



# Product Specification

## 产品规格书

**Product Name:** LED Grow Light  
产品名称: LED 植物灯

**Product P / N:** OH-GL-012-0600  
产品编号:

<b>Product size</b> 产品尺寸	36*36*598mm
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<b>Customer Approval:</b> 客户确认:	
<b>Date:</b> 日期:	

<b>Prepared by</b> 制作人	<b>Checked by</b> 审核人	<b>Approved by</b> 审批人
<b>Name:</b> 姓名: 王能松	<b>Name:</b> 姓名:	<b>Name:</b> 姓名:
<b>Date:</b> 日期:	<b>Date:</b> 日期:	<b>Date:</b> 日期:
<b>Dept:</b> 部门: 工程部	<b>Dept:</b> 部门	<b>Dept:</b> 部门

<b>Updated version number:</b> 更新的版本号:	01
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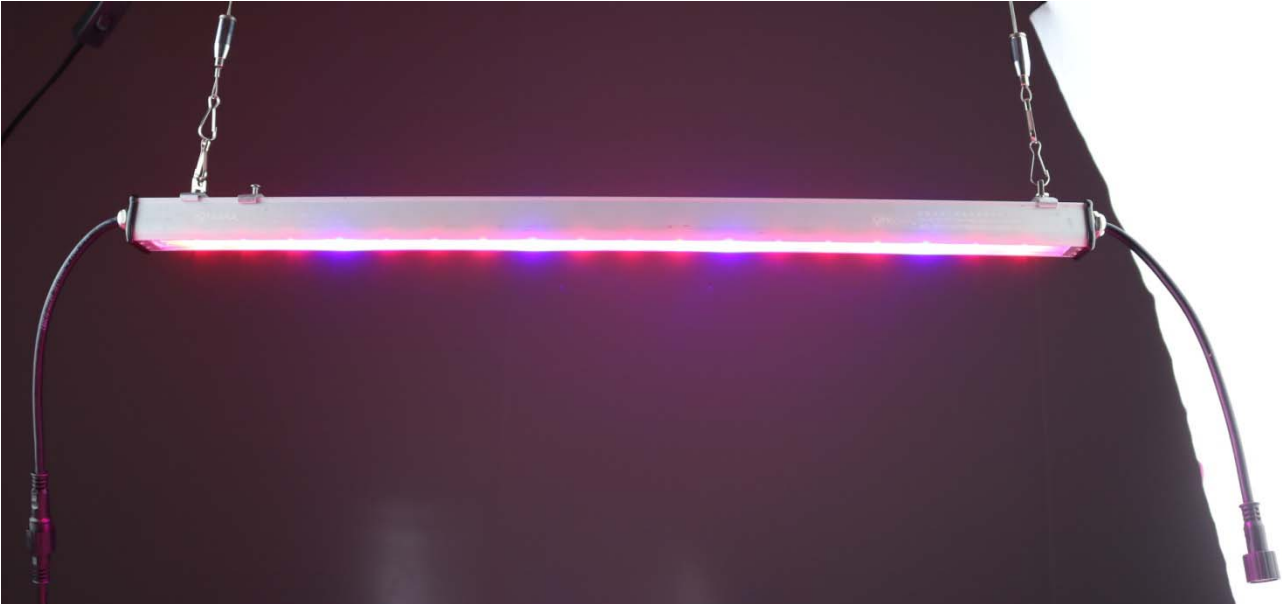
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### 1.0 Product

#### 产品

#### 1.1 Product Photo

##### 产品图片



#### 1.2 Product Definition

##### 产品定义

- LED grow light belongs to new generation grow and assistant grow light for plants. The big difference compared with traditional grow light, whether it is HPS or fluorescent or other kinds, that is LED grow light can provide plants special requirement for different light wavelength and light intensity in their different grow phases to maximize the satisfaction for plant light necessity

LED 植物灯为新一代的植物生长助长灯，其与传统植物生长灯的最大差别在于能根据不同植物在不同的生长过程对光波的特殊要求，量身定做，提供植物需要的光波及光强，从而实现最大程度满足植物生长对光的要求

