



RoHS

Specification

Client Name :

客户名称 :

Client P/N :

客户品号 :

Product P/N :

产品型号 :

HL-LE2835W29Q49HM-12B1C29 (Ra2)

Sending Date:

送样日期 :

Client approval 客户审核			Hongli approval 鸿利光电审核		
Approval 核准	Audit 确认	Confirmation 制作	Approval 核准	Audit 确认	Confirmation 制作
					
☐ Qualified 接受			☐ Disqualified 不接受		
			DATE: 工程部 日期:		

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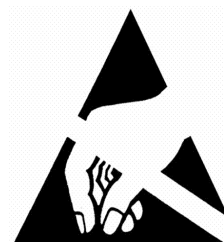
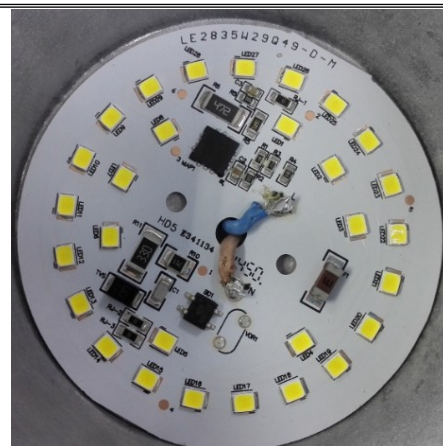
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1.Part code 产品型号命名原则

LE 2835 W 29 Q49 H M-X B1C29 (Ra2)

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

- | | |
|------------------------------|---------|
| ① Product line | 产品系列代码 |
| ② Type | 灯珠类型代码 |
| ③ Emitting light colors | 发光颜色代码 |
| ④ LED Qty code | 灯珠数量代码 |
| ⑤ PCB substrate | PCB基板代码 |
| ⑥ Chip code | 芯片代码 |
| ⑦ IC code | IC代码 |
| ⑧ Power | 功率代码 |
| ⑨ Serial/Parallel connection | 电路组合代码 |
| ⑩ CRI | 显色指数代码 |



ATTENTION注意
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES
请勿裸手接触器件

2.Features 特点

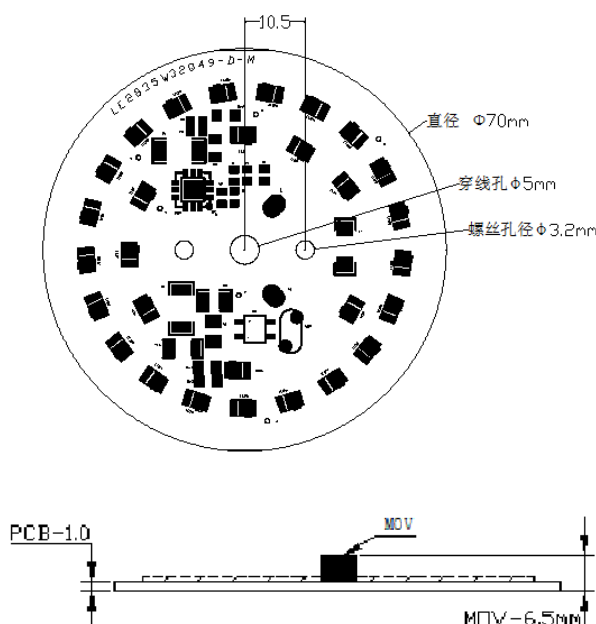
- Dimension :Φ70.0mm×6.5mm
- Connects directly to AC Power
- PF>0.95 THD<20%
- CRI: Ra>80
- Simple BOM
- TRIAC Dimming
- RoHS compliant (ROHS标准)

