

林德顺

HL-A-4014H421W-S1-HR3-DM

产品特点 特征

P=CC-2 Pac@a-e2P=CC-2 封装)

E8 #e (e!0 ;i'e \$ie ;i" - a"-!e, (宽的发光角度)

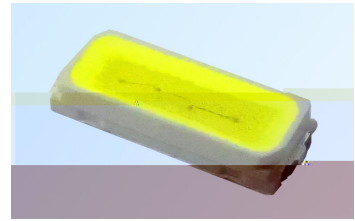
S&i a:le f!# a!! SAT a**e (:!0 a" ' *!#!e# p#!ce**< (适用于所有的SMT组装和焊接工艺)

A\$ai!a:le !" ape a" ' #ee< (适用于载带及卷轴)

A!i* &#e *e" *i \$i 0 !e\$e! : =e\$e! 4< (防潮等级 Level 4)

Pac@a-e:4000pc*/#ee<<2包装每卷4000PCS)

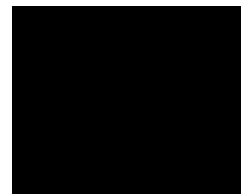
R! , S c! (pia" < 2RoHS 认证)



Description 描述

T.e 9 .ie =ED ; .ic. ; a* fa:#ica e' &*i" - a :!&e c.ip a" ' .e p.!*p.!#

白光LED由蓝光芯片与荧光粉激发而成



A" "#\$"%&\$
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DANGEROUS
SENSITIVE
DEVICES

注意：操作时应注意静电敏感
释放设备装置

Applications 应用

? Optical indication (光学指示)

? Indoor display (室内显示)

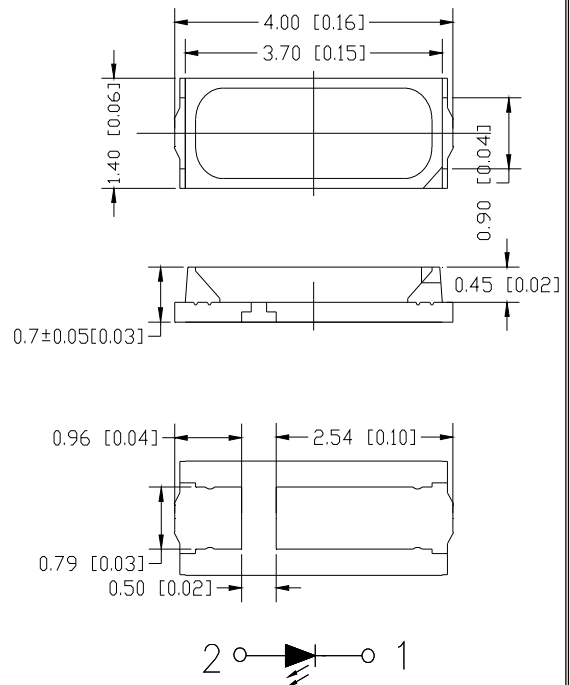
? Automotive lighting (汽车照明)

? Backlight, converter, switch and indicator, display (LCD背光、转换器, 开关和标志, 显示器等)

? Tube lighting application (用于日光灯管)

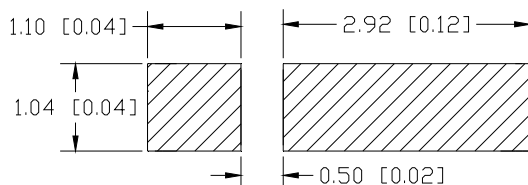
? General application (一般应用)

Package Dimensions 封装尺寸



Recommended Soldering Pattern

建议焊盘尺寸图



Notes: (备注)

1. All dimensions are in millimeters (所有标注尺寸单位为毫米)

2. All dimensions are in millimeters (除特别标注外, 所有尺寸允许公差±0.15mm)



Selection Guide 选择指南

Part # 型号	Chip Area 芯片材料	Package Type 胶体类型
,=A-4014, 4219-S1-, R3-DA	/GaN	Cell ; Diff&e'