### 2.0 Product Features

#### 产品应用特色

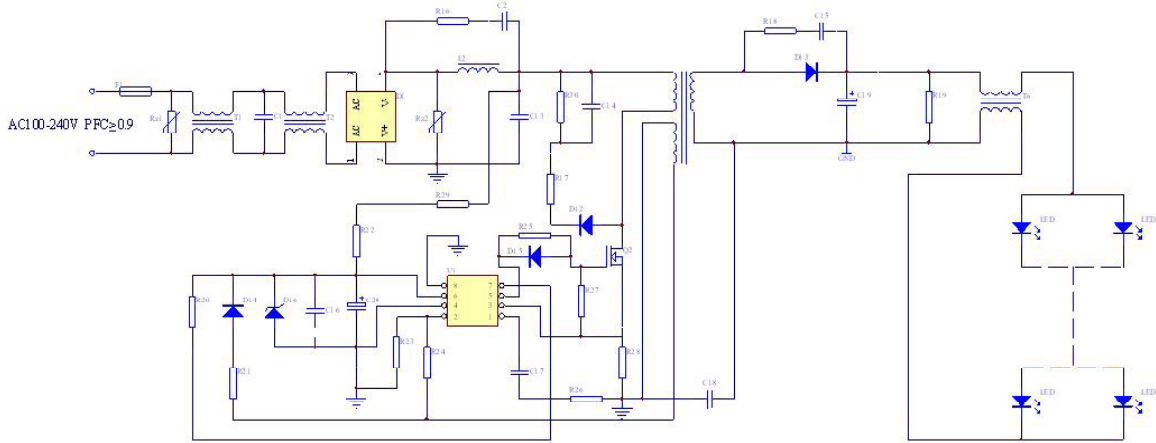
- 1w high power LEDs  
用 1w 大功率灯珠
- The lamp can be parallel connection and centralized turn on/off  
灯具可以并联联结，以方便统一开关
- Water-proof design, suitable for using in some special growing area  
防水设计，满足在某些特殊场合的植物生长用灯
- Different specifications Can be configured according to different Countries  
可根据不同国家地区来配置不同规格插头。（如：美标、欧标、英标、国标等）
- Widely used in greenhouse indoor garden, hydroponic planting Vertical farm. It is suitable for any growth stage of plants and is effective for water solution Culture or soil Cultivation  
广泛应用于大棚、植物工厂、温室养殖、室内花园、水溶养殖、管道式栽培、农场、盆栽、喷载、组培等。适合于植物的任何生长阶段，并且对水溶液培养或土栽培有效。

### 3.0 Product Properties

产品技术参数

#### 3.1 Product working circuit schematic diagram

产品工作原理图



Attention: This diagram is for reference only, We have the right for the designing changes at any time in case we deem it necessary and will not be notified by our company!

#### 3.2 Product basic working technical data

产品基本工作参数

型号			名称		
A 型植物生长灯			OH-GL-012-0600-25		
Power 功率	Peal consumption 实际功率	Input voltage 输入电压	Working Frequency 工作频率	Working Conditions 工作环境	LEDs 灯珠
18W	110V: 16.34W 220V: 16.22W	AC100-277V	50/60Hz	-20~40℃ 45%~95% RH	1W 3535 LED
Flux 光通量	PF 功率因素	Type of LENs 灯罩	Color Ratio 光波比	Φe 幅射通量	Life Span 寿命
506.37-511.30lm	≥0.95	硅胶	R:B:W=1:1:1	4.0189W 4.0447W	30000H
PAR M/m <sup>2</sup> 光合有效辐射		PPFD μmol/m <sup>2</sup> .s 光量子通量密度		Main wavelength 主要波长	
110V : 3985.2 mW 220V: 3959.3 mW		110V :18.147 μmol/m <sup>2</sup> .s 220V: 18.022 μmol/m <sup>2</sup> .s		R(660);B(440);W(2800K)	

#### 3.3 Product photoelectrical testing data

光量子通量密度实测数据

Length 距离	PPFD Value PPFD 值 (μmol/m <sup>2</sup> .s)	
0.1m	230	μmol/m <sup>2</sup> .s
0.2m	100	μmol/m <sup>2</sup> .s
0.3m	57	μmol/m <sup>2</sup> .s
0.5m	25	μmol/m <sup>2</sup> .s
0.6m	19	μmol/m <sup>2</sup> .s
1.0m	7	μmol/m <sup>2</sup> .s
1.5m	3	μmol/m <sup>2</sup> .s
2.0m	2	μmol/m <sup>2</sup> .s