3.Applications 应用

indoor lighting 室内照明

- Bulb Light 球泡灯

4.Package Dimensions封装尺寸



Tolerance unless otherwise specified: $\pm 0.3\text{mm}$.
尺寸公差为 ± 0.3 毫米除非另有说明

5.Performance 性能

(1) Absolute Maximum Ratings

$T_a = 25^\circ\text{C}$

Parameter参数	Symbol符号	Rating Value值	Units单位
Maximum Voltage 最大电压	V_{OPT}	250	V[RMS]
Power Dissipation 耗散功率	P_D	14.5	W
Junction Temperature 结温	$T_j\text{-LED}$	120	$^\circ\text{C}$
	$T_j\text{-IC}$	125	$^\circ\text{C}$
Operating Temperature Range 工作温度	T_{op}	-20°C To $+70^\circ\text{C}$	
Storage Temperature Range 储藏温度	T_{stg}	-40°C To $+100^\circ\text{C}$	
ESD Sensitivity 静电测试	ESD	$\pm 2,000\text{V}$ HBM	
Lead Soldering Temperature 引线焊接温度	T_{sol}	Max. 350°C for 5sec Max.	



(2) Electro-Optical Characteristics at AC220V/50HZ 光电特性 Ta=25°C				at Ta=25°C		
Parameter参数	Symbol符号	Condition 条件		Min.	Typ.	Max. Unit单位
Operating Voltage 工作电压	V _{OPT}	—		200	220	250 V
Correlated Color Temperature 相对色温	CCT	Vin=220VAC		2800	3000	3100 K
				5300	5700	6000
Power Dissipation 功率	P _D	Vin=220VAC With dimmers		3		12 W
				30%		100%
Luminous Flux 光通量	Φ _v	TC=3000K	100% Brightness	990	1100	1320 lm
		TC=5700K	100% Brightness	1100	1250	1500
CRI 显色指数	Ra	—		80	—	—
Power Factor	PF	VIN=220VAC		0.95	—	—
Tolerance of Surge	Vs	IEC61000-4-5		500	—	— V

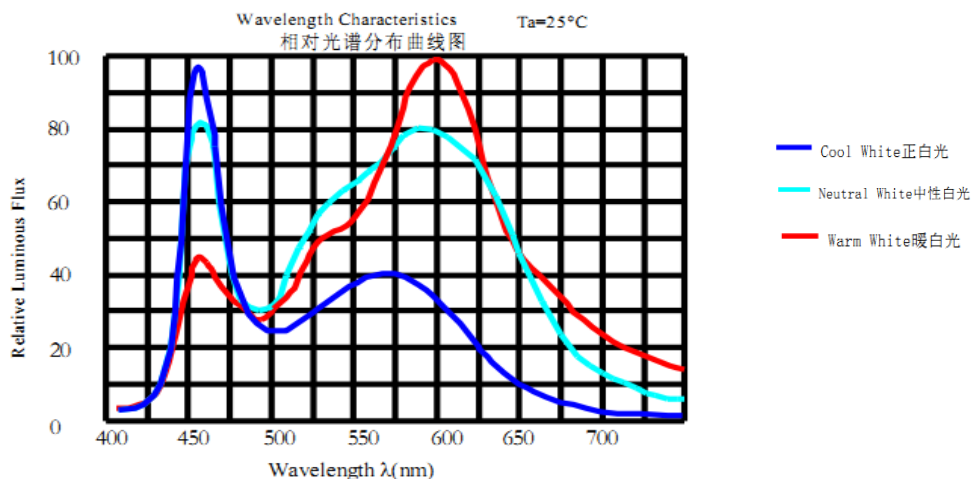
Notes for Table

1. Color bins are defined at transient operation
该产品通过瞬态点亮测试，分光分色。
2. The tolerance of measurement at our tester is Φ_v±10% and Ra±2.
测试仪测量的公差 流明±10% 和显指±2。
3. Tolerance of ±0.005 on x,y coordinates.
色坐标的测量误差允许在±0.005。
4. Φ_v is the total luminous flux output measured with an integrated sphere.
总光通量在积分球内测量。
5. Operating Voltage doesn't indicate the maximum voltage which customers use but means tolerable voltage according to each country's voltage variation rate.
客户不能在最大电压下正常使用，最大电压定义为不同国家的电压波动情况。
6. Make sure that LED case temperature do not exceed 85°C and IC case temperature do not exceed 80°C.
LED焊盘温度不能超过85°C，IC表面温度不超过80°C。

