Card, the software can be run in Win7, Win8, Win10, Win11 of lighting design work.

LISUN Model	Functions
LMS 6000	illuminance (lux), E(Fc), Ee(W/m2), Tc (K), Duv Correlated Color Temperature (CCT), Chromaticity Coordinates, CRI, Purity, Peak Wavelength, Dominant Wavelength, Half Bandwidth, Center Wavelength, Centroid Wavelength, Total Color Difference, Brightness Difference, Red Green Degree, Yellow Blue Degree, CCT, TM 30(Rf, Rg) and 380 780nm
LMS 6000C	LMS 6000 parameter without PC software and TM 30(Rf, Rg)
LMS 6000UV	UV A, UV B, UV C and UV total Radiant Irradiance, UV hazard irradiance, UV spectrum, Dominant Wavelength, Peak signal, Start wavelength, End wavelength and 200 400nm
LMS 6000F	LMS 6000 Parameters+Flicker test and 380 780nm
LMS 6000L	Brightness(cd/m ²), fL, Tc (K), Duv Correlated Color Temperature(CCT), Chromaticity Coordinates, CRI, TM 30 (Rf, Rg), Purity, Peak Wavelength, Dominant Wavelength, Half Bandwidth, Center Wavelength, Centroid Wavelength, Total Color Difference, Brightness Difference, Red Green Degree, Yellow Blue Degree, CCT Difference, SDCM Diagram, Spectrum Diagram and 380 780nm
LMS 6000B	LMS 6000 Parameters+Blue Light Hazard Weighted Irradiance according to GB/T20145, CIE S009/E:2002 and 350 800nm
LMS 6000BF	LMS 6000B Parameters+Flicker test and 350 800nm
LMS 6000P	LMS 6000 Parameters+PAR, PPF, YPF, Blue purple irradiance Eb, Yellow green irradiance Ey, Red orange irradiance Er, Ratio of red and 350 850nm
LMS 6000S	LMS 6000P Parameters+Blue Light Hazard Weighted Irradiance according to GB/T20145, CIE S009/E:2002 and 350 950nm
LMS 6000SF	Full functions: LMS 6000S parameters+Flicker and 350 950nm
LMS 6000I	Input and Output Control via RS485 and 380 780nm



LUX METER | BRIGHTNESS METER | PPFM METER | UV IRRADIANCE METER (PHOTO-200)

The PHOTO-200 series Lux Meter | Brightness Meter | PPFM Meter | UV Irradiance Meter use high-precision linear optoelectronic sensor, which has the characteristics of lightweight, stable performance, high accuracy, high cost performance, and easy carrying. Widely used on-site lighting measurement, the research and development of light source products, quality monitoring of production lines, and plant factories.

Specification

- Detector Accuracy: Class A($\pm 4\%$ reading ± 1 reading)
- Measurement Repetitiveness: $\pm 0.5\%$
- Display Screen: 1.54inch IPS HD LCD touch screen with 180° rotation
- Communication method: USB Type C or Bluetooth
- Power: 1600mA lithium battery can continuous work up to 12hours
- Product Size: 65mm*60mm*60mm
- Product Weight: Aluminum alloy body, 100g
- Secondary development: Support
- Product Weight: Aluminum alloy body, 100g
- Product Weight: Aluminum alloy body, 100g



LISUN Model	Functions
PHOTO 200	Pocket Illuminance Meter: Illuminance lux test range (380 780nm): 0.1 500,000lx (± 0.1 lx), upper and lower limit settings, sorting tests, optical change curves(PC software) illuminance, average illuminance, maximum illuminance, minimum illuminance, point illumination, illuminance transmission (%)
PHOTO 200L	Pocket Brightness Meter: Brightness test range (380 780nm): 0.1 500,000cd/m ² (± 0.1 cd/m ²), upper and lower limit settings, sorting test, light change curve(PC software) brightness, average brightness, maximum brightness, minimum brightness, points brightness, brightness transmission (%)
PHOTO 200P	PPFD Sensor and Lux Meter: illuminance lx, PPFM umol/m ² .s (400 700nm) test range: 0.1 500,000umol/m ² .s (± 0.01 umol/m ² .s) , Up and down limit settings, sorting tests, optical change curves (PC software), PPFM, average PPFM, maximum PPFM, minimum PPFM energy, transmission ratio (%), test time
PHOTO 200DLI	PPFD Sensor (DLI): PPFM umol/m ² .s (400 700nm) test range: 0.1 500,000umol/m ² .s (± 0.01 umol/m ² .s), total amount of effective radiation umol/m ² .d
PHOTO 200B	Blue Light Irradiance (460nm): Irradiance test range: 0.1 200,000μW/cm ² (± 0.1), upper and lower limit settings, sorting tests, optical change curves irradiation, average Irradiance degree, maximum Irradiance, minimum Irradiance degree, minimum Irradiance degree Blu ray energy μJ/cm ² , Irradiance transmission ratio (%), test time
PHOTO 200UV	UV Irradiance: Irradiance (222 nm or 254nm or 365nm) test range: 0.1 500,000μW/cm ² (± 0.01), upper and lower limit settings, sorting tests, optical change curves, Irradiance degree, average Irradiance degree, maximum Irradiance, minimum Irradiance, UV energy radiation transmission ratio (%), test time
PHOTO 200UVZ	UV Irradiance (Multiband): Irradiance (254nm and 365nm) test range: 0.1 500,000 μW/cm ² (± 0.01), upper and lower limit settings, sorting tests, optical change curve, radiation, average radiation, maximum radiation, minimum radiation, UV energy, radical transmission ratio (%), test time
PHOTO 200R	Red Light Irradiance (650nm): Irradiance test range: 0.1 200,000μW/cm ² (± 0.1), upper and lower limit settings, sorting tests, light change curve, irradiation, average radiation degree, maximum radiation, minimum radiation, red light energy μJ/cm ² , radiation transmission ratio (%), testing time
PHOTO 200IR	nIR Irradiance (850 or 940nm): Irradiance test range: 0.1 500,000μW/cm ² (± 0.01)
PHOTO 200IRZ	nIR Irradiance (850 and 940nm): Irradiance test range: 0.1 500,000μW/cm ² (± 0.01)

INTEGRATING SPHERE WITH TESTING HOLDER BASE (IS-*MA)

With the continued development of LED lamps such as streetlights, floodlights and tubes, their sizes are increasing and shapes are becoming more diverse. This presents a core testing challenge: how to properly mount these diverse luminaires in a 4π geometric integrating sphere for high-precision testing.

To address this installation and precision challenge, LISUN has specifically designed a new integrating sphere. It features an expandable and adjustable holder base (bracket) to accommodate various LED lamp types. It also incorporates a cross-laser alignment device to ensure the luminaire's light-emitting surface is always precisely centered in the integrating sphere, simultaneously addressing testing bottlenecks in both mounting adaptability and positioning accuracy.



**The holder base can be installed on the top or on the bottom.
The integrating sphere includes a cross laser to help adjust the lamp position.**

Specification

1. The hold base can hold up to 20kg. The sphere test all lamps such as E27/E40, all tubes such as T5/T8/T12, and all kinds of luminaires
2. The hold base can be installed on the top or on the bottom. And its height can be adjusted
3. Four wires of the holder base connected to the external power supply and max power is 5KW
4. Diameter: IS-0.3M (Φ 0.3m), IS-0.5M (Φ 0.5m), IS-1.0MA (Φ 1.0m), IS-1.5MA (Φ 1.5m), IS-1.75MA (Φ 1.75m), IS-2.0MA (Φ 2.0m), IS-2.5MA(Φ 2.5m) and IS-3.0MA(Φ 3.0m). Other sizes can be designed according to the customer's request
5. The painting of integrating spheres is designed according to CIE Pub. No.84 (1989)

Integrating Sphere theory and Applications

The integrating sphere works with a Spectroradiometer to do the photometric, colorimetric and electrical parameters measurement:

- IS-0.3M/IS-0.5M is suitable for LEDs, LED modules, High Power LED, mini bulbs and other small lamps. The flux testing range is 0.001 to 1,999 lm
- IS-1.0MA is suitable for CFL or LED bulbs. The flux testing range is 0.1 to 199,990 lm
- IS-1.5MA/IS-1.75MA is suitable for CFL, LED bulb and tube, fluorescent lamp, CCFL. The flux testing range is 0.1 to 1,999,900 lm
- IS-2.0MA is suitable for HID lamps or high power lamps. The flux testing range is 0.1 to 1,999,900lm
- IS-2.5MA and IS-3.0MA is suitable for CNAS accredited laboratory big luminaires to test

INTEGRATING SPHERE WITH SIDE ASSISTANT OPENING (IS-*MA**P, IS-*MA**C)

According to IES LM-79 Clause 9.1.2, it requires the 4π geometry and 2π geometry configuring integrating sphere for the LED Testing. Lisun Group developed the integrating sphere with side assistant opening using A-Molding Technology to meet the requirements.

The traditional integrating sphere is assembled by several pieces. Lisun Group developed A-Molding Technology to produce the sphere. A-Molding Integrating Sphere will be more round and the test results will be more accurate than the traditional integrating sphere.



Figure: A-Molding Integrating Sphere VS the traditional Integrating Sphere

Specification

Painting material of integrating spheres is designed according to CIE Pub.No.84(1989)

- Internal BaSO₄ painting: $\rho(\lambda) \geq 0.96$ (450nm~800nm) and $\rho(\lambda) \geq 0.92$ (380nm~450nm)
- Fine diffuse reflection: Reflectance $\rho \approx 0.8$ and accuracy of $\rho(\lambda) < 1.5\%$
- Build-in all functional lamp testing jigs: the vertical is for E40/E27, the horizontal is for T5/T8/T12 tubes and the Testing Holder Base for LED street luminaires. The holder base can be installed on the top or on the bottom.
- Power cable, power terminal and auxiliary lamp position have been built-in (Auxiliary lamp is optional)
- Two photo detector ports, one optical fiber port and one temperature sensor port are built-in
- Ordering Code: IS-1.5MA55P or IS-1.5MA55C ($\Phi 1.5m$, IS-1.5MA55P means square side opening size is $0.5 \times 0.5m$, IS-1.5MA55C means circle side opening diameter is $0.5m$). IS-1.75MA66P or IS-1.75MA66C ($\Phi 1.75m$ and side opening is $0.6m$). IS-2.0MA77P or IS-2.0MA77C ($\Phi 2.0m$ and side opening is $0.7m$). Other size such as diameter $2.5m$, $3.0m$ can be designed according to customer's request.

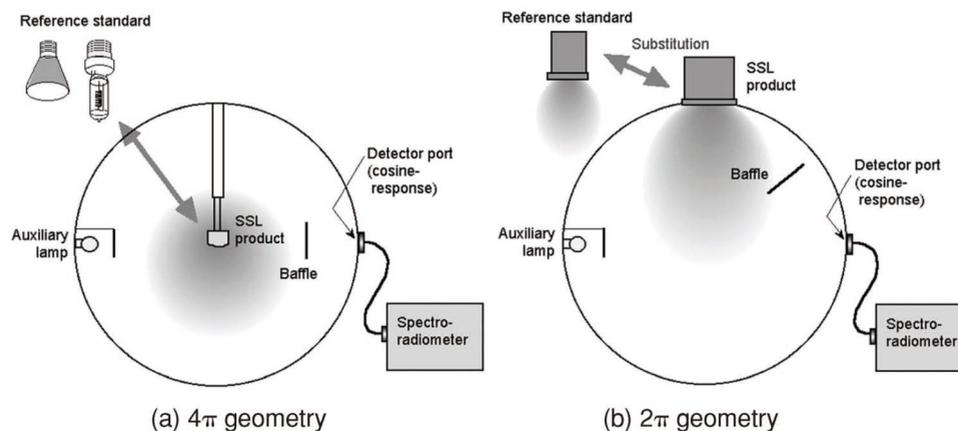


Fig: LM-79 Clause 9.1.2

CONSTANT TEMPERATURE INTEGRATING SPHERE (IS-*MT)

According to requirements of IEC standards, the standard test temperature is 25°C. But high power lamps such as HID lamps and LED outdoor luminaires will produce a lot of heat during the test, thus the temperature inside the integrating sphere can not meet the requirements of IEC standards. Lisun Group designed the Constant Temperature Integrating Sphere which allows the lamp to be tested in a constant air temperature.