### 3.4 Product photoelectrical testing data

#### 产品光电参数测试数据

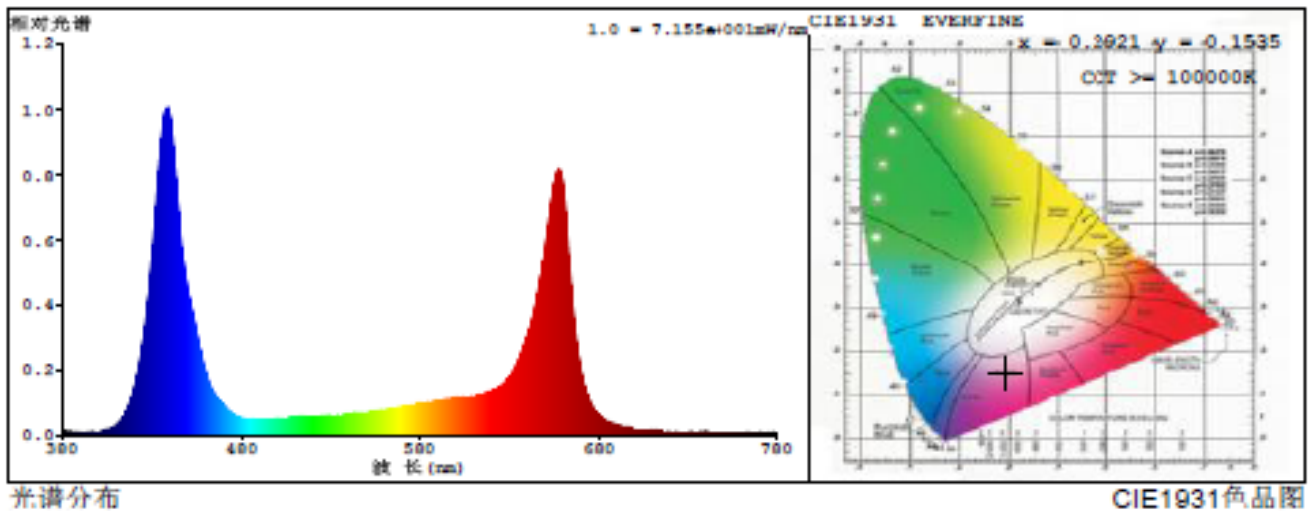
- Photoelectrical testing data by voltage setting 220V  
输入电压为 220V 时产品的光电测试参数

样品名称	:	测试日期	:	2017-08-30 15:03:26
样品型号	:	样品状态	:	
样品编号	:	测试仪器	:	HaasSuite(EVERFINE)
制造厂商	:	测试人员	:	FANGLI
		审核人员	:	damin

#### 测试条件

环境温度	:	25.3Deg	环境湿度	:	65.0%
测试范围	:	380nm-780nm	峰值IP	:	54109 (83%)
测量模式	:	精确测试	积分时间	:	306 ms
			灵敏度	:	低

#### 光谱参数



#### CIE颜色参数

色品坐标:  $x = 0.2921$   $y = 0.1535$  /  $u' = 0.2744$   $v' = 0.3245$  ( $duv = -1.06e-01$ )  
 相关色温:  $CCT \geq 100000K$  主波长:  $\lambda_d = 563.1nm$  色纯度: Purity=66.7%  
 峰值波长:  $\lambda_p = 438nm$  半峰带宽: FWHM=18.4nm 色比: R=34.5% G=57.3% B=8.3%

显色指数:  $R_a = 10.8$

R1=0 R2=31 R3=37 R4=0 R5=0 R6=42 R7=49  
 R8=0 R9=0 R10=0 R11=0 R12=34 R13=0 R14=55 R15=0  
 分级: OUT 白光分类: OUT

#### 光度&辐射度参数

光通量  $\Phi = 506.37 lm$  光效: 31.22 lm/W 辐射通量  $\Phi_e = 4.0189 W$  暗视觉: 1461.2 S/P: 2.8856  
 Photons1:  $6.515e+000 \mu mol/s(400\sim 500nm)$  Photons2:  $9.079e+000 \mu mol/s(600\sim 700nm)$   
 光合辐射参数: 光量子数:  $18.022 \mu mol/s$  光合辐照度:  $3959.3mW(400\sim 700nm)$