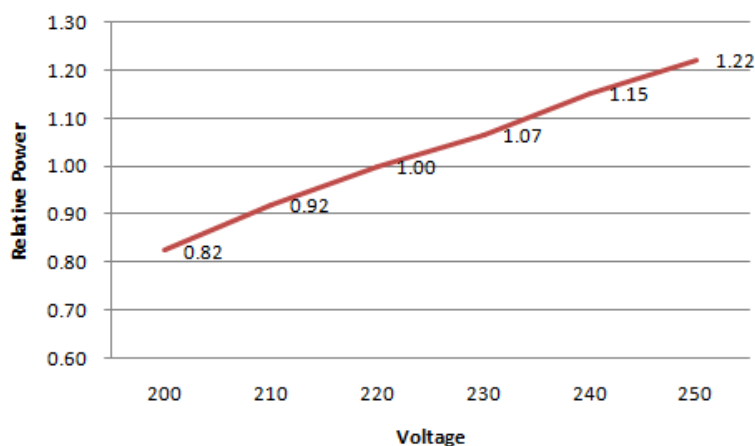


6.Characteristics特性

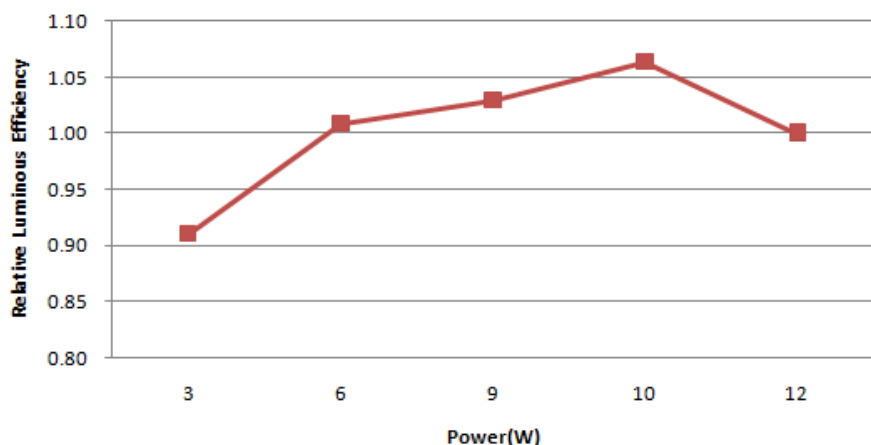
6.1 Color spectrum 光谱图



6.2 Relative Power Distribution vs. Voltage at Ta=25°C 相对功率与电压曲线



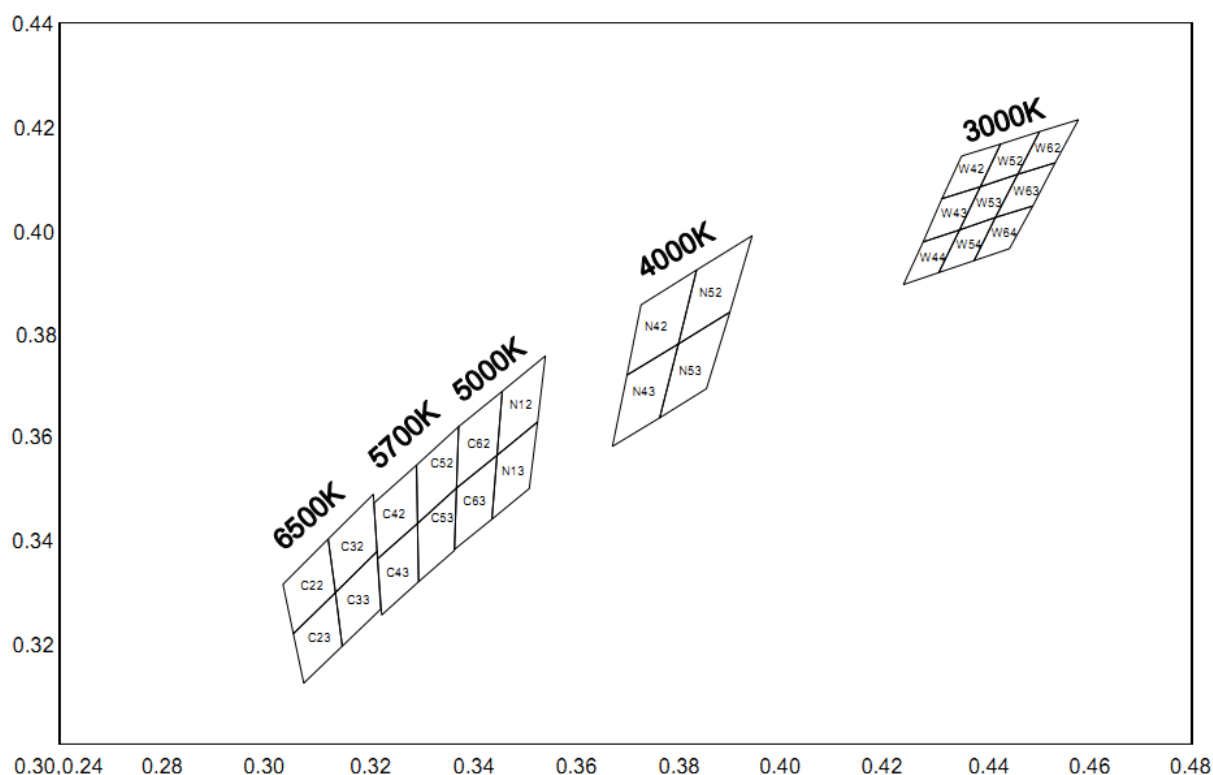
6.3 Relative Luminous Efficiency vs. Power at Ta=25°C 相对光效与功率曲线





7.Product bins 产品分级

Chromaticity bins



TC	X	Y	TC	X	Y	TC	X	Y
2800-3100K	0.4354	0.4142	3800-4250K	0.3731	0.3853	4750-5300K	0.3376	0.3614
	0.4241	0.3892		0.3675	0.3578		0.3368	0.3378
	0.4447	0.3962		0.3858	0.369		0.3514	0.3496
	0.4581	0.4212		0.3947	0.3987		0.3545	0.3754
5300-6000K	0.3211	0.3468	6000-7000K	0.3035	0.331			
	0.3226	0.3251		0.3075	0.3118			
	0.3368	0.3376		0.3227	0.3251			
	0.3376	0.3616		0.321	0.3485			



8、Mark 代码

14041001-H-220V-30K-12W

① ② ③ ④ ⑤

① Production No.(8 Digit)

② Production base(1 Digits)

③ Input voltage (4 Digits)

④ CCT (2 Digits)

⑤ Power (3 Digits)

① Production No.

② Production base

Marking	Production base
H	鸿利,Honglitronic

③ Input voltage

Marking	Voltage
220V	220VAC

④ CCT

Marking	CCT(typ.)
30K	3000K
40K	4000K
50K	5000K
57K	5700K
65K	6500K

⑤ Power

Marking	Power(typ.)
12W	12W



9. Packing Specifications 包装规格

		HONGLI TRONIC 鸿利光电		RoHS	
Part No: _____					
Vopt: _____ V		PD: _____ W			
TC: _____ K		φv: _____ lm			
DATE: _____		LOT: _____			