Specification

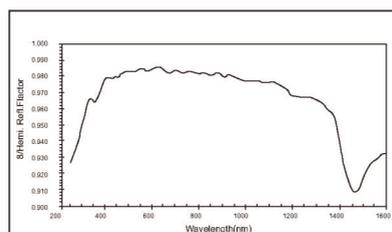
- Diameter: IS-0.3MT (Φ0.3m), IS-0.5MT (Φ0.5m), IS-1.0MT (Φ1.0m), IS-1.5MT (Φ1.5m), IS-1.75MT (Φ1.75m), IS-2.0MT (Φ2.0m). Other size can be designed according to the customer's request.
- Painting of integrating spheres is designed according to CIE Pub. No.84 (1989).
- Material: Pure barium sulphate (BaSO₄).
- BaSO₄ coating: $\rho(\lambda) \geq 0.96$ (450nm~800nm) and $\rho(\lambda) \geq 0.92$ (380nm~450nm).
- Fine diffuse reflection: Reflectance $\rho \approx 0.8$ and accuracy of $\rho(\lambda) < 1.5\%$.
- Build-in all functional lamp testing jigs: jigs for E40/E27 and T5/T8/T12 tubes and the Testing Holder Base for LED street luminaires. The holder base can be installed on the top or on the bottom.
- Auxiliary lamp position has been built-in. Auxiliary lamp and Auxiliary lamp holder are optional.
- Power cable and socket has been build-in. It is convenient to power the lamp.
- Two photo detector ports, one optical fiber port and one temperature sensor port are built-in.
- Constant temperature range: 25°C~55°C (refer to the environmental temperature at 25°C).
 - A. Temperature increasing tolerance: $\pm 1^\circ\text{C}$
 - B. Temperature down tolerance: $\pm 2^\circ\text{C}$
- Build-in cross laser can help to install the standard lamp and the lamp under test in the center of the integrating sphere

Application

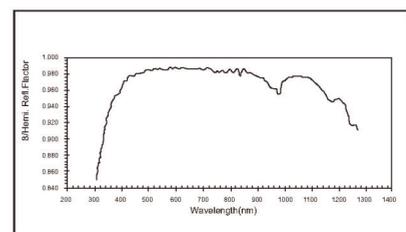
- The integrating sphere works with a Spectroradiometer to do the photometric, colorimetric and electrical parameters measurement:
 - IS-0.3MT/IS-0.5MT is suitable for LEDs, LED modules, High Power LED, mini bulbs and other small lamps. The flux testing range is 0.001 to 1,999 lm.
 - IS-1.0MT is suitable for CFL or LED bulbs. The flux testing range is 0.1 to 199,990 lm.
 - IS-1.5MT/IS-1.75MT is suitable for CFL, LED bulb and tube, fluorescent lamp, CCFL. The flux testing range is 0.1 to 1,999,900 lm.
 - IS-2.0MT is suitable for HID lamps or high power lamps. The flux testing range is 0.1 to 1,999,900 lm
 - LISUN IS-*MT Constant Temperature Integrating Sphere is fully meet IES LM-82 Clause 4.4.



UV-VIS High Index of Reflective Coating



VIS High Index of Reflective Coating



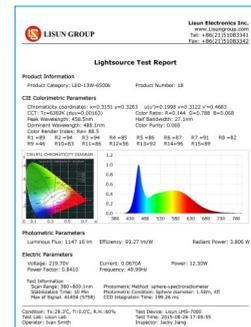
SPECTRORADIOMETER AND INTEGRATING SPHERE COMPACT SYSTEM FOR LED (LPCE-3)

Due to the LED Test System is hard to install and debug, LISUN developed the Spectroradiometer and Integrating Sphere compact System LPCE-3. The LPCE-3 system combines the cabinet, test equipments and integrating sphere together. The system looks better and it is extremely easy to operate.

The LPCE-3 is used to identify the performance of single LEDs and LED lamps. LED's quality should be tested by checking its photometric, colorimetric and electrical parameters. The LPCE-3 system fully meets CIE127-1997, IES LM-79-19 and IES LM-80-08. The integrating sphere is produced by A-Molding technology. A cross laser system and auxiliary position are built in to improve the test accuracy.

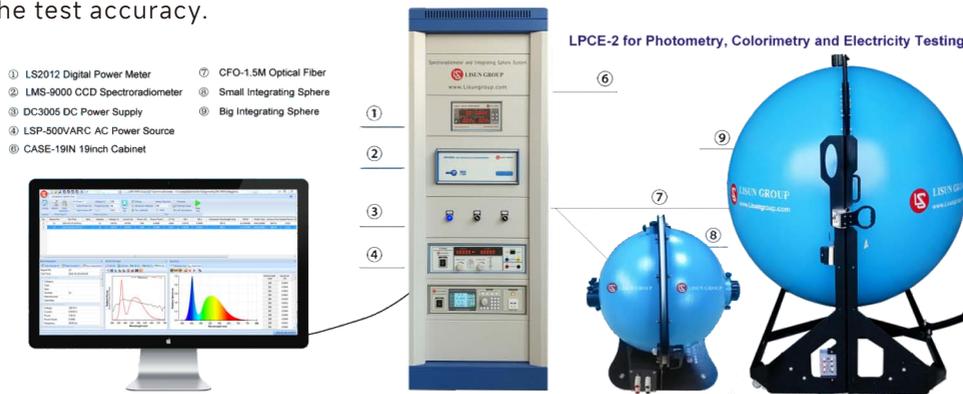
ALL-IN-ONE LED Test System

1. CCD Spectroradiometer
2. Big Integrating Sphere with Cabinet
3. Standard Lamp
4. Auxiliary Lamp
5. Digital Power Meter
6. AC Power Supply
7. DC Power Supply
8. Optical Fiber
9. PC (Optional)



INTEGRATING SPHERE SPECTRORADIOMETER SYSTEM (LPCE-2)

LPCE-2 Integrating Sphere Spectroradiometer Test System is used to test energy-saving lamps, fluorescent lamps, HID lamps, CCFL, plant lighting and LED lighting. The test results meet the requirements of CIE and IES LM-79-19 for the photometry and colorimetry measurement. The LPCE-2 is applied with LMS-9000 or LMS-9500 CCD Spectroradiometer and a-molding integrating sphere with testing holder base function which will be more circle and the test results will be more accurate than the traditional integrating sphere.technology. A cross laser system and auxiliary position are built in to improve the test accuracy.



Measurement

- Colorimetric: Chromaticity Coordinates, CCT, DUV, Color Ratio, Peak Wavelength, Dominant Wavelength, Half Width, Color Purity, CRI, CQS, TM-30-24, Spectrum Test, TlCI-2012, GAI
- Photometric: Luminous Flux, Efficiency, Radiant Power, EEL, Energy Efficiency Class, M/P Ratio, Kmel, ymel, Pupil Flux, Cirtopic Flux, Mesopic Flux, PAR, PPF and Plant Lighting
- Blue Light: Blue Flux, Blue Light Radiant Power, Blue Light Hazard Radiation Level
- Electric: Voltage, Current, Power, Power Factor (PF), Displacement Factor (DF), Harmonic
- LED Aging Test: Flux VS time, CCT VS time, CRI VS time, Power VS time, Current VS time

LAMP START, RUN-UP TIME AND FLICKER TEST SYSTEM (LSRF-3)

LSRF-3 is equipped with Class A photo detector, so the sampling speed is up to 100kHz. It fully meet the requirement of BASIC, Energy Star V2.1, IEC TR 61547-1:2020 IEC-Pst, CA CEC, ASSIST, CIE TN006-2016 CIE SVM, IEEE Std 1789 standards, etc. It is professional for flicker test of LED lights and lamps, energy-saving lamps, etc. According to EU directives 1194/2012, 2009/125 / EC, SASO2902, EU2019/2015 - EU2019/2020 and IEC60969 "Self-ballasted Lamps for General Lighting Services - Performance Requirements" and other requirements.

The integrating sphere & standard lamp are optional

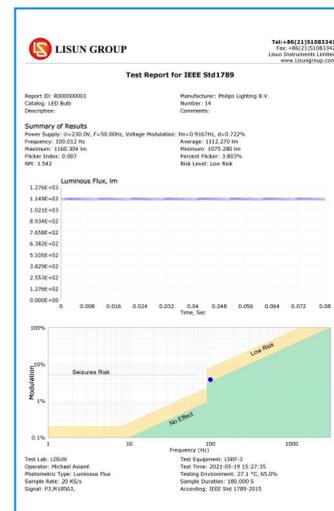
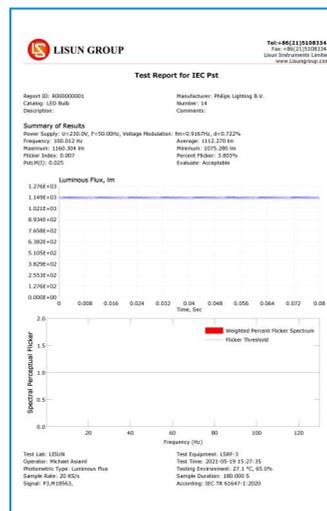
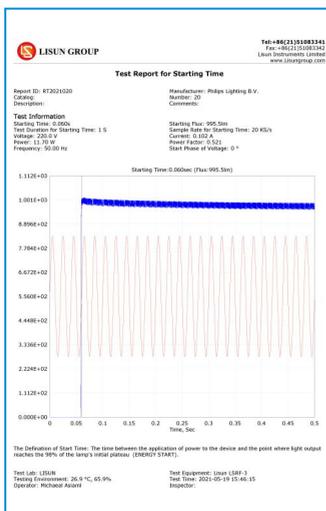


Measurement

Lamp Flicker test: the LSRF-3 needs to work with LISUN Integrating Sphere to test flicker. It also can work with LPCE-2/LPCE-3 Integrating Sphere System, LSG-6000/LSG-1890B/LSG-1800A Goniophotometer system, or LSG-6000CCD/LSG-1890BCCD/LSG-1800ACCD Goniospectroradiometer.

Lamp Start and Run-up Test: the LSRF-3 needs to work with LISUN's LSP-500VARC AC Power Source (With Trigger Function) or LSP-500VARC-Pst (IEC-Pst AC Power Source) to test the Start and Run-up time of lamps which is according to clause 11.4 Start Time Test Method & clause 11.5 Run-Up Time Test Method in the US Standards of Energy Star V2.1, and SASO2902 Table 13.

According to IEC TR 61547-1:2020, The LSRF-3 do the Light Pst V measure on AC Stable as below Figure 1a , and also can do the Light Pst LM(I) measure on AC Fluctuation as below Figure 1b. Note: The Light Pst LM(I) measurements need to work with LISUN's LSP-500VARC-Pst (IEC-Pst AC Power Source).



OPTICAL RADIATION SAFETY TEST SYSTEM (EN62471-C)

IEC62471-2006(CIE S009) Photobiological Safety of Lamps and Lamp System and IEC TR62471-2(2009) Guidance on Manufacturing Requirements Relating to Non-laser Optical Radiation Safety have been published addressing hazard to human (mostly eye and skin), and are completely suitable to assess the optical radiation safety of non-laser sources, such as LED products, UV radiation in general lighting products and etc.

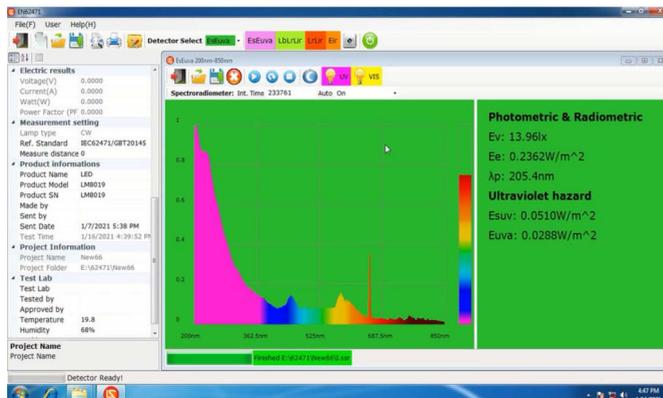


The LED Photobiological Radiation Safety Test System is also according to IEC62471-1, EN62471-1, CIE S009, IEC62471-6:2022, IEC62471-7:2023 (instead for IEC62778), GB/T 20145, IEC/EN 60598 Annex P, IEC/EN 60432, IEC60335-2-27, EN60335-2-27, IEC60335-2-59, GB 7000.1 and 2009/125/EC.technology. A cross laser system and auxiliary position are built in to improve the test accuracy.