#### 电参数

电压  $V = 221.2 V$  电流  $I = 0.07662 A$  功率  $P = 16.22 W$  功率因数  $PF = 0.9571$

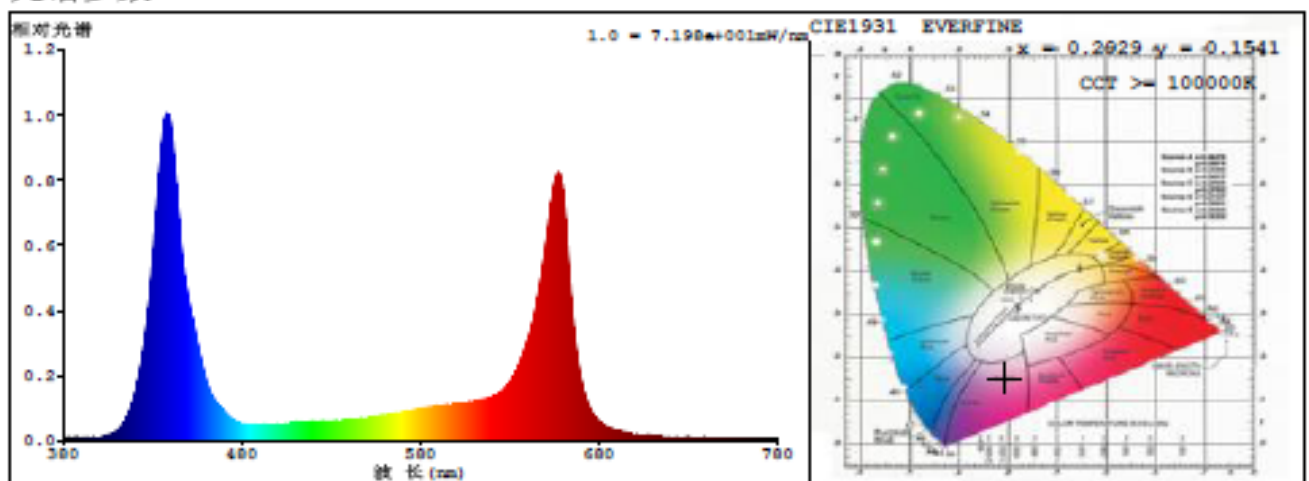
- Photoelectrical testing data by voltage setting 110V  
输入电压为 110V 时产品的光电测试参数

样品名称	:	测试日期	:	2017-08-30 15:02:12
样品型号	:	样品状态	:	
样品编号	:	测试仪器	:	HaasSuite(EVERFINE)
制造厂商	:	测试人员	:	FANG LI
		审核人员	:	damin

### 测试条件

环境温度	:	25.3Deg	环境湿度	:	65.0%
测试范围	:	380nm-780nm	峰值IP	:	54882 (84%)
测量模式	:	精确测试	积分时间	:	306 ms
			灵敏度	:	低

### 光谱参数



光谱分布

CIE1931色品图

### CIE颜色参数

色品坐标:  $x = 0.2929$   $y = 0.1541$  /  $u' = 0.2748$   $v' = 0.3253$  ( $duv = -1.08e-01$ )  
 相关色温:  $CCT \geq 100000K$  主波长:  $\lambda_d = 563.0nm$  色纯度:  $Purity = 66.3\%$   
 峰值波长:  $\lambda_p = 438nm$  半峰带宽:  $FWHM = 18.3nm$  色比:  $R = 34.5\%$   $G = 57.2\%$   $B = 8.2\%$

显色指数:  $R_a = 19.6$

R1 = 0    R2 = 31    R3 = 35    R4 = 0    R5 = 0    R6 = 42    R7 = 48  
 R8 = 0    R9 = 0    R10 = 0    R11 = 0    R12 = 34    R13 = 0    R14 = 54    R15 = 0  
 分级: OUT    白光分类: OUT

### 光度&辐射度参数

光通量  $\Phi = 511.30 lm$  光效:  $31.29 lm/W$  辐射通量  $\Phi_e = 4.0447 W$  暗视觉:  $1467.5 S/P: 2.8701$   
 Photons1:  $6.535e+000 umol/s(400\sim 500nm)$  Photons2:  $9.161e+000 umol/s(600\sim 700nm)$   
 光合辐射参数: 光量子数:  $18.147 \mu mol/s$  光合辐照度:  $3985.2mW(400-700nm)$

