

illumiaPro3-UV 2600-015 UV LED 性能测试系统

快速、准确地测试UV
LED在各种热力条件下
的性能



UV LED性能取决于结温。中心的温度变化会影响UV LED 输出和预期寿命。 Labsphere（蓝菲光学）illumiaPro3-UV 2600-015可助用户快速、准确地测试UV-LED在各种热力条件下的性能。

可靠的测试结果

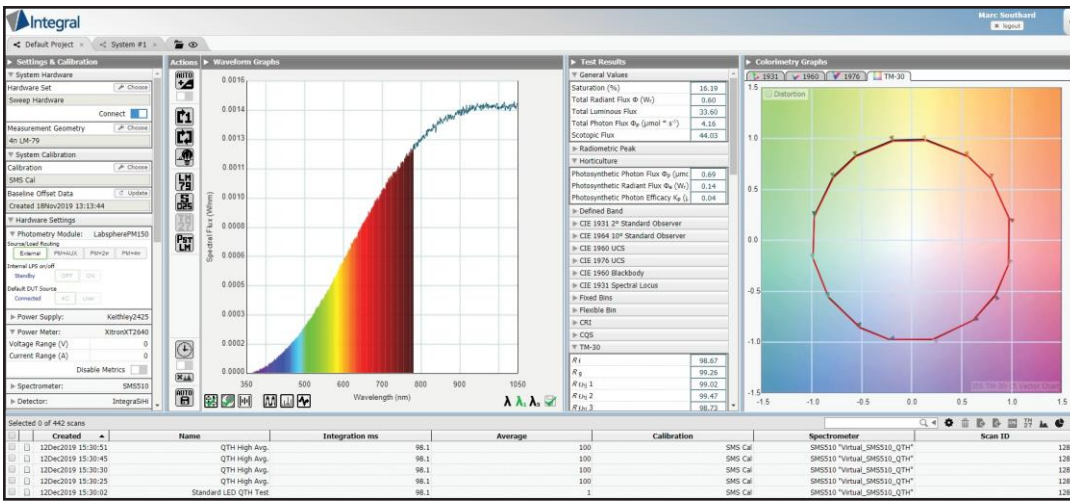
- NMI 可跟踪校准 Xe 标准灯
- 高动态范围，适用于各种光照水平
- Spectralon®积分球，EPV Spectralon 可选
- 具有高效抑制杂散光的 CDS-2600-UV 光谱仪

测量：

- 总辐射通量
- 总光子通量
- 电功率
- 波长特性
- 峰值波长
- FWHM
- L, I, V, T Sweeps
- 连续和脉冲模式控制和测试

应用：

- 杀菌UV 灯（GUV）
- UVC消毒和净化灯
- 紫外线固化灯
- 医学光疗
- 分析仪器
- 园艺照明



Integral® 软件

illumiaPro3-UV 2600-015附带Integral软件，该软件提供了一个功能强大但易于使用的菜单驱动操作环境。它允许用户在指定范围内控制LED温度和工作电流。该控制使软件能够在宽温度范围内测量和表征待测器件（DUT）。系统软件使测量光谱特性以及控制电流和温度的程序自动化。该软件同时收集电、光和热数据，这些数据在屏幕上以图形形式显示和查看，或者可以导出以供进一步分析。

illumiaPro3-UV的LED LIVT

通过采用采用illumiaPro3-UV LIVT扫描功能，独立控制并测试LED正向和反向电压、LED驱动电流、温度以及流明，全面表征LED的特性。

测量功能:

- ILV @ constant T: step & control I, stabilize T, measure L & V
- VLI @ constant T: step & control V, stabilize T, measure L & I
- TLV @ constant I: step & control T, stabilize T, measure L & V
- TLI @ constant V: step & control T, stabilize T, measure L & I
- ILV/T: perform ILV @ constant T, step T and repeat at each T
- VLI/T: perform VLI @ constant T, step T and repeat at each T

Key: L = Lumens, V = Voltage, I = Current, T = Temperature

案例: LIVT 标准设置

The 'Sweep Settings' dialog box is shown in 'Standard' mode. The 'Pulse' tab is selected. Under 'DUT Settings', 'Power Supply Mode' is set to 'Current (A)', 'Sweep Channel' is 'Channel 1', and 'Output Current (A)' has 'Min' and 'Max' fields. 'Increment Current (A)' is 0.000, 'Limiting Voltage (V)' is 35.000, and 'Limiting Voltage (-V)' is 6.000. 'Soak Time (ms)' is 0. Under 'TEC Settings', 'Target Temperature (C)' is 25, 'Increment Temperature' is 5, 'Tolerance' is 0.25, and 'Settling Time (sec)' is 10. Under 'Spectrometer Settings', 'Integration Time (ms)' is 98.5 and 'Delay Time (ms)' is 0. The 'Autosave' checkbox is unchecked. 'Start' and 'Cancel' buttons are at the bottom.

案例: LIVT 脉冲设置

The 'Sweep Settings' dialog box is shown in 'Pulse' mode. Under 'DUT Settings', 'Power Supply Mode' is 'Current (A)', 'Sweep Channel' is 'Channel 1', and 'Pulse Level Current (A)' has 'Min' and 'Max' fields. 'Increment Current (A)' is 0.000, 'Bias Level Current (A)' is 0.000, 'Pulse Width (ms)' is 0.0, 'Duty Cycle (0 to 1)' is 0.000, 'Bias Compliance Voltage (V)' is 0.000, 'Pulse Compliance Voltage (V)' is 0.000, and 'Pulse Soak (ms)' is 0. Under 'TEC Settings', 'Target Temperature (C)' is 25, 'Increment Temperature' is 5, 'Tolerance' is 0.25, and 'Settling Time (sec)' is 10. Under 'Spectrometer Settings', 'Integration Time (ms)' is 98.5 and 'Delay Time (ms)' is 0. The 'Autosave' checkbox is unchecked. 'Start' and 'Cancel' buttons are at the bottom.