Specification

- Wavelength range: 200~800nm(EN62471-A), 200~1500nm(EN62471-B), 200~3000nm(EN62471-C)
- Radiance geometry: optics simulating human eye's retina
- Acceptance aperture: Dia. 7mm for radiance; Dia. 20mm & 7mm for irradiance
- FOV range: 1.5mrad to 110mrad (1.7mrad, 11mrad, 100/110mrad) according to exposure duration of radiance measurement; 100mrad, 1.4rad and 6.28rad for irradiance measurement
- Testing distance: 200mm to 6.0m(optional) with constant FOVs and input aperture
- Image resolution:1600*1200
- Maximum exposure scanning range: 2pi-space
- Calibration: It can be traced to NIM
- Detectors: PMT/InGaAs/Si/PbS
- Imaging radiance meter: scientific grade 16bit CCD camera with TEC
- Sampling speed of pulse source:20us to 10s

Test report



Lisun Electronics Inc.
www.Lisungroup.com
Tel: +86(21)51083341
Fax: +86(21)51083342

Photobiological Safety Test Report of Light source1/3

Product Information	
Name	CT-T004S39W(Track light)
SN	S01
Model	CT-T004S39W(Track light)
Ref FILE	IEC62471:GBT20145
Lamp Type	CW
Temperature [°C]	25.3
Humidity[%]	60.0
Test condition	Stable Time[mn]
Measure Distance [mm]	3000.0
Ref FILE	IEC62471:GBT20145
Tested by	Antolek compliance Laboratory
Approved by	WGC
Test Date	2018-2-18
Test Time	2018-2-18

Spectral distribution

Luminance distribution

Risk	Exempt		Low Risk		Mod Risk		RG
	Limit	Result	Limit	Result	Limit	Result	
Ea[W·m ⁻²]	0.001	1.92e-08	0.003	1.92e-08	0.03	1.92e-08	RGD
La[W·m ⁻² sr ⁻¹]	10	4.24e-04	33	4.24e-04	100	4.24e-04	RGD
Eq[W·m ⁻²]	100	1.23e+00	10000	2.05e+01	400000	3.05e+01	RGD
Lr[W·m ⁻² sr ⁻¹]	1.06e+08	2.88e+02	1.06e+08	4.32e+02	2.88e+08	4.32e+02	RGD
Lp[W·m ⁻² sr ⁻¹]	2.29e+05	2.16e-01	2.29e+05	2.16e-01	2.29e+05	2.16e-01	RGD
Ea[W·m ⁻²]	100	7.21e-03	570	7.21e-03	3000	7.21e-03	RGD
α[mrad]	28.5						
RG							RGD

Electric Results		
Voltage[V]	220.0000	Current[A]
Watt [W]	0.0000	Power Factor

LED LUMEN MAINTENANCE AND AGING LIFE TEST SYSTEM (LEDLM-84PL)

LEDLM-80PL LED Lumen Maintenance and Aging Life Test System is designed according to IES-LM-80 and TM-21. It is used to test & record the optical and electrical maintenance for single LED or LED module. The software is based on Arrhenius model and TM-21 to calculate the LED life. The LEDLM-80PL needs to work with a GDJW/GW Series High Temperature Chamber and DC12010 DC Power Source.

LEDLM-84PL LED Lumen Maintenance and Aging Life Test System is designed according to IES LM-84 and TM-28. It is used to test & record the optical and electrical Maintenance for LED luminaires. The software is based on Arrhenius model and TM-28 to calculate the LED life. The LEDLM-84PL needs to work with a GDJW/GW Series High Temperature Chamber and and LSP-1KVARC AC Power Source.

System Configuration

- Record the changing curves of lumen, colorimetric and electrical parameters VS time for L70 and L50:
 1. L70 (hour): time to 70% lumen maintenance
 2. L50 (hour): time to 50% lumen maintenance
- Test and record the light attenuation data within a short time, then software will predict the LED life
- LEDLM-80PL/LEDLM-84PL test system can test 8 DUTs one time. (More DUTs can be special designed according to customer’s requirements)
- The test system already includes two sets of testing devices in the temperature chamber
- The system supply two solutions for LED lumen maintenance and aging test:
 1. Strictly according to LM-80 or LM-84 to test up to 6000 hours to get L50 and L70 test report based on TM-21 or TM-28. LISUN LEDLM-80PL/LEDLM-84PL test system will be fully automatic and no need human to operate during 6000hours test.
 2. LISUN LEDLM-80PL/LEDLM-84PL test system supply a fast accelerated test. The software was designed based on the Arrhenius Model to simulate 6000 hours testing in a “short time” to get the L50 and L70 test report based on TM-21 or TM-28. This solution saves a lot of time for the testing company.

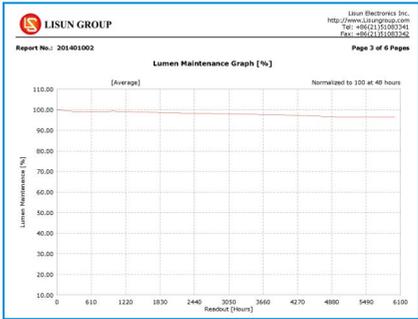


Slope(m)	-3.067E-06
Intercept(b)	1.365E-02
$\alpha 1$	3.067E-06
B 1	1.014
Calculated L ₇₀ (6k)	121,000

LISUN GROUP
 Report No.: 201401002
 Lumen Maintenance Life Prediction(Based on TM-21)
 Test Condition: 55° Case Temp

Sample Name:	White SMD LED
Model:	YL-T3528W-AA-60C
Rating:	20mA, 6.5lm, 75(PA), 6000K
Manufacturer:	OSRAM Lighting
Sample Quantity	6
Number Of Failures	0
DUT drive voltage used in the test (V/Hz)	220.1750.02
Test duration (hours)	6000
Test duration used for projection (hour to hour)	1000 - 6000
Tested case temperature (C)	55
a	6.081E-006
B	0.998
Calculated L70(6k) (hours)	815715
Reported L70(6k) (hours)	> 33000
Calculated L50(6k) (hours)	871949
Reported L50(6k) (hours)	> 33000

Lumen Maintenance Life Prediction Report



Lumen Maintenance Graph

LED DRIVER AGING TEST RACK (LEDRACK-100W192P)

The LED Driver Aging Test Rack is applied to the production line for the finished products testing. With features of simplified operation and nice-looking, it can improve the workers' work efficiency. This system can meet the requirements of IEC62384, GB24825-2009 and other relative standards.

Configuration:

The LED Driver Aging Rack includes three parts: LED Driver Aging Rack, Aging Control System includes PC & software, and LED Load Modules.



Specification

- Application range: LED driver and multi channel driver power aging. It is equipped with computer and monitor. The working condition can be set on the computer software, and the software will record all the real time data to do the statistical analysis
- The parameters of load can be set freely on the software. The monitor shows the real time voltage, current, and power etc
- Load mode: CC, CV, CR, CP, and LED
- Aging control system includes: ON/OFF control signal output; signal of relay switch control; K type thermocouple temperature acquisition
- The channels are parallel connected under arbitrary load mode, which can allow product power expansion
- The LED Driver Aging Rack can also be designed according to customer's LED driver power and other requirement

AGING AND LIFE TEST RACK (SY2036)

The LED aging and life test rack is fully designed according to the IEC standards, and it can also be designed based on the customer request. SY2036 can test all kinds of lamps and luminaires, such as LED, CFL, HID, indoor and outdoor lighting.

Configuration:

- PLC program and English/Chinese touch screen, easy for the operation and maintenance
- Built-in over-current protection system. When the load's current becomes too high, the device will give alarm and switch off the output to protect the transformer
- Contains 3 independent layers and each can work separately
- Input Power supply: AC220V, 50/60HZ, 12KVA Min (110V is optional)
- Built-in transformer: 0-250V 5KVA and 0-300V 5KVA (Other power is optional)
- Maximum power for EUT: 5KVA and 12A (Other power is optional)
- EUT and quantity: 112pcs B22, 112pcs E27. 36pcs T5/T8/T12 Tube. 22pcs LED panel (Other EUT can be designed according to customer request)
- ON/OFF test: Can be set on the touch screen with program
- Test number: 0~999999(Adjustable)



LED POWER DRIVER TESTER (LS2090)

LS2090 LED Power Driver Tester is the comprehensive test instrument for LED power driver which is according to GB/T 24825-2009 and IEC 62384:2006. It can measure the following parameters: input characteristics test (AC&DC), output characteristics test (AC&DC), output start characteristics test (DC) and harmonic test.

The LS2090 usually works with LISUN LSP-500VARC pure sine AC power source and LISUN M9822 DC electronic load to test LED driver. The software can be run Win7, Win8, Win10, Win11.



Specification

1. Input Characteristics Test (AC)

- Measures the input voltage, current, power, power factor, power frequency
- The fundamental frequency scope of the current and voltage: 45Hz ~ 65Hz; Narrow band range: 45Hz~5kHz; Broadband range: 45Hz~1MHz.
- U range: 3~300V (CF=1.67); Current: 5mA~2.7A (CF=3); Power: 0.015~800W; PF: 0.000~1.000.

2. Input Characteristics Test (DC)

- Measures voltage, current, power.
- Voltage range: 3~500V; Current range: 5mA~8A; Power range: 0.015~4KW

3. Output Characteristics Test (AC)

- Measures lamp voltage, lamp current and lamp power.
- Lamp U range: 3 ~ 300V(CF=3); Lamp I range: 5mA~2.7A(CF=3); Lamp P range: 0.015 ~ 800W

4. Output Characteristics Test (DC)

- Measures output lamp voltage, lamp current, lamp power, ripple wave current.
- U range: 3~500V; I range: 5mA~8A; P: 0.015~4KW; Ripple wave current: 5mA~2.5A.

5. Output Start Characteristics Test (DC)

- Change curve and data of the measuring lamp voltage and lamp current within 0~2 seconds.
- Lamp voltage range: 3~500V; Lamp current range: 5mA~8A

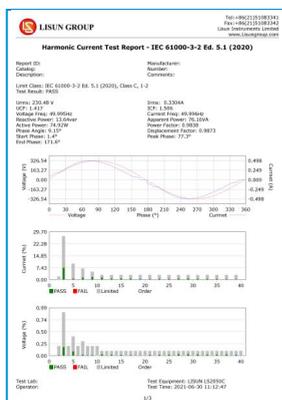
6. Harmonic Testing

- Total harmonic components test of 0~50 times, wave ratio, initial phase angle and peak phase angle

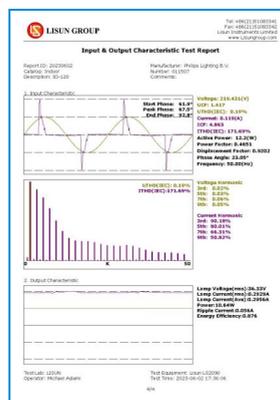
7. Displacement Factor (DF) Testing

- The LS2090 is an update version for WT2080, the LS2090 has the DF testing function.

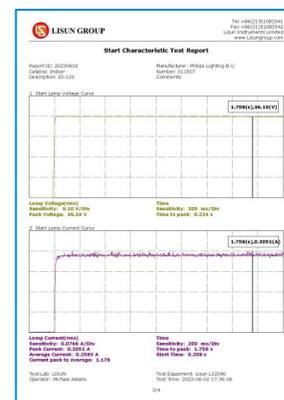
P.S. The LS2090-IEC with additional software (with extra cost) can fully meet EN/IEC6100-3-2:2019



IEC61000-3-2 Test Report



Input & Output Characteristics



Start Characteristics

DC ELECTRONIC LOAD (M9822, M9822B)

M9822/M9822B is newly designed circuit adopts rapid AD and DA technology to achieve rapid measurements with high accuracy. And the resolution of 0.1mV/0.1mA can effectively display the minor change of voltage and current. So the instrument has a wider application field and achieves better test results.

