

# LTS-1500 Series Sphere Spectroradiometer System

## (1) Introduction

LTS-1500 System meets the following standards: CIE NO.127, CIENO.15, SJ / T 2355, GB / T 7922-2003, GB / T 8417-1987 and others, uses the international advanced full-spectrum method to measure the spectral power distribution of samples of various LED, includes x,y chromaticity coordinates, CCT, CRI(color rendering index), color tolerance, variation, purity, dominant wavelength, luminous flux, radiant power, luminous efficacy and other parameters. Corresponding voltage, current, power, power factor and other parameters can be also measured by applied corresponding meters.

Test and data processing software has both language of English and T/S Chinese, also can calculate and print all measurement parameters. Data and analysis results can be PDF and other formats reports.

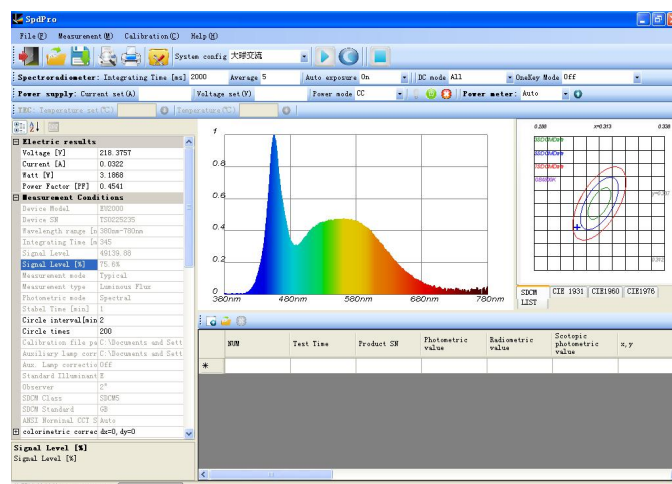
## Advantages

- (1) Integrated design, to provide professional, standardized and efficient integration services;
- (2) Using the most accurate spectroscopic measurements: fast CCD spectrometer with high precision, measurement in milliseconds;
- (3) Totally solution: equipped with 0.3m and 2m sphere, covering all kinds of sources and lamps test; equipped with auxiliary-lamp to text self-absorption value;
- (4) Automatism Design : scaling to support one-step calibration, and one-step measure;
- (5) Advanced technology, the sphere is made by the spinning , no butt joints, to ensure higher accurate;
- (6) Optional : High reliable industrial machine

## The Whole System:



## The Software Interface:



## (2) The Composition:

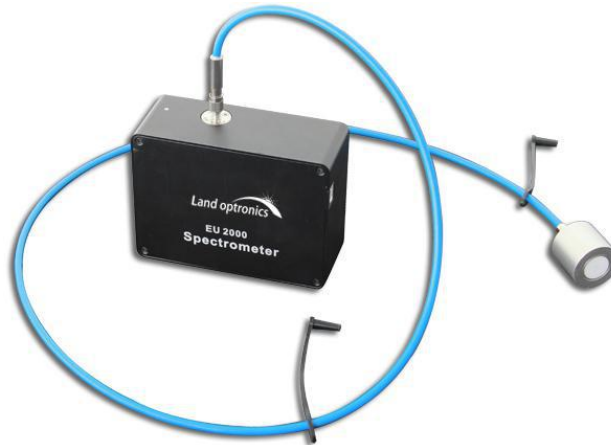
### LTS-1500 SERIES SYSTEM

Model	Integrating Sphere	Side opening
LTS-1500-150	1.5m	defaultΦ200mm (can customize)
LTS-1500-175	1.75m	defaultΦ200mm (can customize)
<b>LTS-1500-200</b>	<b>2.0m</b>	<b>defaultΦ200mm (can customize)</b>