LIVT 扫描测量函数

Name	Constant	Vary	Measure
ILV	T	I	L, V
VLI	T	V	L, I
TLV	I	T	L, V
TLI	V	T	L, I
ILV/T	T for each I Setting	I, T	L, V
VLI/T	T for each V setting	V, T	L, I

测量参数

电学：电流、电压、反向电压、电功率

光学：光谱和总辐射通量，光子通量，
峰值波长，中心波长，质心波长，FWHM

热学：外壳温度控制与电学和光学参数

订购信息

型号: illumiaPro3-UV 2600-015

料号: AA-42000-015

illumiaPro3-UV 2600-015 包括:

- Integral 软件
- 15 cm 光测量积分球
- Xe 光谱通量标准灯
- CDS-2600-UV 光谱仪
- Keithley 2461 SourceMeter®
- Arroyo 5305 TECSorce
- 工具包

典型的 illumiaPro3-UV 2600-015 性能规格

测量范围:	200 - 400 nm
LED 光通量:	1 mW - 2000 mW
5W 热负荷工作温度:	20 - 85 C
积分球尺寸:	15cm (6 inch)
积分球内部材料:	Spectralon
光谱仪:	CDS-2600-UV
分辨率:	2.2 nm
波长准确性:	<±0.4 nm
数据点间隔:	1.0 nm
积分时间:	8 ms - 900 seconds
动态范围:	> 200,000:1*
软件校正杂散光:	< 1.0%**
电源表:	Keithley 2461 SourceMeter®
TEC 制冷:	Arroyo TEC Chiller 207
TEC 电源:	Arroyo 5305 TECSorce
软件:	Integral
参考灯:	Hamamatsu Xe Source

* 测量为饱和信号除以平均10次扫描的暗信号的标准偏差。

** 杂散光是通过500 nm截止滤光片在210-370 nm之间报告的平均透射率

Keithley 2461 规格和测量条件

Voltage Specifications

Range	Max. DC Current	Source			Measure ³		
		Resolution	Accuracy (23° ± 5°C) 1 Year ±(% setting + volts)	Noise (RMS) (<10 Hz)	Resolution ⁴	Accuracy (23° ± 5°C) 1 Year ±(% rdg. + volts)	Digitizer Accuracy ⁵ (23° ± 5°C) 1 Year ±(% rdg. + volts)
200.0000 mV	7.35 A	5 µV	0.015% + 200 µV	1 µV	100 nV	0.012% + 200 µV	0.05% + 1.2 mV
2.000000 V	7.35 A	50 µV	0.015% + 300 µV	2 µV	1 µV	0.012% + 300 µV	0.05% + 1.2 mV
7.000000 V	7.35 A	250 µV	0.015% + 2.4 mV	20 µV	1 µV	0.015% + 1 mV	0.05% + 8 mV
10.00000 V	5.25 A	250 µV	0.015% + 2.4 mV	20 µV	10 µV	0.015% + 1 mV	0.05% + 8 mV
20.00000 V	4.20 A	500 µV	0.015% + 2.4 mV	20 µV	10 µV	0.015% + 1 mV	0.05% + 8 mV
100.0000 V	1.05 A	2.5 mV	0.015% + 15 mV	100 µV	100 µV	0.015% + 5 mV	0.05% + 40 mV

Current Specifications

Range	Max. DC Voltage	Source			Measure ³		
		Resolution	Accuracy (23° ± 5°C) 1 Year ±(% setting + amps)	Noise (RMS) (<10 Hz)	Resolution ⁴	Accuracy (23° ± 5°C) 1 Year ±(% rdg. + volts)	Digitizer Accuracy ⁵ (23° ± 5°C) 1 Year ±(% rdg. + amps)
1.000000 µA	105 V	50 pA	0.025% + 1 nA	40 pA	1 pA	0.025% + 700 pA	0.05% + 4 nA
10.00000 µA	105 V	500 pA	0.025% + 1.5 nA	40 pA	10 pA	0.025% + 1 nA	0.05% + 8 nA
100.0000 µA	105 V	5 nA	0.020% + 15 nA	100 pA	100 pA	0.020% + 10 nA	0.05% + 80 nA
1.000000 mA	105 V	50 nA	0.020% + 150 nA	1 nA	1 nA	0.020% + 100 nA	0.05% + 800 nA
10.00000 mA	105 V	500 nA	0.020% + 1.5 µA	10 nA	10 nA	0.020% + 1 µA	0.05% + 8 µA
100.0000 mA	105 V	5 µA	0.020% + 15 µA	100 nA	100 nA	0.020% + 10 µA	0.05% + 80 µA
1.000000 A	105 V	50 µA	0.050% + 750 µA	5 µA	1 µA	0.050% + 500 µA	0.05% + 1 mA
4.000000 A	21 V	250 µA	0.100% + 3 mA	25 µA	1 µA	0.100% + 2.5 mA	0.10% + 5 mA
5.000000 A	10.5 V	250 µA	0.100% + 3 mA	25 µA	1 µA	0.100% + 2.5 mA	0.10% + 5 mA
7.000000 A	7.35 V	500 µA	0.150% + 6 mA	125 µA	1 µA	0.150% + 5 mA	0.15% + 10 mA
10.000000 A ⁷	7.35 V	500 µA	0.150% + 6 mA	125 µA	10 µA	0.150% + 5 mA	0.15% + 10 mA

请参照Keithley 最新规格数据表:

<https://www.tek.com/en/datasheet/2461-graphical-source-measure-unit>