The new CR-LED test mode can be a real simulation of LED light features set by the increase in the diode turn-on voltage, fully simulate the working principle of the diode. So that the test voltage and current can achieve a normal and stable value, to avoid the traditional fixed resistor mode under voltage and current instability or shock. It is the real reflect the LED drive power load situation.



Specification

- Input Parameters: M9822 is 0~150V/30A/300W, M9822B is 0~500V/15A/300W, M9824A is 0~500V/120A/1200W
- CR-LED measurement mode, fully simulate the load characteristics of LED power
- High-light and high-visibility VFD display
- High resolution of 0.1mV and 0.1mA
- Test functions of OCP and OPP can accurately capture critical parameters
- Modes of CC, CV, CR, CP
- Battery test mode can automatically record the discharge time and the capacity
- The dynamic transition time of 0.1mA can effectively detect the power dynamic response.
- List test can flexibly set test mode and time and finally judge the test result

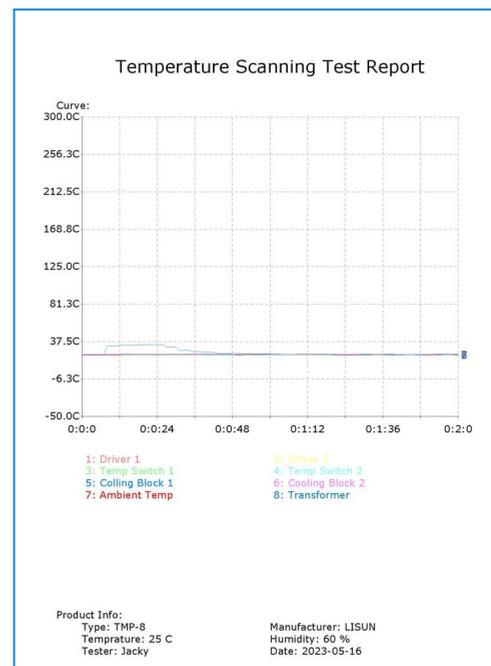
Note: We also have other models with 500V/60A~240A input, please feel free to contact us.

MULTIPLEX TEMPERATURE TESTER (TMP-8, TMP-16)



Specification

- 8 channels temperature signal(TMP-8) or 16 channels temperature signal(TMP-16)
- K type thermocouple
- Temperature range: -40~300°C. Testing accuracy: 0.5%
- Capable of circle monitoring, single monitoring, printing and communication with PC
- English software can run in Win7, Win8, Win10, Win11



MULTIWAY LIFE TESTER (CH316)

Feature

- Measure 16 samples at the same time, evaluate and record the life of each sample.
- Very flexible: Samples can be added and changed at anytime.
- The life of each sample is readable at anytime.
- The switch ON/OFF time is adjustable (Minimum period is 1s).
- Automatically record the test result when the power is off, and resume the original measurement when power is on.
- Sound and light alarm when the product is failed.



Specification

- Current range (normal load): 30mA~1000mA (RMS). Invalid if the load current is smaller than 30mA.
- Tested sample life range: 0~1,000,000 times.
- Switch on/off time: 1 second~99 hours 59 minutes 59 seconds (adjustable).

DIGITAL TORSION METER (CH338)

Digital Torsion Meter is mostly applied to measure the torque of all kinds of luminaires lamp caps. The CH338 is a newly developed intelligent product with built-in microprocessor.

Specification

- Range: 0~10N • m; Accuracy $\leq 1\%$
- Repeatability: $\leq 0.5\%FS$; Over loading: 120%FS
- It can measure the clockwise and anti-clockwise torque of lamp cap and it can preset upper limit alarm. The data won't be lost after turning off the instrument.
- Instrument is convenient to be used because it has several clamps for various lamp caps such as E27/E26, B22d, E14/E12, G13/G5 and so on.



"GO" AND "NOT GO" GAUGE (GNG-E27)

Specification

According to the requirement of IEC60061, Lisun produced high accuracy and high quality "Go" and "Not go" gauge

- GNG-E27 is for E27 lamp cap measurement.
It includes 7006-27B-1, 7006-28A-1, 7006-27C-1, 7006-50-1, 7006-51A-2, 7006-51-2
- GNG-E27H is for E27 lamp holder measurement.
It includes 7006-25A-2, 7006-26-4, 7006-21-5, 7006-22A-4, 7006-22B-1, 7006-22C-1, 7006-22D-1
- GNG-E14 is for E14 lamp cap measurement.
It includes 7006-27F-1, 7006-54-2, 7006-27G-1, 7006-55-2
- GNG-E40 is for E40 lamp cap standard source measurement:
7006-27-7, 7006-28D-1, 7006-52-1, 7006-53-1
- GNG-B22D is for B22d lamp cap measurement.
It includes 7006-4A-2, 7006-4B-1, 7006-11-8, 7006-10-8, 7006-3-1, IEC60968 Fig3
- GNG-B22DH is for B22d lamp holder measurement.
It includes 7006-12-8, 7006-15-7, 7006-20-4, 7006-12A-2, 7006-12B-2, 7006-15A-2, 7006-13-5, 7006-17B-1



EMI RECEIVER SYSTEM (EMI-9KC, EMI-9KB, EMI-9KA)

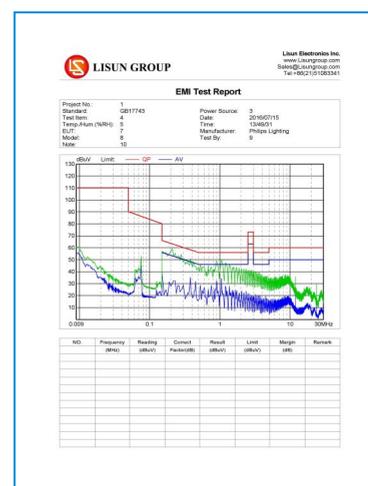
The EMI-9K series EMI Receiver Test System is designed to measure the conducted and radiated interference generated by electrical and electronic products during operation. Fully compliant with CISPR 16-1-1, CISPR 22, CISPR 32, CISPR 15, CISPR 14-1, EN 55015 and EN 55022, it is widely used for LED lighting, switching power supply, power tools, household appliances, IT equipment and other industries.

Specification

LISUN Model	EMC-9KC	EMC-9KB	EMC-9KA
Frequency range	9kHz~1000MHz	9kHz~300MHz	9kHz~30MHz
System configuration	EMI Receiver, LISN, CDNE, isolation transformer, coaxial cable		EMI Receiver, LISN, isolation transformer, coaxial cable
Frequency resolution	Min 1Hz		
Frequency stability	1×10^{-7}	1×10^{-6}	
Detection mode	PK (peak), QP (quasi-peak), AV (average)		
Noise (peak detection)	0dB μ V (9kHz~150kHz) ; 0dB μ V (150kHz~30MHz) ; ≤ 10 dB μ V (30MHz~1000MHz)		
Terminal voltage range	0dB μ V to 120dB μ V (Continuous Wave signal measurement)		
Pulse characteristics	Meets CISPR 16-1-1 and GB/T 6113.101		
Test Accuracy	± 1 dB	± 1.8 dB	
Test bandwidth	200Hz (9kHz~150kHz) ; 9kHz (150kHz~30MHz) ; 120kHz (30MHz~1000MHz)		
Sweep mode	Configurable sweep range, step size, level threshold, and measurement time		
Operation mode	Manual, automatic	Automatic	
Test mode mode	Fixed point, sweep		
Display mode	Large LCD touchscreen + PC Software	PC Software	



EMI Receiver Test System



EMI Receiver Test Report

MAGNETIC SHIELDING CABINET FOR EMI TESTING (SDR-2000B)

The SDR-2000B/SDR-800S Magnetic Shielding Cabinet is designed according to GB/T12190, GJB5792, IEEE std299 and EN50147. It can work with EMI-9KB/EMI-9KA for EMI testing to avoid the environmental electromagnetic interference.

LISUN Model	Cabinet In-Size	Cabinet Door	How to layout Testers & DUT
SDR-2000B	2*1.2*1.8m	0.9*1.7m	EMI Receiver & DUT in cabinet
SDR-800S	0.8*0.8*0.8m	0.6*0.6m	Only DUT in cabinet



NOTE: Other size of cabinets can be designed according to customers' request.

ELECTROSTATIC DISCHARGE SIMULATOR (ESD61000-2)



The ESD61000-2 series ESD generator is designed for ESD immunity testing of electrical and electronic equipment. Its main function is to meet the performance evaluation needs of various products under ESD interference: by accurately replicating ESD pulses, it provides standardized testing conditions to verify the operational stability of equipment when exposed to ESD interference. This device was built-in large English Android touch screen and is suitable for EMC compliance testing in a wide range of fields, including LED Lighting, consumer electronics, automotive electronics and medical devices.

Specification

ESD61000-2A	ESD61000-2	ESD61000-2A	ESD61000-2C
Output Voltage	0.1-20kV±5%	0.1-30kV±5%	
Output Polarity	Positive, Negative or Automatic Switching		
Discharge Capacitor/Resistor	150pF/330Ω (Replaceable)	150pF/330Ω, 150pF/2000Ω, 330pF/2000Ω, 330pF/330Ω(Replaceable)	
Current Rise Time	0.6-1ns		
Testing Functions	Single Test, Count Test, 20PPS, IEC level, Programmable Mode, Custom Mode, Contact Discharge, Air discharge, Interval Discharge		
Trigger Mode	Manual/Auto		
Discharge Numbers	1-9999		
Discharge Repetition	0.05s-99.99s		
Discharge Tip	Contact Discharge Tip, Air Discharge Tip	Contact Discharge Tip, Air Discharge Tip, 30mm Diameter Air Discharge Tip	
Working Power	AC220V (Option is 110V)±10%, 50/60Hz		
Standards	IEC/EN 61000-4-2 (GB/T 17626.2)		Automotive Electronics ISO 10605 (GB/T 19951) IEC/EN 61000-4-2 (GB/T 17626.2)

EFT IMMUNITY MEASUREMENT (EFT61000-4)

The EFT61000-4 series EFT/Burst Immunity Generator is used to simulate high frequency pulses from fast transient pulse: like those from power grid switching or relay contact bounce, that electronic and electrical equipment may face in real operation. This lets the generator assess how well the EUT tolerates such interference, ensuring stable performance in complex electromagnetic environments. Fully compliant with IEC/EN 61000-4-4, ANSI/IEEE C62.41.

Specification

LISUN Model	EFT61000-4	EFT61000-4A
Output voltage	0~5kV	0~6kV
Pulse frequency	1kHz~1,000kHz (Adjustable)	
Polar pulse	Positive, Negative, Automatic	
Internal resistance	50Ω ±20%, 1000Ω ±20%	
Pulse rising time	5ns ±30%	
Pulse width (at 50Ω)	50ns ±30% at 50Ω, 35ns ~ 150ns at 1000Ω	
Pulse length	0.01ms~20ms	
Pulse period	100ms~500ms	
Test time	1s~9999s	
CDN	16A, 3 phase/5 lines	



Touch screen with super big LCD and built-in Android

SURGE GENERATOR (SG61000-5)



The SG61000-5 series Lightning Surge Generator simulates high energy transient interference: from natural lightning induction and switching of large inductive/capacitive loads that electronic and electrical equipment (EUT) may face. It's used to evaluate how well these EUT's power lines and internal wiring resist such interference. Fully complies with IEC/EN 61000-4-5, GB/T 17626.5 and ANSI/IEEE Std C62.41.