Item No.	Product Name	Product No.	Description	Features
1	Spectroradiometer	EU2000	VIS, spectroradiometry (380nm-780nm)	CCD exposure time: 3ms ~ 2000ms; Fast
2	Optical Fiber	Y1.2m	For Optical Signal Transmission	Can used with various integrating spheres
3	Calibration Lamp	24V/50W	Reliable calibrations for spectral irradiance and spectral intensity systems(for 2M)	OSRAM
4	Calibration Lamp	12V/10W	Reliable calibrations for spectral irradiance and spectral intensity systems(for 0.3M)	OSRAM
5	Integrating Sphere <b>(optional)</b>	MSPB-2000	For measuring LED, bar-shaped light, and panel light,2M Carbon Steel	Lamp holder: E27、E40、T5、T8
6	Integrating Sphere	MSPB-0300	For measuring LED and lamp beads,0.3M Carbon Steel	Lamp holder: G4、MR16
7	Digital Power Meter	PM9805	For measuring electric parameters	Applied to measure luminaries and Single LEDs
8	AC Power Source	500W	Providing AC Power Source	Applied to be used at laboratory
9	DC Power Supply	DS3003DS	Providing DC Power Source (30V/3A)	Applied to be used at laboratory and product lines
10	Computer	15 Inch	Industrial Personal Computer, with wireless keyboard and mouse	<b>Optional</b>
11	Software	V2.1	English and T/S Chinese	free

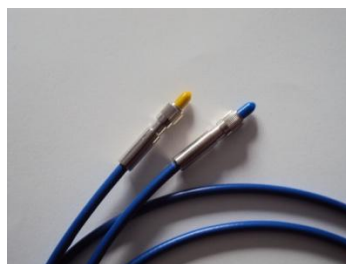
### (3) Specifications:

#### 1. EU2000 Spectroradiometer 1 pcs



- (1) spectral range: 380nm ~ 780nm, 1nm interval measurement and analysis;
- (2) Wavelength accuracy: 0.3nm;
- (3) Measurement speed: 3ms ~ 2000ms;
- (4) The CCT range: 1000K ~ 100000K, resolution better than 0.1K;
- (5) Flux range: 0.01lm-106 lm (integrating sphere according to size);
- (6) Flux Accuracy: 2%;
- (7) Color accuracy:  $\leq 10K$  (standard light);
- (8) color tolerance Accuracy:  $\pm 0.5SDCM$  (with respect to stability better than  $\pm 0.15SDCM$  NIM standard light source and the amount of direct transfer value);
- (9) chromaticity coordinates accuracy: 0.0005 (standard light);
- (10) software parameters: support Traditional Chinese and English language interface, support for Windows: XP, 7 (32-bit / 64-bit) operating systems;
- (11) Communication Interface: USB2.0.

#### 2. Optical Fiber 1.2m 1pcs



Optical Fiber is used to connect the spectroradiometer and the integrating sphere for Optical Signal Transmission

**3. Calibration Lamp (24V/50W) & (12V/10W) 2pcs**

Provides reliable calibrations for spectral irradiance and spectral intensity systems.

NIST Traceable Calibration.

National Institute of Metrology P.R.China Traceable Calibration.



**4. 2M Integrating Sphere(MSPB-2000) 1pcs**

Advanced technology, the sphere is made by the spinning, no butt joints, to ensure higher accurate;The internal surface is coated with BaSO<sub>4</sub>.

1. Inner Diameter is 2m, made of carbon steel,with  $2\pi$  port  $\Phi$ 200mm
2. Reflectance Value at VIS range is 93%
3. Applied to measure LED, bar-shaped light, panel light, etc
4. Two hemispheres are independent, easy to install and disassemble.
5. The standard lamp holder:E40、 E27、 T5、 T8



**5. 0.3M Integrating Sphere(MSPB-0300) 1pcs**

Advanced technology, the sphere is made by the spinning, no butt joints, to ensure higher accurate;The internal surface is coated with BaSO<sub>4</sub>.