Label on blister packaging 吸塑盒标签

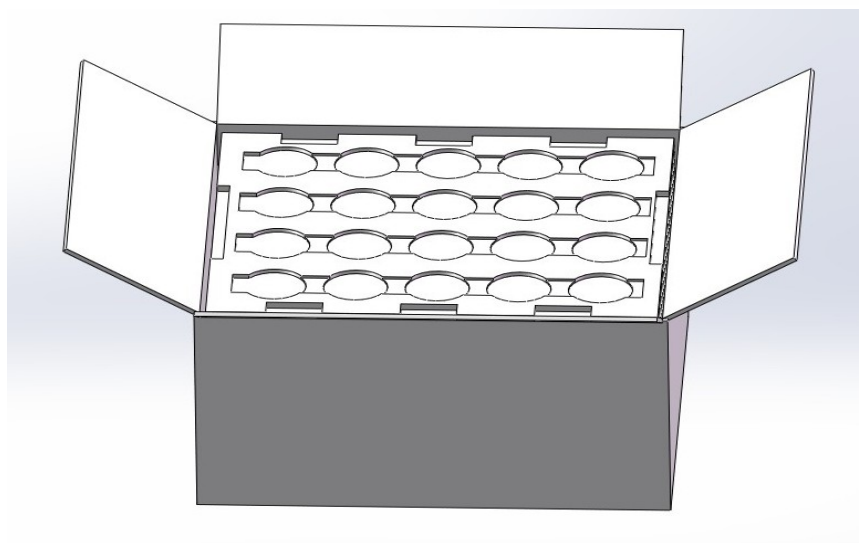
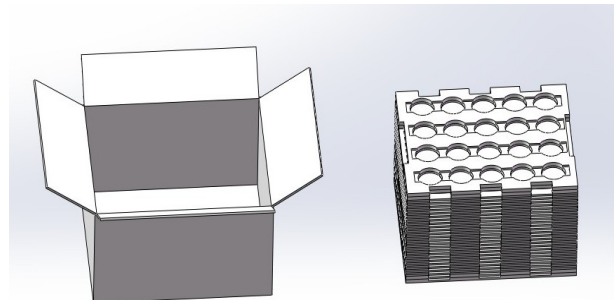
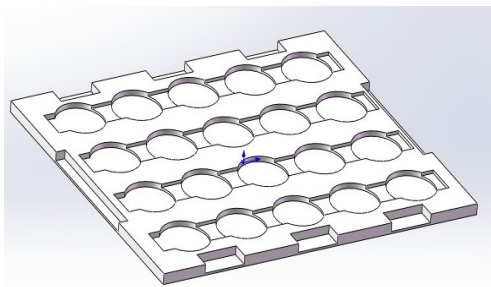
		HONGLI TRONIC 鸿利光电		成品标示卡 (Product Identity Card)		RoHS	
品名(Description):		High Power LEDs					
产品型号(Type):		XXXXXXXX XXXXXXXX					
发光颜色(Color):		XXXXXX					
数量(QTY):		XXXXXK					
生产批号(LOT NO):		XXXXXXXX XXXXXXXX					
出货日期(Date):		XXXX. XX. XX					
操作员(Operator):		XXXX					

Label on box 外箱标签

ΦV: Luminous Flux rank 光通量档次典型值

TC: Color temperature 色温

■ Packing figure 包装图



- 1Box : 20PCS Per tray * Max 25 layers = 500PCS(around 8kg)
- Box size (LxWxH) =400x320x185mm

Precautions (注意事项)