**Built-in oscilloscope + attenuator probes:
View waveforms on English Android touch screen directly!**

Specification

LISUN Model	SG61000-5	SG61000-5H-SP	SG61000-5H	SG61000-5C
Output Voltage (Open)	1.2/50 μ s \pm 20%	1.2/50 μ s \pm 20%	1.2/50 μ s \pm 20%	10/700 μ s \pm 20%
Output Current (Short)	8/20 μ s \pm 20%	8/20 μ s \pm 20%	8/20 μ s \pm 20%	5/320 μ s \pm 20%
Output Impedance	2 Ω , 12 Ω	2 Ω , 12 Ω , 500 Ω	2 Ω , 12 Ω , 500 Ω	15 Ω and 40 Ω
Output Voltage Range	0~6KV \pm 10%	0~10KV \pm 10%	0~10KV \pm 10%	0~6KV \pm 5%
Output Current Range	0~3KA \pm 10%	0~5KA \pm 10%	0~5KA \pm 10%	0~150A \pm 5%
Surge Repetition	1~9999 times			
Polarity	Positive, negative or automatic switching			
Phase Shift	Asynchronous, Synchronization 0 $^{\circ}$ ~ 360 $^{\circ}$ or Specific Angle			
Coupling/Decoupling Network (CDN)	Built-in a 16A single phase CDN	Built-in a 16A single phase CDN	Built-in a 20A 3phases CDN	4-line symmetric CDN

1. The above Surge Generator can work with LISUN CDN61000-5P Series Power Cable CDN, and CDN61000-5C Series Communication Line CDN.
2. The 10KV, 15KV, 20KV and 30KV surge generator didn't be listed in the table, please visit LISUN website to view the details.

IMPULSE WITHSTAND VOLTAGE TESTER (SUG255LX, SUG255PX)

The SUG255 Series Impulse Voltage Generators output standard 1.2/50 μ s high voltage impulse signals: simulating transient high voltage shocks EUT may face in real operation. Built-in large English Android touch screen. Fully compliant with IEC 60255-5, IEC 60060-1 and IEC 62368.



Specification

LISUN Model	SUG255LX	SUG255MX	SUG255PX	SUG255PX-20KV	SUG255PX-30KV
Impedance of Generator	12 Ω , 500 Ω	38 Ω , 500 Ω	2 Ω , 500 Ω	2 Ω , 500 Ω	2 Ω , 500 Ω
Range of Output Voltage	0 ~ 12kV		0 ~ 20kV		0 ~ 30kV
Voltage Output Waveform	1.2/50 μ s				
Polarity of Output Voltage	Positive or Negative				
Operation Mode	Manual or Automatic				
Test Repetition	1 ~ 9999				
Interval Time	3 ~ 9999s				

VOLTAGE DIPS AND INTERRUPTIONS GENERATOR (CSS61000-11)

The CSS61000-11 is specifically for voltage anomaly immunity testing of electrical and electronic products. Fully compliant with IEC/EN 61000-4-11 and GB/T 17626.11, the function is to simulate common power grid abnormalities such as voltage dips, interruptions and voltage variations, it provides standardized testing conditions for evaluating product stability and reliability under power grid fluctuations.



LISUN Model	CSS61000-11	CSS61000-11T
Waveform	AC Sine Wave	
Range of Voltage Dip	0~110%	
Built-in IEC Level	100%、80%、70%、40%、0%	
Dip Phase Set	0°~360° (1° Step)	
Voltage Dip Duration	0.5~9999.5T	
Voltage Dip Internal	1~9999ms	
Voltage Dip Count	0~9999 times	
Operating Mode	Automatic dip	
Trigger Mode	Manual, automatic and 50ms	
EUT Power	Single phase AC220V/Max16A	Single phase AC380V/Max20A

IMMUNITY TEST SYSTEM FOR AUTOMOTIVE ELECTRONICS (EMS-ISO7637)

The EMS-ISO7637 Automotive Electronics Immunity Test System is according to ISO 7637-2:2021 and ISO 7637-3:2016. It simulates common transient conducted interference in automotive power supply systems and provides standardized test conditions for evaluating the operating stability of on-board electronic devices (such as ECUs, sensors and charging stations) in complex electromagnetic environments.



LISUN Model	Product and Description
LIS-7600	Multifunctional Immunity Test Host: connects all testers to PC.
LIS-7610	P1/2a Simulator: Generates Pulse 1 & Pulse 2a for immunity test.
LIS-7620	P2b/4 Simulator: Generates Pulse 2b & Pulse 4 for immunity test.
LIS-7630	P3 Simulator: Generates Pulse 3a & Pulse 3b for immunity test.
LIS-7650	P5a/5b Simulator: Generates Pulse 5a & Pulse 5b for immunity test.
LISN200	Artificial Network: Transient conducted emission EMI test, integrated with TES200N.
TES200N	Switch: Transient conducted emission EMI test, integrated with LISN200.
VFTC	Capacitive Coupling Clamp (Optional): ISO 7637-3 & automotive electronic interference test.
F-120-6A	Current Injection Probe (Optional): ISO 7637-3 ICC test (slow pulse).
FCC-BCICF-1	Bulk Current Injection Probe Fixtures (Optional): ISO 7637-3 ICC calibration, works with F-120-6A.
ICC-AC	Inductive Coupling Clamp Adaptor (Optional): ISO 7637-3 ICC test, works with F-120-6A.
DCC-100	Direct Capacitive Coupling (Optional): ISO 7637-3 common/differential mode tests.
CASE-19	19 Inch Cabinet (Optional): Installs all testers.

RF CONDUCTED IMMUNITY TEST SYSTEM (RFCI61000-6)

The RFCI61000-6 RF Conducted Immunity Test System is an automatic test system for the conduction sensitivity testing. It fully meets the IEC/EN 61000-4-6 and ISO 11452-4. RFCI61000-6 was built-in Power Amplifier, Signal Source, Power Meter and Attenuator, It can work with LISUN CDN Coupling Decoupled Network, AB-EM Electromagnetic Clamp and AB-100W Current Injection Clamp (Option).

Specification

- Power Amplifier (Built-in): 150kHz~230MHz
- Signal Source (Built-in): 9k~1GHz(-60~10dBm)
- Power Meter (Built-in): 9k~3GHz(-40~+30dBm)
- Attenuator: DC~1GHz, 100W/6dB(50Ω)



LISUN Model	RFCI61000-6-85W	RFCI61000-6-35W
Output Voltage	1~30Vrms (CDN method) 1~18Vrms (Electromagnetic Clamp) 1~10Vrms (Current Injection Clamp)	1~17Vrms (CDN method) 1~11Vrms (Electromagnetic Clamp)
Max Output Power	85W, +49dBm	35W, +44dBm
Harmonic	<15dBc	<15dBc

MAGNETIC FIELD GENERATOR (PFM61000-8A)

The PFM61000-8A Magnetic Field Generator is according to IEC/EN 61000-4-8, GB/T 17626.8, ISO 11452-8 and MIL-STD-461G. The function is to simulate 50Hz/60Hz power frequency magnetic field environments. It is widely used in product testing in the electronics, power, medical, automotive and other industries.

Specification

LISUN Model	PFM61000-8A	PFM61000-8B
Magnetic Field Intensity (Long Duration)	1~100A/m (adjustable)	1~400A/m (adjustable)
Magnetic Field Intensity (Short Duration)	100~1000A/m (adjustable)	400~1000A/m (adjustable)
Magnetic Field Duration	long-duration: 1s~999min short-duration: 1s~5s	
THD Output Current (THD-i)	<8%	
Magnetic Field Direction	Rotated at 360 degrees to support proximity and immersion method testing.	
Magnetic Field Frequency	50Hz or 60Hz	
Magnetic Field Antenna	1*1m single-turn	1*1m multi-turn
Control System	A 10-inch extra-large Android touchscreen with both Chinese and English	



RING WAVE GENERATOR (RWG61000-12)

The RWG61000-12 Ring Wave Generator uses to simulate the ring wave interference encountered by electronic and electrical products (EUT) in actual use. Widely used in LED lighting, medical, power, industrial control, new energy charging piles, small and medium-sized motors, low-voltage electrical appliances, energy meters and household appliances. Fully Compliant with IEC 61000-4-12/EN 61000-4-12 and ANSI/IEEE C62.41.



Touch screen with super big LCD and built-in Android

Specification

Product Model	RWG61000-12	RWG61000-12T	RWG61000-12A	RWG61000-12AT
Output Voltage	0~4KV		0~6KV	
Voltage/Current Wave	Open circuit voltage wave: frontier: 0.5μs±20%. Short circuit current wave: frontier: ≤1μs. Oscillation frequency: 100kHz±10%			
Polarity	Positive, Negative or Automatic switching			
Phase Shift	Asynchronous, Synchronization 0°~360° or Specific Angle			
Output Impedance	12Ω, 30Ω			
Coupling/Decoupling Network (CDN)	Built-in a 16A single phase	Built-in a 20A 3phases/5wires	Built-in a 16A single phase	Built-in a 20A 3phases/5wires
Working Power	AC220V(Option 110V)±10%, 50/60Hz			
Dimension (DxWxH)	44x45x35cm	44x45x20cm 44x45x35cm(CDN)	44x45x30cm 44x45x20cm(CDN)	44x45x30cm 44x45x35cm(CDN)
Gross Weight	About 28kg	About 46kg	About 45kg	About 48kg

THREE LOOP ANTENNA (VVLA-30M)

Specification

- The three loop antenna VVLA-30M is a standard measurement antenna according to CISPR15-2018. It can work with LISUN GROUP EMI-9KB, EMI-9KC, EMI-9KA EMI Receiver System for EUT magnetic field radiation test measurement between X, Y and Z planes
- Frequency range: 9KHz ~30MHz
- It can switch between X, Y and Z planes
- The transfer impedance of the current probe is 0 dbΩ; Impedance: 50Ω/BNC
- Ring diameter: 2m; No need to move EUT or loop during measurement process
- The antenna has been calibrated in the factory by placing calibration dipole antenna in the center of the antenna; users can also use it for recalibration



GLOW-WIRE TEST APPARATUS (ZRS-3HS, ZRS-3H)

The ZRS-3H glow wire tester is designed for evaluating the flame resistance of products and plastic components such as electrical and electronic equipment, home appliances and lighting equipment. By simulating a “glow wire high-temperature contact” scenario, it tests the ignition properties, ignition temperature, flammability and flammability index of materials under specific heat loads. Fully compliant with IEC 60695-2-10, IEC 60695-2-11, IEC 60695-2-12, IEC 60695-2-13 and UL 746A Clause 35.

Specification

LISUN Model	ZRS-3H	ZRS-3HS
Product Name	With Cabinet	Without Cabinet
Heating Temperature	RT~1100°C (adjustable), Accuracy ±3°C, Resolution ±1°C	
Glow Time	0.1s~999.9s (adjustable), Accuracy ±0.1s	
Ignition Time	0.1s~999.9s	
Flame Extinction Time	0.1s~999.9s	
Glow Wire Pressure on Test Sample	0.95N±0.1N, pressure limit depth 7mm	
Glow Wire Spec	80%Ni and 20% Cr with φ4mm diameter	
Thermocouple Spec	Ni-Cr/Ni-Si Alloy (K scale) with φ1mm diameter	
Operation Display	Large LCD touch screen, clear indicator lights and remote control	



Economy Version



Standard Version

NEEDLE FLAME TEST (ZY-3S, ZY-3)

The ZY-3 Needle Flame Tester is a fire safety testing instrument designed for electrical and electronics, home appliances, lighting and information technology equipment. It simulates “micro-flames” generated by internal equipment faults such as short circuits and component overheating, allowing evaluation of the flame resistance and fire safety of products and insulation materials under these conditions. Fully compliant with IEC 60695-11-5 and IEC 60695-2-2.

