



湘能华磊光电股份有限公司
Xiangneng HuaLei Optoelectronic Corporation

产品规格书

Product Specification

产品名称 Product Name	HL-S12L 白光 LED 圆片
型号规格 Model SPEC	12L 圆片
客户名称 Company Name	
文件编号 Doc ID	C-PB-B-012
版本号 Version NO.	A/14

承认 Admit	确认 Confirmation	制作 Prepared by

客户确认 Customer Confirmation	签名 Signature	日期 Date
	公司名称: Company Name	
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HL-S12L白光LED圆片产品规格
Product specification of HL-S12L blue LED wafer

● **特性: Features**

- (1). 亮度高/寿命长 High luminous intensity/Long operation life.
- (2). 可应用于户内/户外 Indoor/outdoor applications.;
- (3). 顶部有钝化层 Passivation layer on top.
- (4). 百分百全测 100% Probing test.

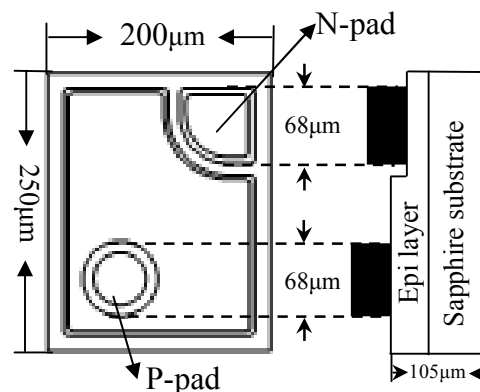
● **物理参数: Characteristics**

1、尺寸 Size

- (1). 芯片尺寸 Chip size: 08milx10mil ($200 \pm 15 \mu\text{m} \times 250 \pm 15 \mu\text{m}$)
- (2). 芯片厚度 Chip thickness: 4.1mil ($105 \pm 15 \mu\text{m}$)
- (3). P/N电极 P/N bonding pad: 2.7mil ($68 \pm 10 \mu\text{m}$)

2、金属电极 Metallization: P/N电极 为金合金 Au alloy P/N bonding pad.

3、结构 Structure: 参考右图 refer to the right figure.



● **25℃时电光特性: Electro-optical characteristic at 25℃**

Test parameter (测试参数)	Condition (条件)	Min (最小值)	Typ	Max (最大值)	Unit (单位)	Yield rate (良率)
Dominant wavelength(Wd) 主波长	20mA	445	-	475	nm	≥90%
Luminous power(P ₀) 光功率	20mA	3	-	30	mW	≥90%
Forward voltage(Vf ₄) 正向电压	1uA	1.8	-	3.0	V	≥90%
Forward voltage(Vf ₁) 正向电压	20mA	2.8	-	3.8	V	≥90%
Reverse current (Ir) 反向电流	-8V	0	-	1	uA	≥90%

●. 绝对最大范围: Absolute Maximum Ratings

(参数) Parameter	(符号) Symbol	(条件) Condition	(范围) Rating	(单位) Unit
(正向直流电流) Forward DC current	If	Ta=25℃	≤30	mA
(反向电压) Reverse voltage	Vr	Ta=25℃	≤8	V
(结温) Junction temperature	Tj	—	≤115	℃
(储存温度) Storage temperature	Tstg	芯片 chip	-40 ~ +85	℃
		储存 chip-on-tape/storage	0 ~ 40	℃
		运输 chip-on-tape/transportation	-20 ~ +65	℃
(封装加热温度) Temperature during packaging	—	—	280 (<10sec)	℃

备注:Note

以上最大范围是通过无树脂涂层的印刷电路板所决定的，其与封装形式具高度相关性。施加大于最大范围如正向电流及结温等均会对LED产生危害。

Maximum ratings are package dependent. The above maximum ratings were determined using a Printed Circuit Board (PCB) without an encapsulant. Stresses in excess of the absolute maximum ratings such as forward current and junction temperature may cause damage to the LED.