Mass Production list 批量生产目录

Part # 型号	CCT (4) Ai"	CCT (4) T0p	CCT (4) Aa8	D (mm) Ai"	D (mm) T0p	Test Condition 测试条件
,=A-4014, 4219-S1-, R3-DA	5E00	F000	F500	24	2F	/FGF0 (A
	4E50	5000	5300	24	2F	/FGF0 (A
	3800	4000	4250	24	2F	/FGF0 (A
	2800	3000	3100	23	25	/FGF0 (A

Part # (e e# (参数) S0 (符号) Ai" (最小) T0p (平均) Aa8 (最大) B"i* (单位) iC



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A. Absolute Maximum Ratings at T_a=25°C 绝对最大额定值

Parameter (参数)	Symbol (符号)	Value (值)	Unit (单位)
Power Dissipation (功耗)	P _D	30W	W
Forward Current (正向电流)	I _F	1000	mA
Peak Forward Current (峰值正向电流)	I _{FP}	150	mA
Reverse Voltage (反向电压)	V _R	5	V
Electrostatic Discharge, BA5 (静电)	ESD	1000	V
Operating Temperature (操作温度)	T _{op}	-40 to 85	°C
Storage Temperature (保存温度)	T _s	-40 to 100	°C
Thermal Resistance (热阻)	R _{θj-c}	35	°C/W
Case Temperature (结温)	T _p	115	°C

Note: (备注)

1. Duty cycle < 10% (脉宽0.1ms, 周期1/10)

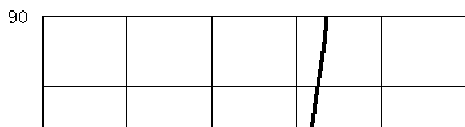
Optical characteristics curves 典型光学特性曲线

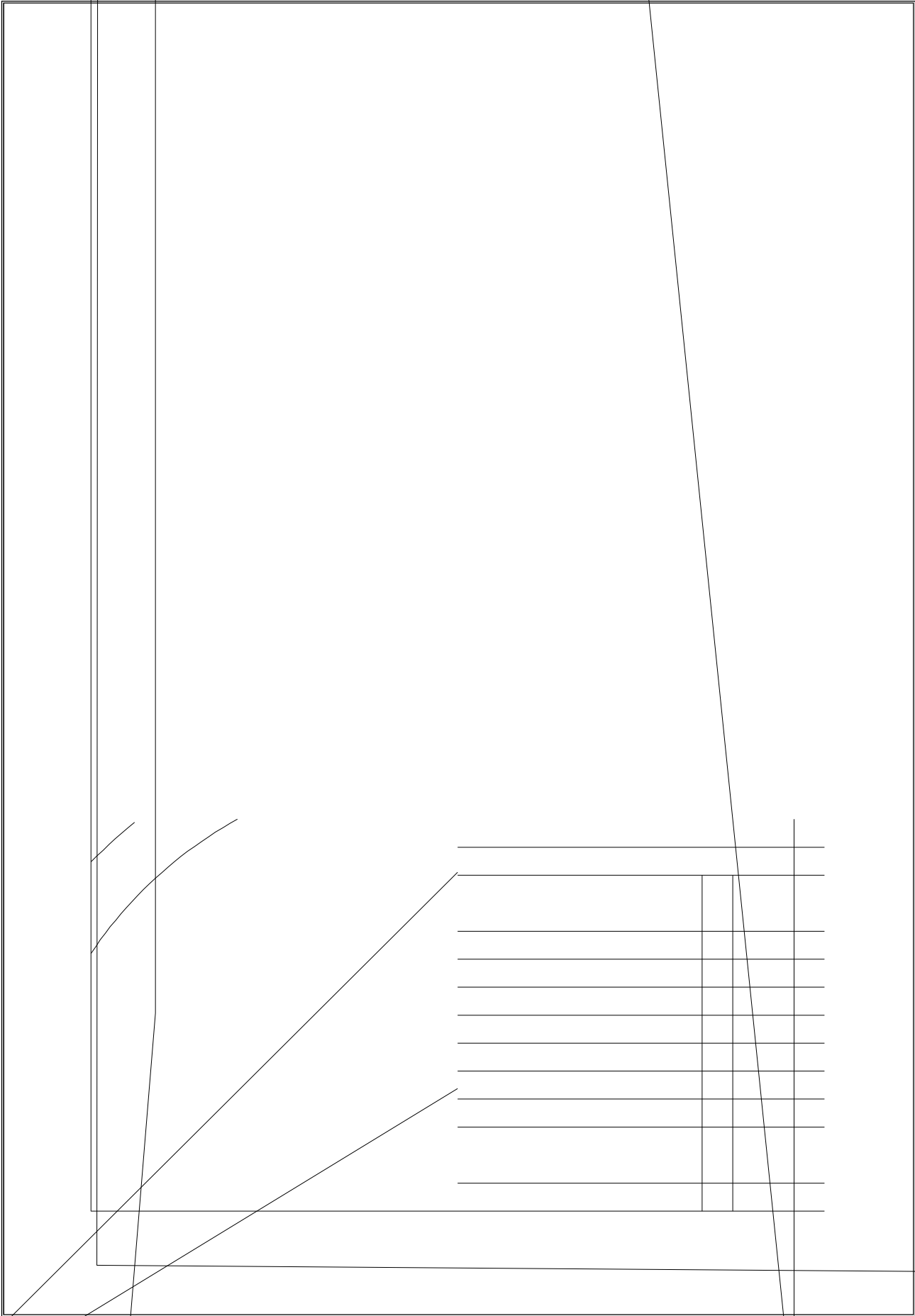
Temperature - Forward Current Characteristics
温度与正向电流特性曲线