LISUN Model	ZY-3	ZY-3S
Product Name	With Cabinet	Without Cabinet
Burner Angle	Adjustable	
Burner Time	0-999.9s (±0.1s)	
Burner Time Recorder	0-999.9s (±0.1s)	
Flame Height	12mm±1mm	
Burner Gas	≥95% butane	
Temperature Test Range	0~1000°C	
Temperature Rise Time	100°C rise to 700°C need 23.5s ±1s	
Thermocouple Spec	Φ0.5mm K-type	
Operation Display	Large LCD touch screen, clear indicator lights and remote control	



Economy Version



Standard Version

HORIZONTAL VERTICAL FLAME TESTER (HVR-LSS, HVR-LS)

The HVR-LS Horizontal Vertical Flame Tester is a flammability testing instrument designed for electrical equipment and plastic parts. It performs horizontal and vertical flammability testing on materials, focusing on assessing their flammability levels. Using a standard burner and a specific gas source (methane or propane), the instrument ignites horizontal or vertical test samples at a specified flame height and angle. Fully compliant with IEC 60695-11-3, IEC 60695-11-4, IEC 60695-11-10, IEC 60695-11-20 and UL94

LISUN Model	HVR-LS	HVR-LSS
Product Name	With cabinet	Without cabinet
Test Function	Supports horizontal/vertical HB&V class test and 5V class (optional)	
Time Parameters	Burning/After-flame/After-burning time: 0~999.9s (adjustable), Accuracy 0.1s	
Combustion Angle	Standard configuration: 0°/20°/45°	
Flame Height	20~175mm (adjustable)	
Gas Parameters	Methane/Propane; Flow rate: 0~1L/min (adjustable); Pressure: 0~0.25MPa	
Standard Burner Spec	Inner tube diameter of the burner head: 9.5±0.3mm, length: 100±10mm	
Back Pressure Control	Range: 200mm water column	
Operation Display	Large LCD touch screen, clear indicator lights and remote control	



Economy Version



Standard Version

TRACKING TEST CHAMBER (TTC-1)

The TTC-1 Tracking Tester is designed to evaluate the tracking resistance of insulating materials in humid or contaminated environments, simulates the scenario in which surface contamination causes leakage current in insulating components of electrical equipment, leading to tracking corrosion or even breakdown. The presence of a sustained flame or insulation breakdown determines the material's Tracking Resistance Index (CTI). It widely used in Materials R&D, New Energy, Electronics and Electrical Industry. Fully compliant with IEC 60112 and GB/T 4207

LISUN Model	TTC-1	TTC-1S
Product Name	With Canbiet	Without Canbiet
Electrode Spec	Rectangular platinum (purity>99%), pressure 1.0N±0.05N	
Applied Voltage Range	100V~600V AC, frequency 48~60Hz (adjustable);	
Contaminated Liquid Spec	0.1% ammonium chloride solution, with dedicated storage system.	
Drip Device Parameters	Distance: 30~40mm (adjustable), volume: 44~55 drops/cm ³ , interval: 30s ± 5s (adjustable).	
Leakage Current Monitor	0~100mA (accuracy: ±2%), supports 60mA over-threshold alarm.	
Sample Size Requirement	Recommended dimensions: 100*100*(2-10)mm	
Test Time Setting	0~9999s (adjustable)	
Operation Display	Large LCD touch screen, clear indicator lights and remote control	



Equipped with large LCD touch screen

Goniophotometer for Automotive and Signal Lamps (LSG-1950, LSG-1950S)

The RSY-LT Hot Wire Ignition Tester is designed to evaluate the ignition characteristics of solid insulating materials and combustible materials under the action of hot wires. It is used to simulate the ignition risk of surrounding materials when an electric heating element (such as a resistance wire or motor winding) overheats. By precisely controlling the hot wire temperature, pressure application time, and contact pressure, it measures the material's hot wire ignition temperature (HWIT) and hot wire flammability index (HWFI). It is widely used in the electrical and electronics, household appliances, new energy and insulation materials industries.

Specifications	Contents
Test Function	Hot Wire Ignition Temperature (HWIT) and Hot Wire Flammability Index (HWFI) tests
Hot Wire Parameters	Base Wire: Nickel-chromium alloy, $\varphi 0.5 \pm 0.01$ mm; Wire Coil: Ni80/Cr20, $\varphi 0.5$ mm
Hot Wire Preconditioning	Time 8s to 12s, Power 0.26 W/mm $\pm 4\%$
Pressure Control	Wire-to-sample contact pressure 1 ± 0.1 N, Coil Winding Tension 5.4 ± 0.05 N
Timing Parameters	Ignition duration: 0~999.9s; test time: 120s
EUT Holder Parameters	Distance from EUT holder surface to connector plate: 70 mm, height: 60 mm, suitable for hot wire coil mounting
Combustion Chamber Spec	Volume ≥ 0.5 m ³
Material	High-temperature spray-coated steel construction, heat-resistant and corrosion-resistant, suitable for long-term high-temperature testing environments
Operation Display	Large LCD touch screen, clear indicator lights and remote control



Equipped with large LCD touch screen

TEMPERATURE METER FOR LAMP CAPS & LUMINAIRES TEST (TMP-L)

The TMP-L Lamp Cap Temperature Rise Test System (equipped with a wind shield) is designed for temperature rise testing of lamp burners and lamp caps. The wind shield can effectively prevent air convection interference during the test while isolating the impact of light source thermal radiation on the test sample. This provides a stable environmental condition for testing the lamp cap's operating temperature, ambient temperature and temperature rise. Fully compliant with IEC 60598:2024 Appendix D.

LISUN Model	TMP-LS	TMP-LM	TMP-LB
Inner Dimensions (L*W*H)	900*900*900mm	1200*1000*1800mm	1800*1800*1800mm
Outer Dimensions (L*W*H)	1200*1200*1150mm	1500*1300*1950mm	2100*2100*1950mm
Interlayer Spacing	150mm		
Mesh Hole Diameter	1~2mm		
Small Hole Area	40% \pm 5%		
Lamp Cap Models	Nickel-Ring Lamp Caps: E14, E27, E40 and B22d		



The TMP-L must be used in conjunction with the LISUN TMP-8 Multiplex Temperature Tester.

AUTOMATIC SAFETY TEST SYSTEM (LS9955)

The LS9955/LS9956 Automatic Safety Test System fully meets GB4706.1, IEC/EN60335-1, UL60335, GB7000, IEC60598, GB4943, IEC60950 and GB9706.1. It is used for luminaries, home application and motor tools safety test in production line or Lab R&D.



Specification

- Remote control device and can control by software (Optional)
- Display all setting parameters and testing results in the same big LCD screen
- It can set the PASS/FAIL limit value. It has light/noisy to warn
- Test mode programmable; Quick discharge, 50 memory groups, 8 steps per group
- Support 50Hz and 60Hz frequency; Electric safety wall detecting feature
- The LS9955 can test Withstand Voltage (AC/DC), Insulation Resistance (IR), Leakage Current (LLC) and Ground Resistance (GR)
- The LS9956 can test Withstand Voltage (AC/DC), Insulation Resistance (IR), Leakage Current (LLC), Ground Resistance (GR) and Power

Withstand Voltage Test (AC/DC)			Insulation Resistance Test (IR)		
Voltage Range	Accuracy	Current Range	IR Range	Accuracy	Voltage Range
100~4000V	±3%	0.02~12.00mA	0.50~500MΩ	±3%	DC100~1000V
Leakage Current Test(LLC)			Grounding Resistance Test (GR)		
LLC Range	Accuracy	Voltage Range	GR Range	Accuracy	Output Current
0.01~20mA	±0.3%	AC10.0~300.0V	0w600mΩ	±3%	AC1.00~30.00A
LISUN Power Test					
Voltage	Current	Power	PF	Accuracy	Test Time
10.0~300.0V	0.010~20.00A	1.0~6000.0W	0.2~1.0	Class 0.5	0~999.9s

The LS9923 is a high-performance testing device specially for AC & DC withstanding voltage and insulation resistance test. It allows setting the output voltage. The limit value, testing time and other parameters can be set on the screen. It has a variety of automatic test functions. The testing is quick and high accurate which is not only applied in the production line but also in the lab developing research.



Withstanding Voltage	Output Voltage Range	AC/DC Max 5.00KV
	Output Voltage Accuracy	±(2%+3bits)
	Breakdown Current Range	AC/DC: 0.10~12mA
	Test time	0~999.9s
Insulation Resistance	Output frequency	50Hz/60Hz
	Output Voltage Range	DC Max 1.00KV
	Output Voltage Accuracy	±(2%+3bits)
	Insulation Resistance Range	1.0~2000MΩ
	Insulation Resistance Accuracy	±(5% +3bits) <100 MΩ and ±(10% +5bits) >100 MΩ
Test time	0~999.9s	

DIGITAL OSCILLOSCOPE (OSP1102)

The OSP Series Digital Oscilloscope was designed and produced by high accuracy electronic components and modules. The test accuracy is world high class. It is used for all kinds of electronic products testing.



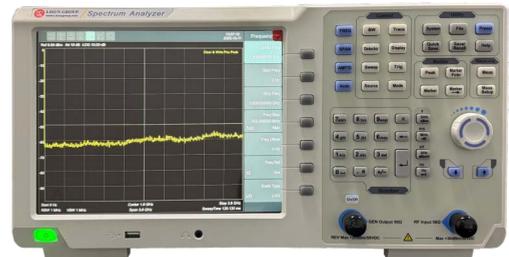
Specification

LISUN Model	Channel	Width	Sample Rate	Vertical Resolution	Screen Size
OSP1102	Double Channels	100M	1G	8bits	7inch
OSP3202E	Double Channels	200M	1G	8bits	8inch
OSP3302	Double Channels	300M	2.5G	8bits	8inch
OSP3202A	Double Channels	200M	2.5G	14bits	8inch
OSP3104E	Four Channels	100M	1G	8bits	8inch
OSP3104AE	Four Channels	100M	1G	14bits	8inch
OSP3204E	Four Channels	200M	1G	8bits	8inch
OSP3204AE	Four Channels	200M	1G	14bits	8inch

SPECTRUM ANALYZER (SPA-3P6G)

A spectrum analyzer measures the magnitude of an input signal versus frequency within the full frequency range of the instrument. The primary use is to measure the power of the spectrum of known and unknown signals.

High Precision



Specification

- Frequency range: 9kHz~1.5GHz(SPA-1P5G), 9kHz~3.6GHz(SPA-3P6G), 9kHz~7.5GHz(SPA-7P5G); Frequency rate: 1Hz
- Frequency span: 0Hz, 100Hz to maximum frequency of device; Frequency span accuracy: $\pm \text{span}/(\text{swept points}-1)$
- Internal reference frequency: 10.000000MHz; Internal reference frequency accuracy: $\pm[(\text{days from last calibrate} \times \text{freq aging rate}) + \text{temperature stability} + \text{initial accuracy}]$;
- Temperature stability: <2.5ppm(15°C to 35°C); Aging rate: <1ppm/year
- Marker frequency resolution: $\text{span}/(\text{swept points}-1)$
- Frequency counter resolution: 1 Hz, 10 Hz, 100 Hz, 1 kHz
- Resolution bandwidth (-3 dB): 10Hz to 500kHz(1~10 sequence), 1MHz, 3MHz; Accuracy: <5%

HIGH & LOW TEMPERATURE AND HUMIDITY CHAMBER (GDJS-015A, GDJW-010A)

The High & Low Temperature and Humidity Chamber is designed according to the IEC60068-2-1. It fully meets the test requirement of CFL/LED lamps, electricity products, electronic components, materials etc.