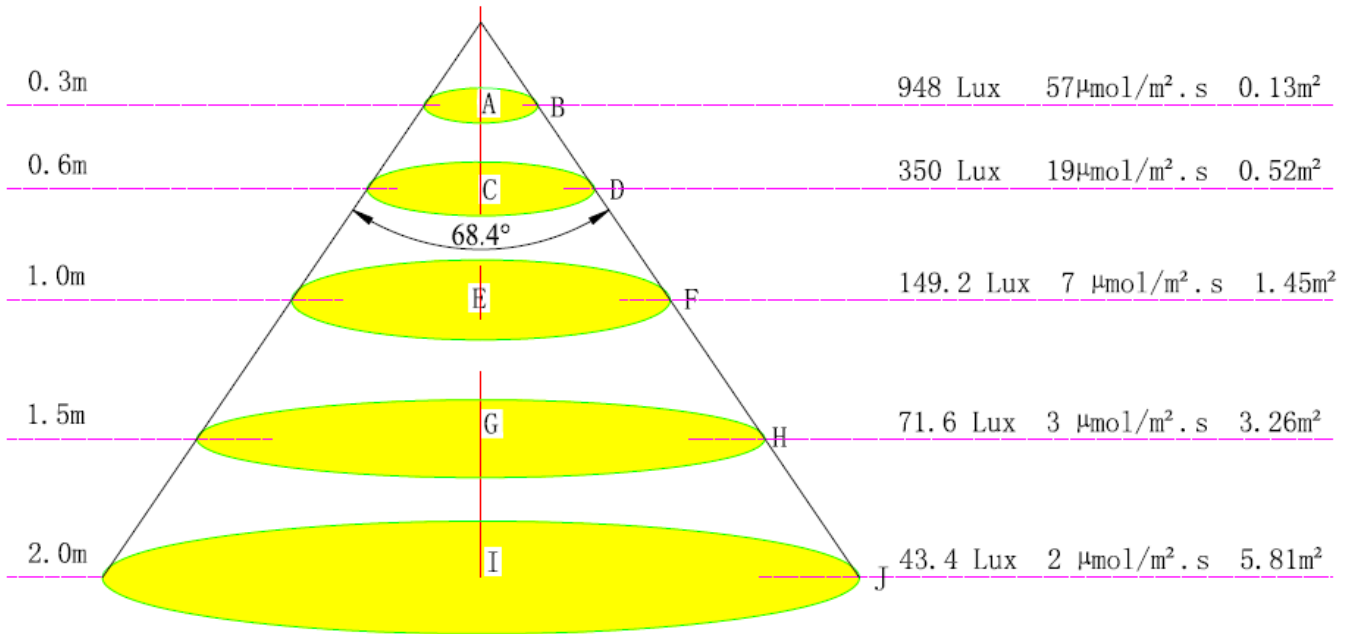
### 电参数

电压  $V = 110.6 V$  电流  $I = 0.1497 A$  功率  $P = 16.34 W$  功率因数  $PF = 0.9872$

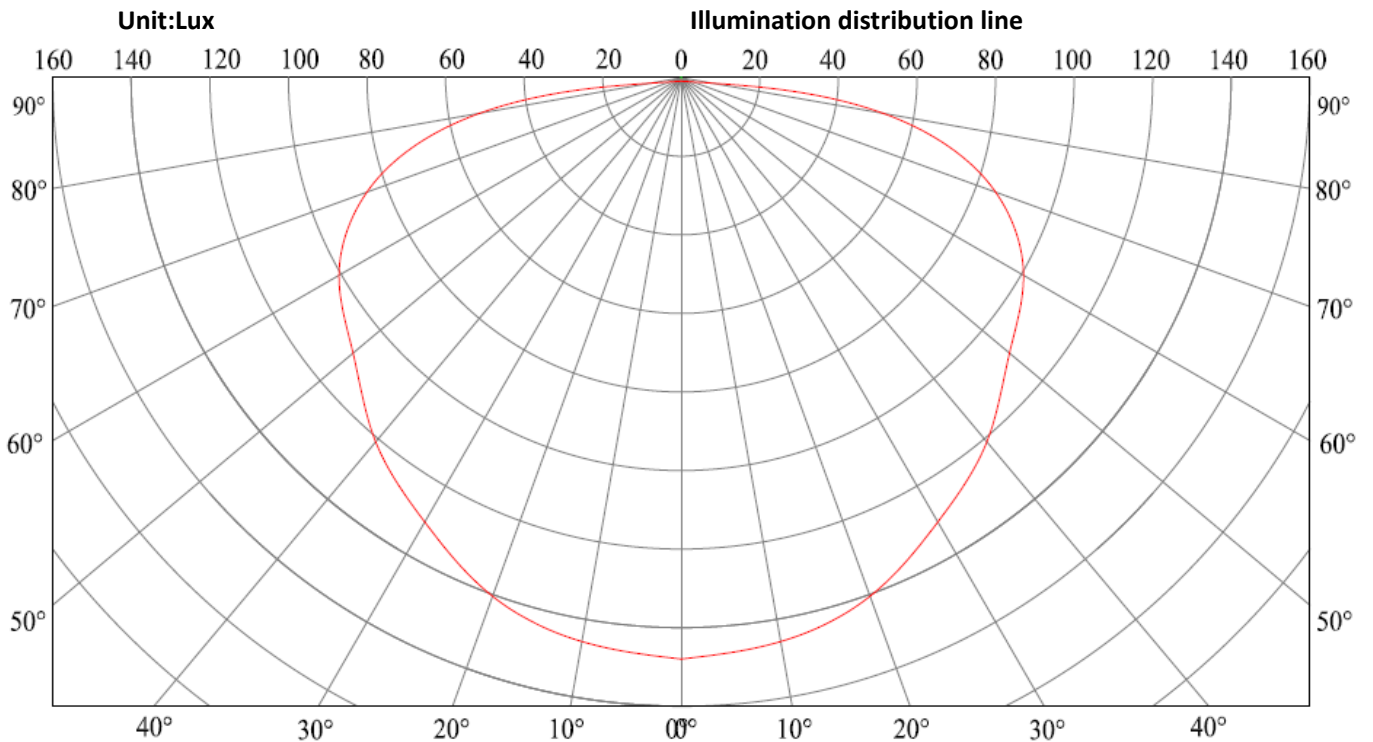
### 3.5 Product illumination testing data