●. 包装尺寸规格: Packing Specification

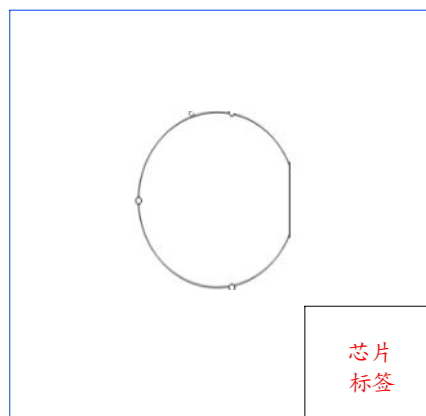
※蓝膜:Blue Tape 195mm×200mm

※离型纸: Anti-adhesive Paper 200mm×200mm

※静电金属袋:Antistatic Bag 220mm×220mm (自粘式封口袋 Insulating self-adhesive bag),

每个静电袋包装不超过 30 张为宜。No more than 30 pieces in each antistatic bag is recommended.

※标签: Label 55mm×60mm 粘贴于蓝膜右下角 (如下图) The label is in the lower right on the blue tape.



●. 产品存放与运输: The Products in Storage and Transport

(1)、产品需以竖立方式存放, 请勿折叠、重压芯片。

Products should be placed upright, and do not press or fold.

(2)、包装盒无防水、防潮和防湿的能力, 必须远离存放。

The boxes must be kept away from water, moisture and dust.

(3)、请不要在芯片包装所用的离型纸、蓝膜、产品标签上使用硬质工具进行标记 (可使用标签纸粘贴在离型纸外进行标记)。

Do not mark on the anti-adhesive paper, blue tape and label by rigid tool.

(4)、请使用托盘或包装盒等硬质容器搬运芯片, 保持芯片包装蓝膜平整。

Please place chips in rigid containers for transportation, and make sure the blue tape is kept smooth.

●. 使用防范措施: Precautions for use

(1)、生产作业时, 应确保操作员的身体和设备接地。

Be sure to ground the worker's body and equipment when operator handles the chips in mass production.

(2)、工作台与电源需具有相同的接地线。

Set the ground line of work bench to the same that of the power supply.

(3)、在相对湿度 45%-65%的环境下储存芯片, 确保空气中的灰尘和气体不能损坏芯片。

Chips are stored in the environment with 45% - 65% of the relative humidity and to ensure that the air dust and gas can not damage the chips.

(4)、利用不易带静电的箱子储存。

Use a storage case which can not be easily charged with static electricity.

(5)、芯片为一般电子设备而设计。

This chips are designed for general electric equipments.

※电脑 Computer

※测量仪器 Measuring instrument

※OA 设备 OA equipment

※家用电器 Home appliances

※AV 设备 AV equipment

※通讯设备 Telecommunication

※设备终端等 Equipment(Terminal) etc.

●. 其他注意事项: Other Cautions

(1)、芯片处理过程中要采取ESD保护措施。

Precause of ESD protection is necessary during handling chips.

(2)、考虑到蓝膜材料的变化, 出厂芯片应储存不超过 6 个月。

Chips should be stored within 6 months.

(3)、光电参数均系湘能华磊光电股份有限公司测试仪器在室温条件下测试所得。

The electro-optical characteristics are measured at room temperature in Xiangneng Hualei Optoelectronic Corporation.

(4)、在非标准环境下使用芯片造成的损失，湘能华磊光电股份有限公司一概不负责任。

Xiangneng Hualei Optoelectronic Corporation cannot take any responsibility for any loss that are caused by using the chips at exceedingly critical conditions.

(5)、如用户有任何特殊质量或可靠度方面的需求，如医疗设备、航空应用、交通信号灯、安全系统设备等，请提前咨询湘能华磊光电股份有限公司。

It is recommended to consult Xiangneng Hualei Optoelectronic Corporation in advance if user's application requires any particular quality or reliability. Such as medical equipments, aerospace applications, traffic signals, safety system equipments and so on.

(6)、此产品承认书仅适用于湘能华磊光电股份有限公司 A2 品圆片。

The approval sheet applies only to A2-class chips of Xiangneng Hualei Optoelectronic Corporation.