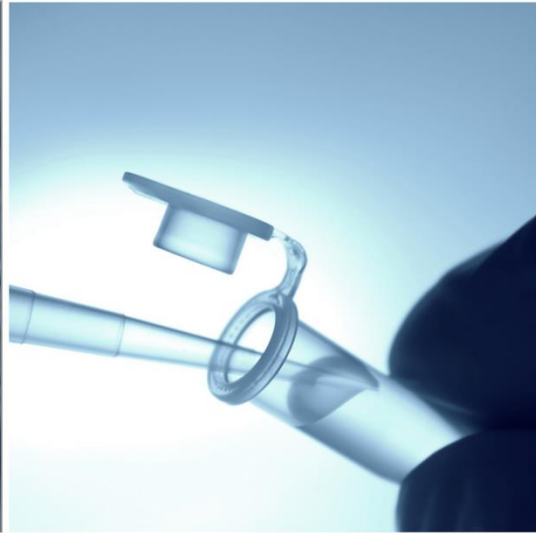
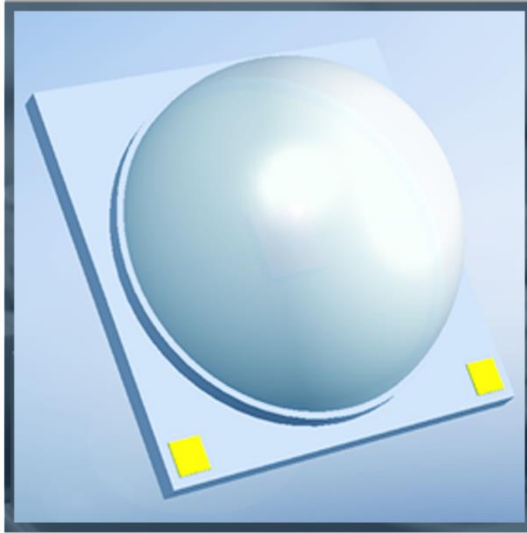


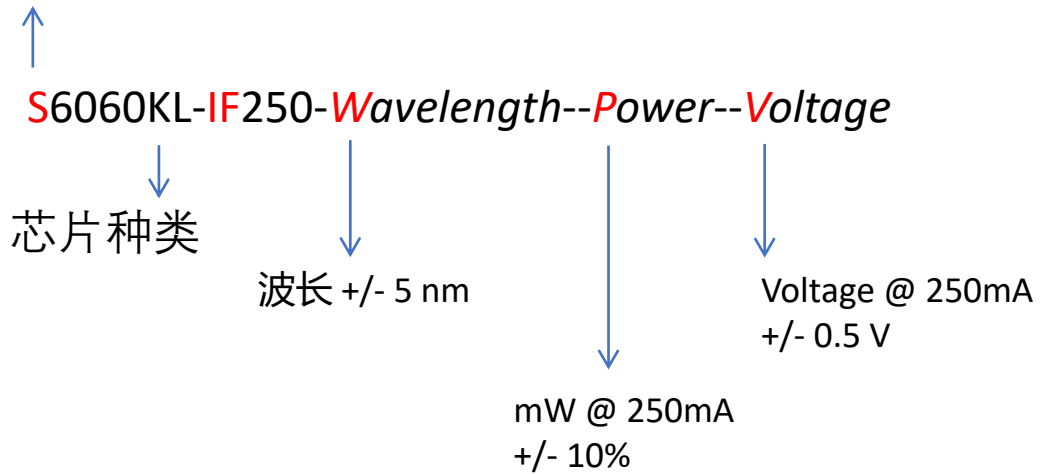
大功率UV-C 发光二极管 产品规格书

6060 SMD Packaged LED

V1.4c February 2020



SMD 类型封装和驱动电流 (mA)



Example:

S6060MH-IF250-W270-P110-V6.0

Interpretation:

表面贴装型6.0 x 6.0 mm封装LED
芯片类型KL
驱动电流 = 250 mA
峰值波长 = 270 +/- 5nm
功率输出 @ 250mA = 110 mW (+/-10%)
正向电压 @ 250mA = 6.0V (+/- 0.5V)

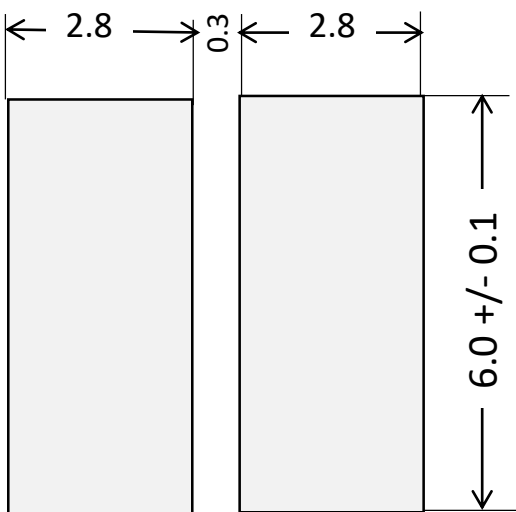
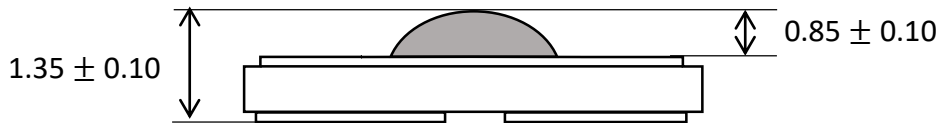
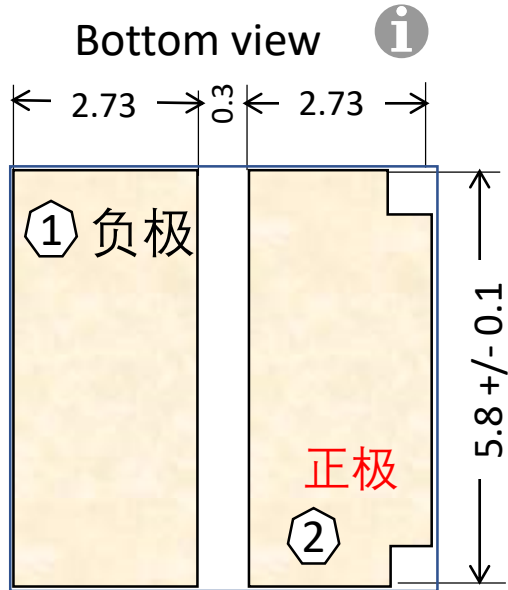
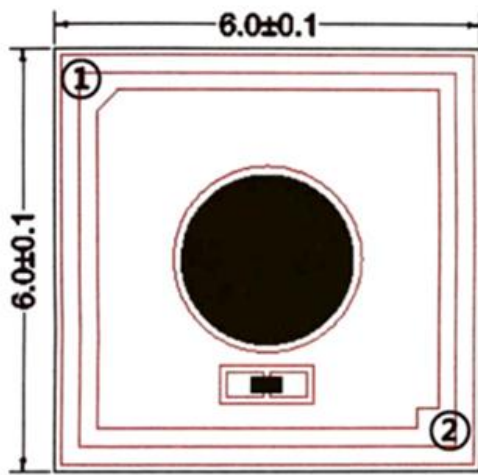
MH 芯片设计电极

MH design 6060 SMD

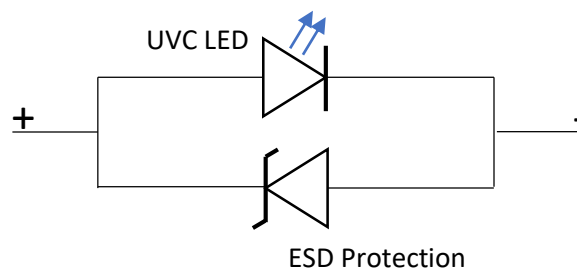
尺寸单位mm

① Cathode (-)