产品照度测试参数

- Illumination Graph  
照度图



- illumination Data  
光照参数



### 4.0 Product Main Material

产品主要材料及关键配件

#### 4.1 Driver

电源

- Wide voltage design, AC100V-277V,50/60Hz, meets all countries input voltage requirement  
宽电压设计，适合全世界各国家使用
- Isolating power supply design, ensures safety in usage  
隔离电源设计，使用安全

#### 4.2 LEDs

灯珠

- 3535 LEDs  
3535 灯珠

#### 4.3 Heat Dissipation

散热

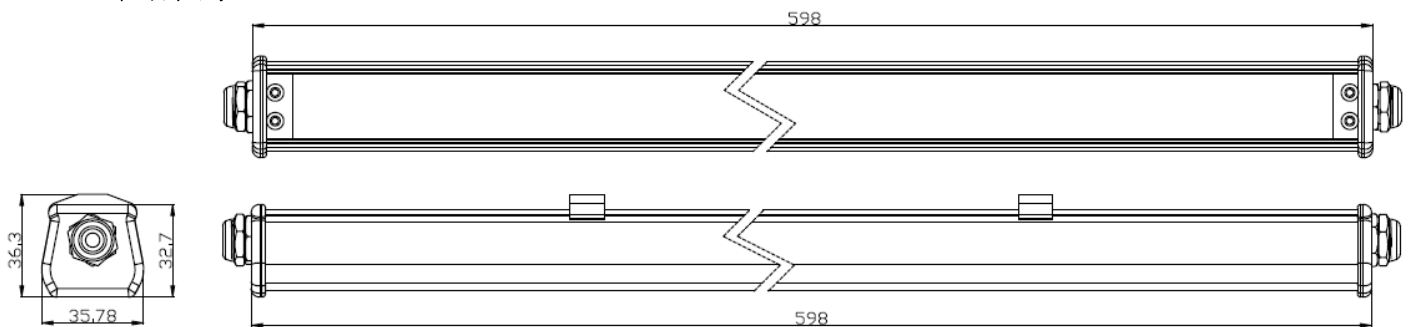
- Adopting high heat conductive materials: AL6063,  
采用高导热铝材：AL6063,

### 5.0 Product Size & Package

产品尺寸与包装

#### 5.1 Product size illustration

产品尺寸



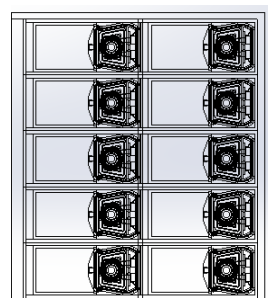
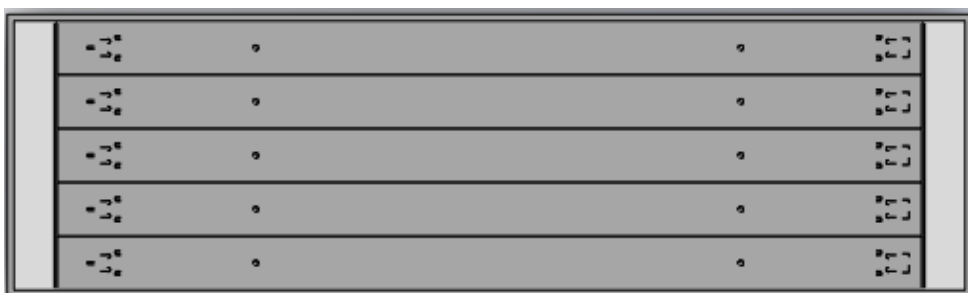
#### 5.2 Product packing info

产品包装尺寸

Product P/N 产品编号	Product NW. 产品净重	Box Size 纸盒尺寸	Carton Size 纸箱尺寸		
			Size 尺寸	GW. 毛重	Qty/ Carton 每箱产品数量
OH-GL-011-0600	830g	645x82x40mm	720x210x180mm	9.3kg	10 pieces