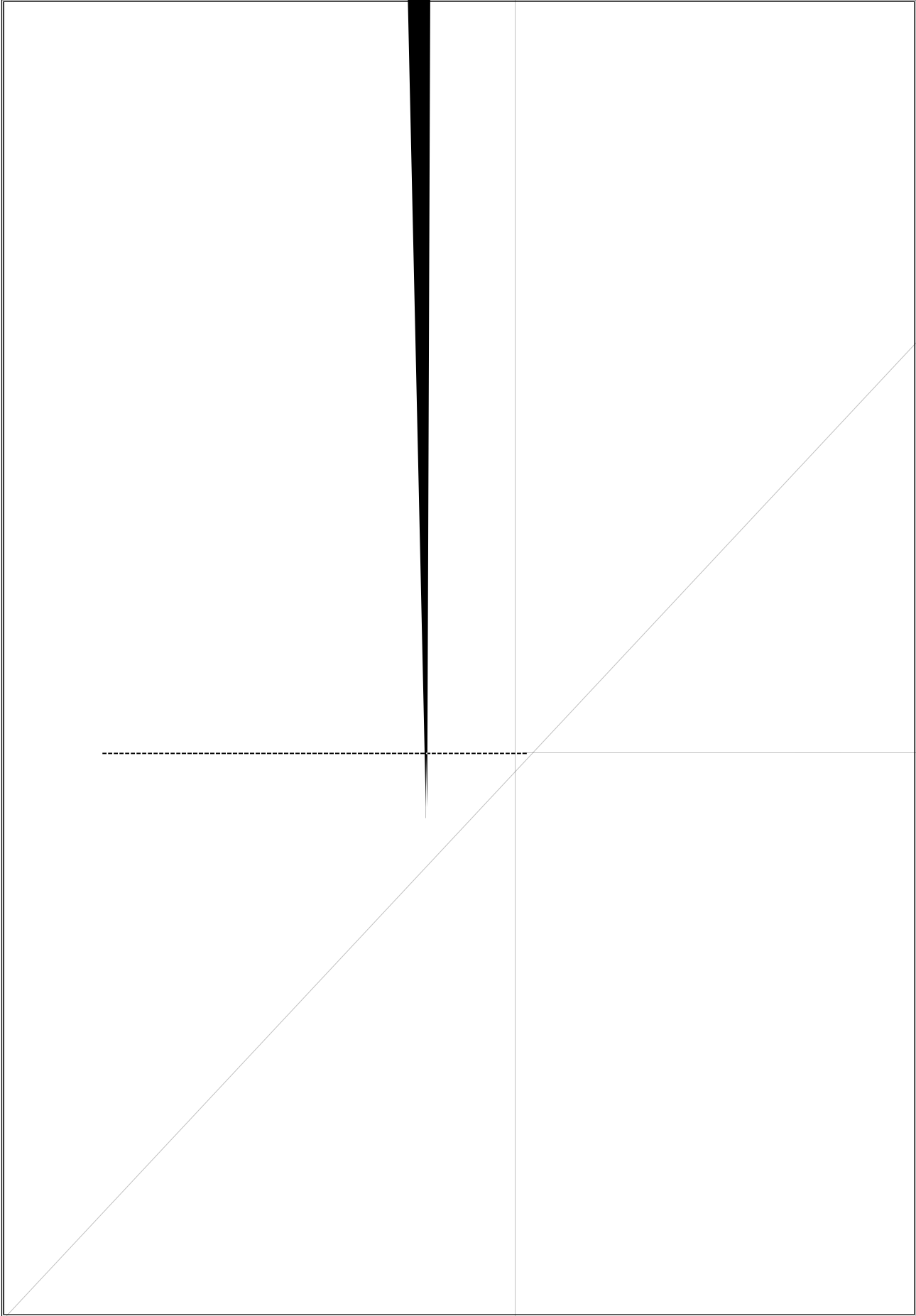
Forward Current vs. Relative Intensity
正向电流与相对光强特性曲线