② Anode (+)



Electrical scheme of SMD



图纸不完全按比例绘制
规格如有变更，恕不另行通知

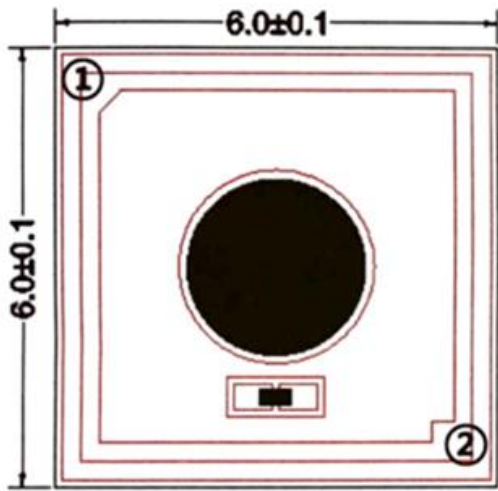
KL与MG芯片设计电极

尺寸单位mm

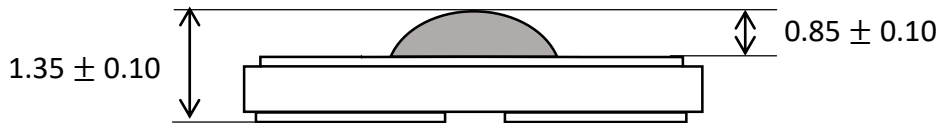
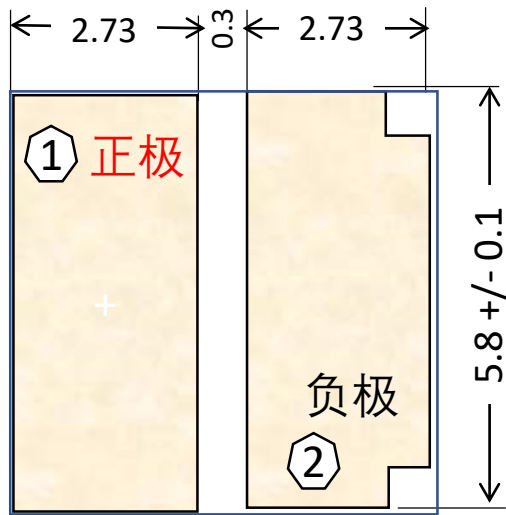
KL and MG designs 6060 SMD

① Anode (+)

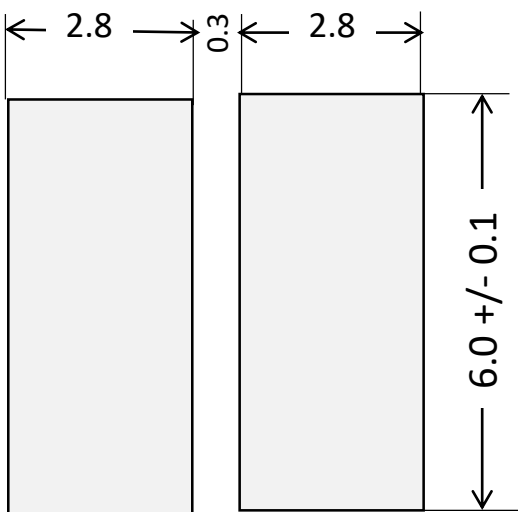
② Cathode (-)