Specification

- The chamber is made of SUS304 steel. The insulation material is made of polyurethane hard foam and ultra-fine fiber glass. Using double-deck aging silicone rubber door sealing strip to insulate the high temperature steam
- The controller is English and can communicate with PC.
- The temperature accuracy is 0.1°C and humidity is 0.1%R.H
- The temperature sensor is PT100 Ohms/MV resistor
- The humidity sensor is Finland brand electronic hygrometer.
- The heating system is full separately system which is made of Nickel chromium alloy electric heating type heater
- The cold system is applied by fully enclosed fan cooled single-stage and cascade refrigeration mode. The compressor is from France TECUMSEH brand which allow you get after sales support from local country.
- The circulation system uses temperature resistant and low noise air-conditioned motor and multi-blade centrifugal wind wheel
- The safety protection system includes electric leakage, short circuit, over temperature, motor overheating, compressor pressure, overload, over-current protection



High & Low Temperature and Humidity Chamber with Programmable Function (GDJS Series)

LISUN Model	GDJS-225*	GDJS-500*	GDJS-010*	GDJS-013*	GDJS-225*
Internal Dimension(cm)	50*60*75	70*80*90	100*100*100	100*100*130	50*60*75
External Dimension(cm)	105*102*200	132*132*217	167*152*231	217*152*231	105*102*200
Work Power	7.0kW	13.5kW	15.0kW	16.5kW	7.0kW
Temperature Range	A: -20°C~150°C	B: -40°C~150°C	C: -60°C~150°C	D: -70°C~150°C	
Humidity Range	30%-98% R.H				
Fluctuation/Evenness	±0.5°C/±2°C				
Humidity Deviation	-2%~-3% R.H				
Temperature Rise Speed	1.0~3.0°C/min				
Temperature Fall Speed	0.7~1.0°C/min				

High and Low Temperature Chamber with Programmable Function (GDJW Series)

LISUN Model	GDJW-225*	GDJW-500*	GDJW-010*	GDJW-013*	GDJW-015*
Workroom Dimensions(cm)	50x60x75	70x80x90	100x100x100	100x100x130	100x100x150
Temperature Range	A: -20°C~150°C	B: -40°C~150°C	C: -60°C~150°C	D: -70°C~150°C	
Fluctuation/Evenness	±0.5°C/±2°C				
Temperature Rise Speed	1.0°C~3.0°C/min				
Temperature Fall Speed	0.7°C~1.0°C/min				

The * in GDJS-225* means the temperature range A: -20°C~150°C, B: -40°C~150°C, C: -60°C~150°C

WATERPROOF TEST AND WATERPROOF TEST CHAMBER (JL-X/JL-XC)

JL-X (Open Type) and JL-XC (Chamber Type) waterproof test system is according to IEC60529, IEC60598, IEC60335, IEC 60034-5 and GB7000.1. The JL-X (Open Type) needs a room and can test bigger EUT products such as LED tube or outdoor big luminaires, household products and outdoor device. The JL-XC (Chamber Type) doesn't need installation but test small EUT products such as electronic components, mobile & communication devices, medical equipments



JL-12



JL-34



JL-56



JL-8



JL-34CP-R600



JL-56CP-1000L

The whole JL-X/JL-XC waterproof test system includes:

- **Drip Box (JL-12):** The drip box is for IPX1 and IPX2 drip test. The drip box size is 800*800*45mm (L*W*H). The diameter of drip hole is 0.4mm. The distant between each drip hole is 20mm, max sample 150kg.
- **Drip Box Chamber (JL-12CP):** It is for IPX1 and IPX2 test. JL-12CP-600M drip box is 600*600mm and JL-12CP-1200M is 1200*1200mm, max sample 50kg.
- **Swing Pipe Water Spray Test Equipment (JL-34):** It is for IPX3 and IPX4 test, the semi-diameter of swing pipe is 1 meter. The internal diameter of the swing pipe is 15mm. IPX3 is 120 degree and IPX4 is 180 degree. The automatic sample rotating table's diameter is 600mm and speed is 1~5rpm which is controlled by PLC
- **Swing Pipe Water Spray Test Chamber (JL-34CP):** It is for IPX3 and IPX4 test. JL-34CP-R200 semi-diameter of swing pipe is 200mm, JL-34CP-R400 is 400mm and JL-34CP-R600 is 600mm.
- **Waterproof Jet Test Device (JL-56):** Water tank size is 780x580x1100mm. Diameter of nozzle is 6.3mm for IPX5 and 12.5mm for IPX6. The water speed is 12.5±0.625L/min for IPX5 and 100±5L/min for IPX6.
- **Waterproof Jet Test Chamber (JL-56CP):** It is for IPX5 and IPX6 test. The JL-56CP-500L chamber inside size is 800*800*800mm. JL-56CP-1000L chamber internal size is 1000*1000*1000mm and JL-56CP-1400L chamber internal size is 1180*1180*1000mm.
- **Immersion tank Waterproof test Device (JL-7):** It is for IPX7 test. The water tank size is 1000 x1000x1200mm. Max sample is 120kg.
- **Immersion tank Waterproof test Device (JL-8):** It is for IPX8 test. It can simulate 0~50m water depth. The water immersion tank diameter is 600mm and height is 1200mm. The compressive stress is 10 atmospheric pressures or design according to customer request.

P.S. LISUN can combine JL-12CP, JL-34CP and JL-56CP in one chamber (Product item is JL-123456CP)

HIGH TEMPERATURE PRESSURE JET WATERPROOF TEST CHAMBER (JL-9K1L)

JL-9K1L High Temperature & Pressure Jet Waterproof Test Chamber is designed according to IEC60529, GB4208, DIN40050-9 and ISO20653 for protection level IPX9K test. It is a waterproof test machine designed for vehicle spare parts, electrical and electronic industry to simulate natural environment or human factors.

The both interior and exterior material of this chamber is high quality stainless steel, big glass observation window and it has elegant appearance. The turntable and spray lance motor adopt imported motor, rotation speed can be adjusted according to requirement.



Specification

- Working Chamber: 1000*1000*1000mm
- Test time: 30s (Pre-settable and adjustable)
- Angle of Water Ring: 0°, 30°, 60°, 90° (The testing angle can be adjusted)
- Testing table: Load bearing 15kg/Φ400~500mm
- Based on horizontal line, distribute nozzle hole at anticlockwise: $\pm 0^\circ \pm 30^\circ \pm 60^\circ \pm 90^\circ$ with valve on nozzle
- Water Temperature in Tank: $80 \pm 5^\circ$ (Adjustable, enhanced temperature and water overflow protection)
- Spraying distance: 100mm~200mm and can be adjustable nozzle distance by manual
- Spraying pressure: 8,000~10,000kPa (81.5~101.9kg/cm²)
- Electrical high temperature flow meter: Flow is 14~16 L/min
- Rotation speed of testing table: 5~17r/min (Motor drives turbine slow rotating, control speed and adjust to appropriate speed by frequency converter)

UL WATER SPRAY TEST DEVICE (JL-UL)

UL Water Spray Test Device is designed according to UL60507-ENGL standard figure 38.1, figure 38.2, ANSI Z21.10.3-2004, Figure 10/Figure 11 clause of ANSI Z21.58 standard and CSA4.3-2004 standard. It also meets UL1598, UL153, UL154B, UL1703, UL8750, UL1741, UL514B, UL1278, UL1571 and other standards.

The main function of the equipment is to test the physical and other related properties of electronic and electrical products, lamps, cabinets, electrical components and other products under simulated rainy weather conditions. After testing, the performance of the product can be judged by verification, so as to facilitate the design, improvement, verification and factory inspection of the product.



Specification

- Suitable for UL rain test and 45 degree sprinkler test
- The device consists of two parts: UL Water Spray Test Device (three UL nozzles on the top) and UL sprinkler test device (one UL nozzle on the bottom)
- The frame of the device is made of moulded aluminium material, which has stable structure and is easy to clean
- The nozzle rack is movable and can be lifted freely by hand-operated stainless steel wheel device
- The device adopts imported nozzles originally installed in UL laboratory and fully meets UL standards
- The support base adopts universal brake casters, which are convenient to move and fix

DUSTPROOF TESTING MACHINE (SC-015)

The Dustproof Test Chamber SC-015 is designed according to IEC60529, GB2423.37-89 (Test L: dust test methods), GB 4208-93 protective casing grade (IP code), GB/T 4942.2-93(protective casing grade of low-voltage apparatus), GB 7000.1-1996, GB 7001-1986(protective casing grade of lamps), DIN40050 and IP5K0. The SC-015 is applied to physical and other related performance tests for electronic and electrical products, lamps, electrical cabinets, electrical components, automobiles, motorcycles and their parts and other products under simulated dust climate conditions.

- Temperature Range: environmental temperature +5~50°C
- Standard wire diameter of metal screen: 50um;
- Standard spacing between wires: 75um
- Test dust: dry talc powder
- Total test time: 0~999H (adjustable);
Vibration time: 0~999H (adjustable);
- Vacuum:0~10Kpa (adjustable); Pumping speed:0~4800L/H (adjustable)
- The vibration device and heating device can ensure that the dust in the chamber is kept dry at all times, and the dust concentration in the air during the test always meets the standard requirements



Model Number	Working Room Size (mm)	Remark
SC-500	800*800*800	Single door structure
SC-010	1000*1000*1000	
SC-015	1000*1500*1000	Cabinet can be put in a horizontal direct or vertical direct
SC-020	1000*2000*1000	

IK LEVEL TESTER (IK01-06, IK07-10, IK07-10VT)

Most of the luminaires manufacturers are requested to do IK level test (Impact Protection). LISUN can supply the IK test instrument from IK01-10.

IK ratings are defined as IKXX, where "XX" is a number from 00 to 11 indicating the degrees of protection provided by enclosures (including luminaires) against external mechanical impacts. The different IK ratings relate to the ability of an enclosure to resist impact energy levels measured in joules (J). IEC 62262 specifies how the enclosure must be mounted for testing, the atmospheric conditions required, the quantity and distribution of the test impacts and the impact hammer to be used for each level of IK rating. The IK application on lighting luminaires testing is according to IEC60598 (GB7000) and IEC60068-2-75 (GB2423.55).

Degrees of protection against external mechanical impacts:

Ik01	Ik02	Ik03	Ik04	Ik05	Ik06	Ik07	Ik08	Ik09	Ik10	Ik11(Option)
0.14J	0.2J	0.35J	0.5J	0.7J	1J	2J	5J	10J	20J	50J

**IK07-10
Impact Pendulum**



**IK07-10VT
Vertical Impact Tester**



IK01-06 Spring Impact Hammer

SALT SPRAY TEST MACHINE (YWX/Q-010)

The Salt Spray Test Machine/Chamber is applicable to the salt spray corrosive test for the protection level of components, parts, electronic and electrical parts and metal materials and industrial products.

Specification

- The Salt Spray Test Machine is made of transparent materials so that the operator can see the tested sample in it and the spraying situation.
- A waterproof structure is adopted between the chamber cover and chamber body, thus there is no salt spray overflow.
- Can do continuous test and cycle test.
- It meets the following standards: IEC60068-2-11(GB/T2423.17), GB/T10125, ISO9227, ASTM-B117, GB/T2423-18, IEC 60068-2-52, ASTM-B368, MIL-STD-202,EIA-364-26, ASTM-B117, GJB150, DIN50021-75, ISO3768, 3769, 3770; CNS 3627, 3885, 4159, 7669 etc.



LISUN Model	Work Room Size (mm)	Exterior Size (mm)	Voltage	Power(kW)
YWX/Q-150	600*450*400	1100*750*930	1Phase/220V	2
YWX/Q-250	900*600*500	1500*900*1150	1Phase/220V	2.5
YWX/Q-750	1100*750*500	1700*1050*1150	1Phase/220V	3.5
YWX/Q-010	1200*800*500	1800*1100*1200	1Phase/220V	3.5
YWX/Q-016	1600*900*600	2300*1300*1300	3Phase/380V	5
YWX/Q-020	2000*1000*600	2700*1400*1500	3Phase/380V	7.5

ELECTRODYNAMIC VIBRATION GENERATOR SYSTEM (LVD-100KG-6D)

Electrodynamic Vibration Generator System is complied with IEC 60068, IEC68-2-6, JIG189-97, GB/T13309-91, IEC60598 and GB2423 etc.

- LVD-100KG: Combined the Vertical and Longitudinal total 4 directions in one test table
- LVD-100KG-6D: Combined the Vertical, Level and Longitudinal total 6 directions in one test table

Specification

- Sine Wave, Frequency Modulation, Sweep Frequency, Programmable, Frequency Doubling, Logarithm, High Acceleration speed, Amplitude Modulation, Time Control, Full-function Computer Control, simple and easy to set the acceleration and amplitude.
- Vibration table size: 500*500mm (Other size can be designed)
- Vibration: 0~5mm (Adjustable range P-P). Vibration waveform: sine wave (half wave and full wave). Acceleration speed: 0~20g (Adjustable)
- Maximum test load Capacity: 100kg
- Accuracy: Frequency can be displayed to 0.01 Hz. Precision 0.1 Hz
- Sweep Frequency function (1~600Hz): (Upper frequency, Lower frequency, Time range) It can set real standard arbitrarily to sweep frequency back and forth



UV LAMP AGING CHAMBER (UV-263LS)

The UV-263LS uses UV lamps to simulate sunlight, condensing moisture to simulate rain and dew, placing the material (EUT) in a cycle of alternating light and moisture, accelerating aging at a specific temperature. Fully compliant with ISO 4892-3, ISO 11507, AATCC TM186, ASTM D3794, ASTM D4329, ASTM G151 and DIN 53384

Model Number	UV-263LV	UV-263LS	UV-263LT
Chamber Structure	Trapezoidal Inner	Square Inner	Desktop Inner
Inner Size (W*D*H)	450*1140*500mm	550*1140*450mm	500*400*400mm
Temperature Range	RT+10°C~70°C		
Humidity Range	≥75%RH		
Control System	LCD programmable controller simulates UV, high temperature, high humidity, rain spray, condensation and darkness.		
UV Lamp Spec	ATLAS UVA Lamps 40W/pcs, 8pcs and life>1000h/pc		China Brand UVA Lamps 20W/pcs, 3 pcs
Irradiance Intensity	0.35~1.2W/m ² Adjustable (Integrated Irradiance Meter)		
Blackboard Temperature	50°C~70°C		
Test Sample Size	48pcs 70*150mm	Irregular Samples	18pcs 70*150mm



XENON LAMP AGING TEST CHAMBER (XD-150LS)

Xenon lamp aging test Chamber adopts xenon arc lamp which can imitate the full spectrum of sunlight to reappear destructive spectral wave that exists in different environment. It is designed according to standard ISO 4892-1, ISO 4892-2, ISO 4892-3, GB/T16585-1996, GB14522-93, GB/T16422.3-97, ASTM D2565 and etc.