1. Cautions for use

- Due to connecting high voltage, pay attention to safety when installing and/or testing.
请注意，由于该产品接高压，因此在该产品安装调试时请务必注意安全。
- DO NOT touch the module without any reasonable ESD protection while circuit is active.
当电源工作时，不要触碰模组任何地方，如PCB板，器件等。
- Long time exposure to sunlight or UV can cause silicone discolored.
长时间暴露在太阳或者UV底下，会使胶发生变色。
- Please do not use with substance containing sulfur.
请不要与含硫元素物质一起使用。
- Please do not assemble/use in conditions of high moisture and/or strong oxidizing gas such as Cl, H₂S, NH₃, SO₂, NO_x, etc.
请不要在高湿或者强氧化气体，如Cl, H₂S, NH₃, SO₂, NO_x的环境下使用。
- Please make sure of not getting short during the welding process.
请在焊接过程中注意不要使其短路。
- The module is recommended to apply in indoor lighting.
本产品使用于室内照明。

2. Handling of silicone resin for LEDs

- AC LED module series is encapsulated with silicone resin for high optical efficiency.
AC LED模组系列产品用硅树脂封装以达到良好的出光效果。
- Please do not touch the silicone resin area with sharp objects such as pincette (tweezers).
不要用尖物（如镊子）去碰硅树脂区域。
- Finger prints on silicone resin area may affect the performance.
印在硅树脂上的指纹可能影响性能。
- Please store LEDs in covered containers to prevent dust accumulation as this may affect performance.
请储存在有盖的容器内，以防止LED封尘，影响性能。
- Excessive force more than 3000gf on the silicone lens can result in fatal or permanent damage of LEDs.
大于等于3000gf的力会导致胶体产生永久性失效。
- Please do not cover the silicone resin area with any other resins such as epoxy, urethane, etc
请不要用其它树脂材料，如环氧树脂、聚氨酯等覆盖在硅树脂区域。



3. Storage

- Do not impact or press on this product because even a small amount of pressure can damage the product. The product should also not be stored in condition of high temperature, high humidity or under sunlight since the device is sensitive to these conditions.
不要将产品挤压或在有压力的环境下，因为该产品这样有可能受损，也不要储存在高温，高湿或者太阳直射的环境下。
- When storing devices for a long period of time before usage, please following these guidelines:
 - * The devices should be stored in the anti-static bag .
 - * If the anti-static bag has been opened, please vacuum and re-seal it for moisture proof.如果长时间不用，请按以下指引：
 - * 该产品储存在防静电袋内。
 - * 如果防静电袋被打开，需要重新密封，请做真空防潮处理。

4. Guidelines for working

- Use only properly rated test equipment and tools for the rated voltage and current test.
使用额定测试装置或者工具来测量产品的电压与电流。
- It is strongly suggested to wear insulated gloves and rubber bottom shoes to prevent electric-shock.
强烈建议使用橡胶手套与穿橡胶底鞋子防止静电。
- When do assembly process , Do not wear any conductive items (such as jewelry) which could accidentally contact circuits.
组装时，不要穿戴导电物件（如珠宝首饰），因为可能碰到电路。
- Hot-plug test is not recommended.
不建议做热插拔测试。
- Faults, lightning, or switching transients can cause voltage surges in excess of the normal ratings.
故障，闪电或者开关短路可能引起电压瞬态升高，超过额定值。
- Internal component failure can cause excessive voltages.
内部元器件失效有可能导致电压超高。

5、ESD (Electro Static Discharge)

- The product is equipped with an integrated circuit (IC) which can be damaged when exposed to static electricity. Please handle it by using equipment that prevents static electricity. Do not touch unless ESD protection is applied.
该光引擎产品使用IC，此IC能被静电击穿，请用防静电的工具来操作使用
- Environmental controls:
Humidity control (ESD gets worse in a dry environment)
干燥的环境ESD更明显



Under Development	●
Mass production	

6、EOS (Electrical Over Stress)

- Electrical Over-Stress (EOS) is defined as damage that may occur when an electronic device is subjected to a current or voltage that is beyond the maximum specification limits of the device.

EOS损坏发生在电流或电压超过最大限制。

- To help minimize the damage from an EOS :
帮组减小EOS损坏

A surge protection circuit