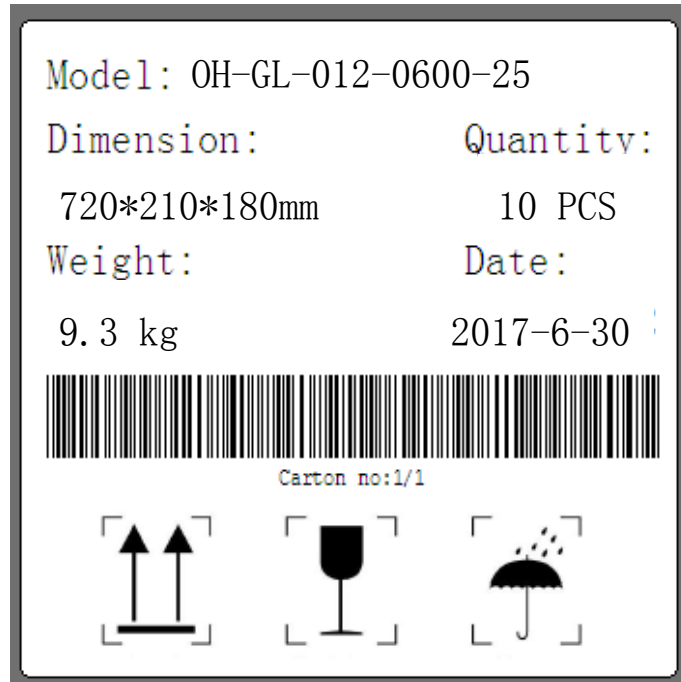
#### 5.3 Product packing illustration

产品包装图示

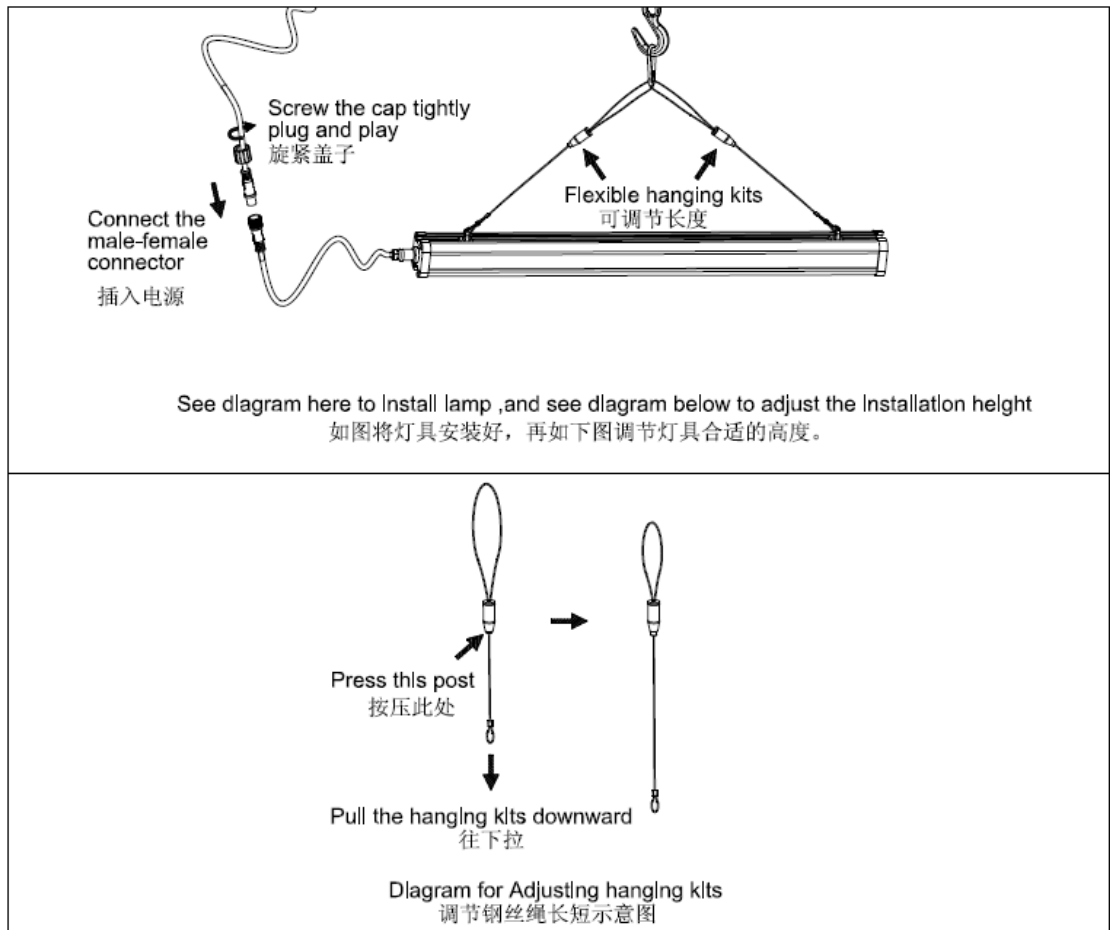




### 5.4 Carton label 纸箱标签



### 6.0 Product Installation Illustration 产品安装图示



### 7.0 QA & Safety Standard

#### QA 及安全标准

#### 7.1 Quality control per ISO9001 -2008 Standard

质量控制依据 ISO9001 - 2008 标准 .