Forward Voltage vs. Forward Current
正向电压与正向电流特性曲线

Ambient Temperature vs. Relative Intensity
环境温度与相对光强特性曲线







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2in Range o3) *romaticit0) oordinate Bin区分类及色坐标范围

CCT 色温	Bi" C! 'e Bi" 代码	C/EQ8	C/EQ0	Bi" C! 'e Bi" 代码	C/EQ8	C/EQ0	
F0004	C32 F000-F5004	0.3205	0.3481	C42 5E00-F0004	0.3211	0.3468	
		0.3117	0.3393		0.3294	0.3542	
		0.3131	0.329		0.3296	0.3429	
		0.3213	0.3371		0.3219	0.3360	
		0.3213	0.3371		0.3219	0.3360	
	C33 F000-F5004	0.3131	0.329	C43 5E00-F0004	0.3296	0.3429	
		0.3145	0.3187		0.3298	0.3315	
		0.3221	0.3261		0.3227	0.3251	
		0.3376	0.3616		0.3461	0.3685	
		0.3461	0.3685		0.3545	0.3754	
50004	CF2 5000-53004	0.3451	0.3561	N12 4E50-50004	0.3530	0.3625	
		0.3372	0.3497		0.3451	0.3561	
		0.3372	0.3497		0.3451	0.3561	
		0.3451	0.3561		0.3530	0.3625	
		0.3441	0.3437		0.3514	0.3496	
	CF3 5000-53004	0.3368	0.3378	N13 4E50-50004	0.3441	0.3437	
		0.3E31	0.3853		N52 3800-40004	0.383K	0.3K20
		0.383K	0.3K20			0.3K4E	0.3K8E
		0.3803	0.3EEE			0.3K03	0.383K
		0.3E03	0.3E1F			0.3803	0.3EEE
0.3E03	0.3E1F	0.3803	0.3EEE				
40004	N43 4000-42504	0.3803	0.3EEE	N53 3800-40004	0.3K03	0.383K	
		0.3EFE	0.3F34		0.3858	0.3FK0	
		0.3FE5	0.35E8		0.3EFE	0.3F34	



CCT 色温 Bi" C! 'e Bi"



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Reliability Test Items and Conditions 可靠性测试项目及条件