1. Inner Diameter is 0.3m
2. Reflectance Value at VIS range is 93%
3. Applied to measure LED, SMD, etc
4. The standard lamp holder:E27、 G4



**6. PM9805 Digital Power Meter (AC&DC Model)****1pcs**

Wiring form	single-phase
Measure item	Voltage V、current A、Power W、 Power factor PF、 Frequency Hz
Measure form	Trms
Voltage range	75V/150V/300V/600V AC (range change automatic) Max Voltage: 700V AC Min Voltage 5V AC (don't work if Voltage<5V)
Current range	0.5A/2A/8A/20A AC (range change automatic) Max Current: 26A AC Min Current 10mA AC (don't work if Current<10mA)
Power range	0.1W-9999W
Power factor range	0.001-1.000 Power(W)÷[Voltage(V)×Current(A)]=Power factor (PF)
Frequency	45-400Hz
Basic accuracy	±0.4% reading+0.1 % range+1 digit
Measure speed	5 times/S
Input impedance	≥1MΩ(All Voltage)
Communication interface	RS232(9 pin COM)
Power supply	100 ~ 240 V AC, 50/60 Hz

**7. 500W AC Power Source****1pcs**

## 1、 Input source:

Single-phase, 220V±22V, 50Hz/60Hz

## 2、 Output power: 500W

## 3、 Output voltage:

(1) Range: 0V~150V; 0V~300V, Single-phase

(2) Voltage stability: ≤0.2%

(3) Source effect: ≤0.1%

(4) Load effect: ≤0.2%

(5) Harmonic distortion: ≤2% Resistive full load

(6) Transient reflection speed: &lt;2ms



4、 Output current:

Max output current: 4.6A (0V~150V) /2.3A (0V~300V)

5、 Output frequency:

(1) Range: 45Hz~65Hz (Manual adjust) /50Hz/60Hz

(2) Frequency stability:  $\leq 0.03\%$

**8. DX3003DS DC Power Supply 1pcs**



Parameter		DS3003DS
Input Voltage		110V AC $\pm 10\%$ 50Hz $\pm 2\%$ or 220V AC $\pm 10\%$ 50Hz $\pm 2\%$
Input Power		160VA
Output rating	Voltage	0~30V
	Current	0~3A
Source effect $\pm\%$ of Output+offset	Voltage	CV $\leq 0.01\%+3\text{mV}$
	Current	CC $\leq 0.05\%+5\text{mA}$
Load effect $\pm\%$ of Output+offset	Voltage	CV $\leq 0.01\%+3\text{mV}$
	Current	CC $\leq 0.05\%+5\text{mA}$
Setting accuracy@25°C $\pm\%$ of Output+offset	Voltage	$\leq 0.1\%+10\text{mV}$
	Current	$\leq 0.1\%+10\text{mA}$
Measurement resolution	Voltage	10mV, 1mV
	Current	10mA, 1mA
Measurement accuracy@25°C $\pm\%$ of Output+offset	Voltage	$\leq 0.05\%+5\text{mV}$
	Current	$\leq 0.05\%+5\text{mA}$
Measurement speed	Voltage	160ms/ones
	Current	160ms/ones
Ripple and Noise 20~20MHz	Voltage	$\leq 1\text{mVrms}/3\text{mV}$ (P-P)
	Current	$\leq 0.05\%+5\text{mA}$
Temperature index@0~40°C $\pm\%$ of Output+offset	Voltage	$\leq 0.05\%+10\text{mV}$
	Current	$\leq 0.1\%+10\text{mA}$

## **9. 15 Inch Industrial Personal Computer**

**1pcs (Optional)**

- 1.Screen size: 15inch
- 2.Type of touch screen: resistance type
- 3.Screen proportion: 4:3
- 4.Touch frequency: >35million
- 5.Wireless keyboard and mouse included
- 6.Windows XP OS



## **Contact Us**



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