- Product quality control  
产品质量控制
  - ✧ Finish product QC inspection standard: MIL - STD - 105E C=0  
成品 QC 检验标准: MIL - STD - 105E C=0
  - ✧ Production processing QC standard: GB 2829—87 - Periodical checking and sampling procedures  
生产过程 QC 检验标准: GB 2829-87 - 定时抽检和打样程序
  - ✧ QC confirm every production step and keep record  
QC 记录生产的每个步骤并保留记录
- Raw material & Components quality control  
原材料及配件质量控制
  - ✧ Driver: Per MIL-STD-105E C=O  
驱动: 依据 MIL-STD-105E C=O
  - ✧ LEDs : Per MIL-STD-105E C=O  
灯珠: 依据 MIL-STD-105E C=O
  - ✧ Heat dissipation: Per MIL-STD-105E C=O  
散热: 依据 MIL-STD-105E C=O

#### 7.2 Quality Controlling Items

质量控制项目

- Switching Test: Switch on/off for 10 times with interval time 10 sec.  
开关测试: 间隔 10 秒种 10 以上开关测试
- Reliability Tests:  
可靠性测试:

Reliability Tests: 可靠性测试:	Conditions 条件
High Temperature Operation Test 高温运行测试	Ta=50°C,240hrs
Low Temperature Operation Test 低温运行测试	Ta= - 20°C,240hrs
High Temperature Storage Test 高温存放测试	Ta=70°C,240hrs
Low Temperature Storage Test 低温存放测试	Ta=-30°C,240hrs
High Temperature and High Humidity Test 高温及高温测试	Ta=40°C,95%RH,240hrs

- Aging Test: Default two days or Per customer requirement  
老化测试: 通常为两天也可按客户要求

Voltage 电压	Testing Condition 测试条件	Duration Time 测试时间
110V	Room Temperature 室温	72H
220V	Room Temperature 室温	24H

- Safety Test: Leakage current test, Grounding test  
安全测试工: 漏电流测试, 接地测试
- Illumination Test  
照度测试

### 7.3 Product Safety Certificates

#### 产品安全证书

- CE, RoHS, FCC

### 7.4 Product Warranty Statement

#### 产品质保声明

- LED light life span is usually about 50,000 hours, Base on following terms, Ohmax warrants Ohmax LED lamps to be free from defects in material and workmanship and to operate from the date of manufacture for the time period of 3 years.

奥马斯依据下列条款郑重承诺：LED 灯的使用寿命一般在 50,000 小时，基于以下条款，奥马斯 LED 灯提供客户三年的质保产品使用期。

- Terms and Conditions:

条款和条件:

- This warranty will not apply in the event of conditions demonstrating abnormal use or stress, such as operating temperatures in excess of maximum rated temperatures, under/over voltage conditions, excessive switching cycles or operating hours, dirty or broken sockets, or improper lamp installation. Replacement of LED driver board provided by Ohmax with any other product will void entire warranty.

本质保承诺当在非正常使用或因超过某些极限条件的情况下不予认可。如使用温度超过最大额定温度，低于或超过电压允许范围，插座污损造成漏电等意外情况，灯具的不正确安装。不管用任何其它产品更换奥马斯产品上的 LED 电源都不适用于本质保范围。

- The user shall promptly return the product at the user's expense to Ohmax after receiving instructions as if, when and where to ship product. Failure to follow this procedure shall void this warranty

客户在收到奥马斯退回产品的通知后，应在规定的时间内自费退回给奥马斯指定的地址。客户未能按照要求做到，则本质保承诺不予生效。

- NO labor allowance is made for any lamp replacement during the warranty period. Any labor option or cost that is not pre-approved by Ohmax will not be eligible for reimbursement.

在质保期内任何人为的对奥马斯产品的任何配件或材料的更换，奥马斯对出现的产品质量问题不负任何赔偿责任。

- Ohmax reserves the right to examine all failed lamps and reserves the right to be the sole judge as to whether any lamps are defective and covered under this warranty.

奥马斯保留对质量问题产品的检查权利，保留对产品质量事故是否符合本质保条件的唯一合法的解释权。

### 8.0 Product Usage Attention Items

#### 产品使用注意事项

- Please cut off the power before installation and maintenance.

在安装和维护前，请先切断电源。

- LED product is much more durable for collision, knocking, but do not do it for longer life

LED 产品坚固耐用，但有意的碰撞、敲打对产品寿命是有影响的，应避免这种做法。

- Please make sure that the installation Location Can withstand 5 times the weight of the product before installation

安装前确保安装位置可以承受 5 倍于该产品的重量。

- Indoor use, forbid to expose to the out-door or get wet.

室内使用，不可在露天或潮湿的环境中使用。