Test Item 项目	Reference Standard 参考标准	Test Conditions 测试条件	Time 时间	Quantity 数量	Accept/Reject 接收/拒收
Reflow 回流焊	1ESD22-B10F	Te (p:2F0°C (a8 TG10 *ec	3 i (e*<	22Pc*<	0/1
Temperature Cycle 温度循环	1ESD22-A104	100°C>5°C 30 (i"< RS5 (i" -40°C>5°C 30 (i"<	100 C0c!e*	22Pc*<	0/1
High Temperature Storage 高温保存	1ESD22-A103	Te (p:100°C>5°C	1000 ,#*<	22Pc*<	0/1
Low Temperature Storage 低温保存	1ESD22-A11K	Te (p:-40°C>5°C	1000 ,#*<	22Pc*<	0/1
Normal Temperature Power On 常温通电	1ESD22-A108	TaG25°C>5°C /FGF0 (A	1000 ,#*<	22Pc*<	0/1
High Temperature High Humidity Power On 高温高湿通电	1ESD22-A101	85°C>5°C/ 85 J R , /FG40 (A	1000 ,#*<	22Pc*<	0/1

Failure Criteria

Test Item 项目	Symbol 符号	Test Conditions 测试条件	Failure Criteria 判定标准	
			Minimum 最小	Maximum 最大
Forward Voltage 正向电压	VF	/FGF0 (A	--	B<S<=T581<1
Reverse Current 反向电流	/R	VR G 5V	--	10&A
Optical Flux 光通量	Φ	/FGF0 (A	=<S<=T580<E	--

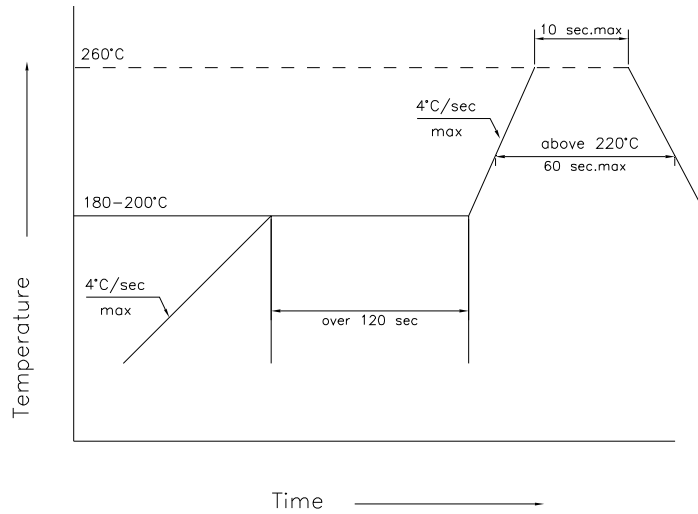
B.S.=: Bppe# Specifica i!" =i (i 规格上限 =.S.=: =! ; e# Specifica i!" =i (i 规格下限

*T.e ec."ica% i" f!# (a i!" * .! ; " i" .e 'a a * .ee * i* %i (ie' ! .e Opica% c.a#ac e#i* - ic* a" ' ci#c&i e8a (p!e* !f .e #efe#e"ce" p#!' &c *< / ' !e* " ! c!" * i & e .e ; a##a" - i" - !f i" ' &* #ia% p#!pe# 0 " !# .e - #a" i" - !f a" 0 %ice " *e<

数据工作表中所示的技术信息仅限于典型特征和电路实例引用的产品.它既不构成工业特性的保证,也不构成任何许可的授权.

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SM⁴ Reflow Soldering Instructions SM⁴ 回流焊说明



1. Reflow soldering cannot be performed more than twice.

2. When soldering, do not apply pressure to the adhesive surface of the material while it is heated.

Soldering iron 烙铁焊接

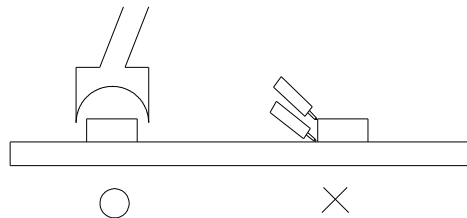
1. When using a soldering iron, the temperature must be below 300°C and the time must not exceed 3 seconds.