Model Number	XD-150LS	XD-010LS	XD-010LF
Inner Size (D*W*H)	500*600*500mm	1000*1000*1000mm	
Sample Test Rack	Flat Panel-Type	Flat Panel-Type	Drum-Type
Temperature range	RT~80°C		
Black Panel Temperature	45~85°C		
Humidity Range	20~95%RH		
Irradiance of xenon light	0.30~0.57W/m ² (at 340nm) adjustable; 0.66~1.22W/m ² (at 420nm) adjustable; 35~70W/m ² (300~400nm) adjustable; 300~1200W/m ² (300~800nm) adjustable.		
Xenon Lamp Spectrum	280~800nm		
Irradiance Probe	Irradiance measurement range: 0.1~5,000W/m ² ;		
Water Spray Pressure	0.12~0.15Mpa (Adjustable)		
Display and Control	Touch Screen for Temperature、Humidity、Irradiance、Water Spray		



AUTOMATIC DOUBLE DROP TEST MACHINE (DT-60KG)

This series drop test bench is used to test the main simulation packages in the transportation, loading and unloading process under drop impact influence, identification package impact strength and packaging design.

Specification

- The drop height is 400~1500mm and motor rotation for height
- The max weight test is 60kg and max size is 2000*800*300mm
- Drop angle tolerance is <1° and drop height tolerance is ±10mm
- Drop method: face, edge and corner
- Power supply: AC380V/50HZ and 4KVA
- The machine height display by the digital measuring instrument, also combined with calibration function
- Drop method: Electromagnetic drive drop control, click on the drop button can be achieved the drop test



OZONE TEST CHAMBER (OTC-150A)

The OTC-150A Ozone Test Chamber simulates how ozone oxidizes materials in natural environments. It uses a silent discharge tube to generate ozone at controllable concentrations, and pairs with a precise temperature-humidity control system to replicate material aging in ozone conditions. It also has static/dynamic stretching functions to simulate materials' stress-bearing states, while monitoring ozone concentration, temperature and humidity in real time to keep test conditions stable. Widely used in rubber, textiles and cables fields, it's applied to verify properties like automotive rubber seals' ozone cracking resistance, outdoor textiles' ozone color fastness and cable sheaths' ozone aging resistance. Fully compliant with ISO 1431-1, ASTM D1149, ASTM D3041, ASTM D1171, AATCC 109, IEC 60811-403 and DIN 53509-2.

LISUN Model	OTC-150A	OTC-500A
Inner Size (D*W*H)	500*500*600mm	700*800*900mm
Ozone Concentration	10~1,000pphm (Adjustable)	
Temperature	0°C~60°C (±1°C)	
Humidity	20%~90% RH (based on 20°C~40°C)	
Sample Rotation Speed	8~25mm/s	
Sample Test Mode	Static, Dynamic and Intermittent Dynamic Stretching	



SULFUR DIOXIDE TEST CHAMBER (SQ-010)

The SQ-010 Sulfur Dioxide Test Chamber is a testing device specially developed for simulating industrial corrosive environments. Its function is to accurately control the concentration of sulfur dioxide (SO₂) gas and temperature to simulate sulfur dioxide corrosion environments in industrial atmospheres. This accelerates the evaluation of sulfidation corrosion resistance of metal materials, coatings, platings and complete products, enabling rapid identification of material protection defects or product structural design vulnerabilities.

The SQ-010 Sulfur Dioxide Test Chamber features a corrosion-resistant PP sheets with integral molding, the Sulfur Dioxide (SO₂) Concentration: 0~25 pphm (Adjustable). It utilizes U-shaped titanium alloy high-speed heating electric tubes to keep temperature range: RT+5°C~+50°C (±1°C), fully compliant with ISO 6988, ASTM B845, ASTM G87, DIN 50018, IEC 60068-2-42 and IEC 60068-2-43.

LISUN Model	Work Room Size (mm)	Working Power
SQ-150	450*600*400	Single Phase/3kVA
SQ-250	600*900*500	Single Phase/4kVA
SQ-750	750*1100*500	Single Phase/5kVA
SQ-010	850*1300*600	3Phases/6kVA
SQ-016	850*1600*600	3Phases/8kVA
SQ-020	900*2000*600	3Phases/9kVA



DIGITAL CC AND CV DC POWER SUPPLY (DC3005)

Specification

The Adjustable Digital Constant Current and Constant Voltage DC Power Supply is with high stability and high precision which can display 0.0001A and 0.0001V accuracy. The voltage and current are adjustable, and it can output constant current or constant voltage. It is suitable to supply DC Power for the standard lamp and the high power LEDs.



Model	DC3005	Dc3010	Dc6005	Dc6010	Dc12005
Max Output Voltage/Current	30V/5A	30V/10A	60V/5A	60V/10A	120V/5A
Voltage Resolution	0.0001V(0.0000V~10.000V); 0.001V(10.000V~100.00V); 0.01V(>100.00V)				
Voltage Accuracy	±(0.02% rdg+0.01%rng+1digital)				
Current Resolution	0.0001A				
Current Accuracy	±(0.02%rdg+0.01%rng+1digital)<5A;±(0.03%rdg+0.02%rng + 1digital)≥5A				

AC POWER SOURCE (LSP-500VARC)

The LSP-500VARC High Precision Pure Sine Wave AC Power Supply has the characteristics of good output waveforms, low harmonic, high accuracy, integrated source and meter. With Output short -circuit, over-current, over-voltage, over-power, overheating alarm protection functions.



Specification

- Output frequency range: 45.00~65.00Hz; Frequency stability: ≤0.05%/30min
- Total Harmonic Distortion: ≤0.3 % (No load or full load with resistive load)
- Voltage Stability: ≤0.1%/30min
- Equivalent internal resistance: ≤0.1 (Zero internal resistance design)
- Power Supply Efficiency: >40%; Load Effect: ≤0.1%
- Communication port: RS232/RS485
- Test Parameters: Voltage, Current, Power, PF, Frequency

P.S. LSP-500VARC and LSP-1KVARC are the updated versions with big LCD screen. The LSP-500VARC-Pst and LSP-1KVARC-Pst are according to IEC TR 61547-1:2020 IEC61000-3-3, IEC 61000-4-15 and IEEE 1453 Pst programmable function, and can work with LISUN LSRF-3 Lamp Start, Run-up Time and Flicker Test System to test Pst LM(I) parameter.

Model	Output Power	Max Current
LSP-500VARC LSP-500VARC-Pst	500W	500W
LSP-1KVARC LSP-1KVARC-Pst	1000W	1000W

OZONE TEST CHAMBER (OTC-150A)

The LSP-5KVAS PWM Type AC Power Supply has the characteristics of ultra-low output voltage distortion and configurable output current protection value. It is specially developed for home appliances, motors, compressors and other industries. Used to replace traditional voltage regulators and frequency converters to provide efficient, low-cost, and accurate testing solutions.

Specification

- Circuit Form: (IGBT) SPWM pulse wave width adjustment method
- Output Frequency: 45~70HZ
- Frequency Stability: $\leq \pm 0.1\%$
- Transient Restoration Time: $\leq 20\text{ms}$
- Source voltage/Load Efficiency: $\leq 1\%$
- Waveform Distortion: $\leq 1\%$
- Efficiency: $\geq 86\%$
- Self-protection function: over-voltage, over-current, over-load, short-circuit, over-temperature and automatic alarm display



Model	Output Power	Max Current
LSP-3KVAS	3000W	0~150V: 25A, 150~300V: 12.5A
LSP-5KVAS	5000W	0~150V: 42A, 150~300V: 21A

PS. More than 5KVA AC Power Source can be designed as customer's request

DIGITAL POWER METER (LS2008R, LS2012, LS2050B, LS2050C)

- Measurement: Voltage, Current, Power and Power Factor
- Voltage range: 10~600V; Current range: 0.005~20A
- Accuracy: $\pm (0.4\% \text{reading} + 0.1\% \text{range} + 1\text{digit})$. LS2050B/C: $\pm (0.1\% \text{reading} + 0.1\% \text{range} + 1\text{digit})$
- Communicate with PC by RS232/RS485. The LS2050-IEC with additional software (need to add extra cost on LS2050C) fully meets EN/IEC6100-3-2:2019

Model	Measure	Remark
LS2008R	AC Parameters: U, I, P, PF	AC model
LS2012	AC+DC Parameters: U, I, P, PF	Voltage Range: 1~600V, Current Range: 0.005~20A (small current 0.005~2A optional)
LS2050B	AC+DC Parameters: U, I, P, PF and DF Total 0-50 Harmonics in IEC/CSA	Test Accuracy is Class 0.5 with LCD touch screen, it has software can be run in Win7, Win8, Win10, Win11
LS2050C	AC+DC Parameters: U, I, P, PF and DF Total 0-50 Harmonics in IEC/CSA	Has all functions of LS2050B, test accuracy is Class 0.2 Fully meet LM-79-19, frequency Range: 0.5Hz-100kHz



LS2008R AC Model



LS2012 AC&DC Model



LS2050 High Accuracy Model

APPLICATION



Photometric, Colorimetric & Safety Performance Test Solution for LED

- Goniophotometer System: LSG-6000, LSG-1890B or LSG-1800ACCD
- Spectroradiometer & Integrating Sphere Test System: LPCE-2 or LPCE-3
- LED Life Maintains Test System according to LM-84: LEDLM-84PL
- Photobiological Radiation Safety Test System: EN62471-C or EN62471-P
- Lamp Start, Run-up time & Flicker Test System: LSRF-3 and LSP-500VARC-Pst
- LED Power Driver Test System: LS2090, M9822 and LSP-500VARC
- IK Level Tester | Spring Hammer Impact Tester: IK07-10, IK01-06
- Electricity Safety Tester: LS9955, ZRS-3H, ZY-3



Single LEDs or LED Chips

Environmental Chamber Test Solution for LED Luminaires

- Waterproof Test for IPX5 and IPX6: JL-56
- Dustproof Testing Machine for IP5X and IP6X: SC-015
- High & Low Temperature and Humidity Chamber: GDJS-015A
- Salt Spray Test Machine: YWX/Q-010
- UV Lamp Aging Test Chamber: UV-263LS
- Xenon Lamp Aging Test Chamber: XD-80LS
- Ozone Test Chamber: OTC-150A



LED Luminaires

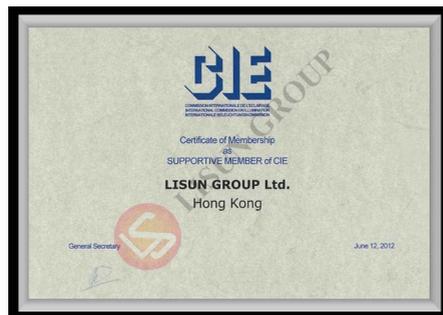
EMC and EMI Test Solution for LED Drivers and LED Luminaires

- EMI Test System: EMI-9KB or EMI-9KA
- Electrostatic Discharge Simulator: ESD61000-2C
- EFT Immunity Measurement: EFT61000-4
- Surge Generator: SG61000-5
- Voltage Dips and Interruptions Generator: CSS61000-11
- Ring Wave Generator: RWG61000-12



LED Power Driver

Certificate & Awards



CIE Supportive Membership



Calibrate Certificate



CE Certificate



LPCE 3 Patent



ISO9001:2015