2. Hand soldering can only be performed once.

Repairing 修补

Repairing should be avoided. If repair is unavoidable, it must be done using a double-iron (as shown in the diagram), but it is essential to confirm the method first to avoid damaging the LED's characteristics.

LED reflow soldering should not be repaired. When repair is unavoidable, it must be done using a double-iron (as shown in the diagram), but it is essential to confirm the method first to avoid damaging the LED's characteristics.



Precautions 注意事项

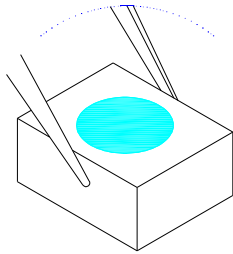
The LED encapsulation is made of silicone, so the LED adhesive surface is soft. Applying pressure to the adhesive surface will affect the LED's reliability. Therefore, preventive measures should be taken to avoid applying strong pressure to the parts when using a vacuum nozzle. The pressure on the adhesive surface should be appropriate.

LED封装为硅胶，故LED胶体表面较软，用力按压胶体表面会影响LED可靠性，因应有预防措施避免在封装的零件上的强大压力，当用吸嘴时，胶体表面的压力应是恰当的。



1<,a" 'e .ec! (p!"e" a!"- .e *i'e *&#face :0 &*i" - f!#cep* !# app#!p#ia e !!!*U '!'! '#ec%0
!&c. !#,a" 'e .e *i!c!"e %e"* *&#face6 i (a0 'a (a-e .e i" e#"a% ci#c&i #0<

通 用适当的工具从材料侧面夹取，不可直接用手或尖锐金属压胶体表面，它可能会损坏内部电路

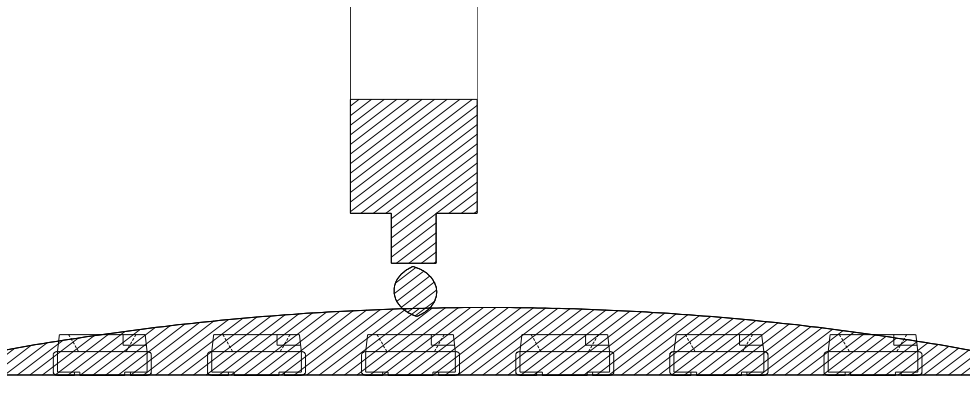


LED工作环境及与LED适配的材料中硫元素及化合物成份不可超 100PPM

LED工作环境及与LED适配的材料中硫元素及化合物成份不可超 100PPM

当我们需 用外封胶涂抹LED产品时，应确保外封胶与LED封 胶水相匹配，因为大多数LED的封 胶水为硅胶，它有较 强的氧化性和较强的吸湿性，必须防止外封材质进入LED内部以 成LED的损伤，单一的溴元素含量要求小于900PPM，单 一氯元素含量要求小于900PPM，在涂抹LED产品时要求外封胶溴元素与氯元素总 含量必须小于1500PPM

当我们需 用外封胶涂抹LED产品时，应确保外封胶与LED封 胶水相匹配，因为大多数LED的封 胶水为硅胶，它有较 强的氧化性和较强的吸湿性，必须防止外封材质进入LED内部以 成LED的损伤，单一的溴元素含量要求小于900PPM，单 一氯元素含量要求小于900PPM，在涂抹LED产品时要求外封胶溴元素与氯元素总 含量必须小于1500PPM



其它注意事项请参照我们的LED 用手册

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