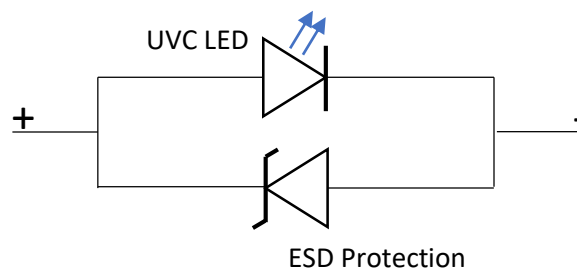
Bottom view



Recommended Solder Pattern on PCB



Electrical scheme of SMD



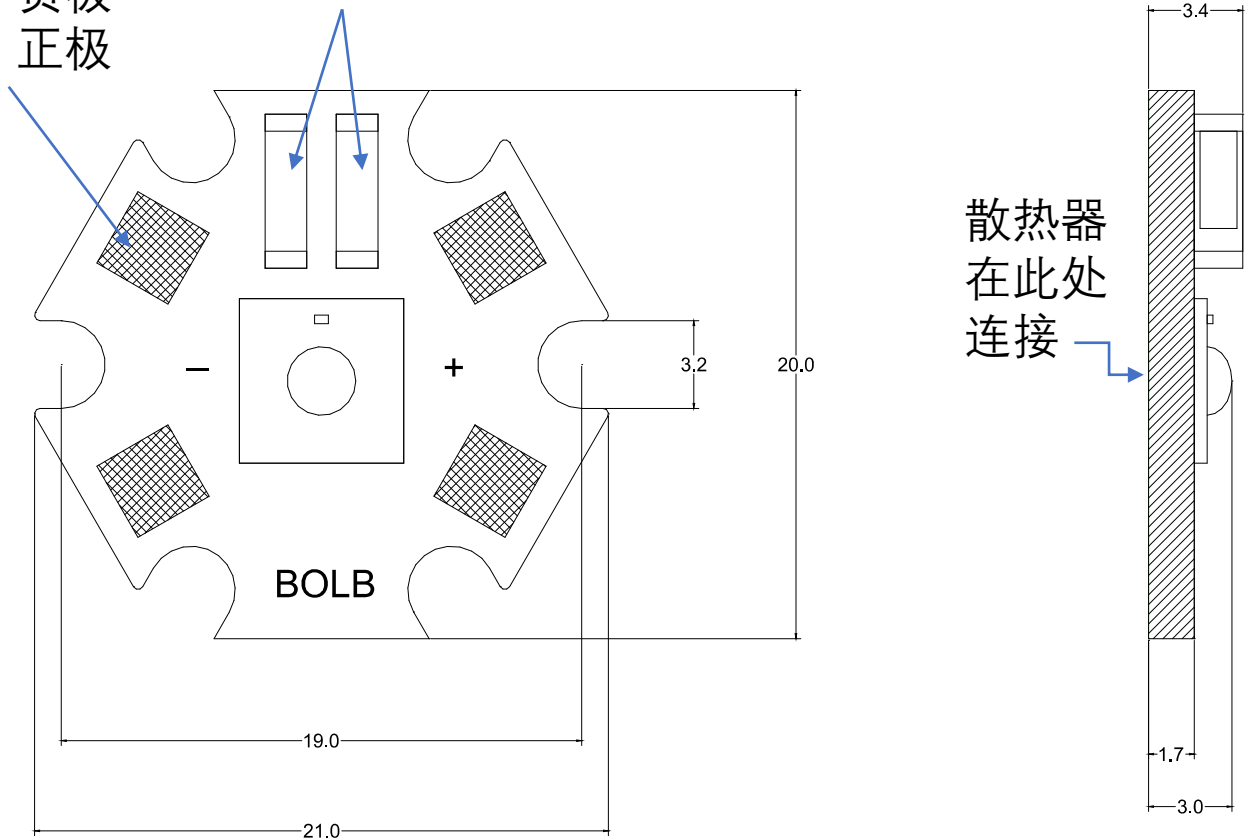
图纸不完全按比例绘制
规格如有变更，恕不另行通知

SMD LED on Hex MCPCB

尺寸单位mm

3x3 mm²焊盘
右边x2: 负极
左边x2: 正极

快速插入式接头
右边负极; 左边正极
0.025" wires (AWG 22 - 25)



产品优势

- 选择通用的可见光LED的MCPCB格式
- 消除回流焊
- 使用0.025英寸电线连接, 即插即用 (AWG 24 or 25)
- 使用更大的接触面以便良好散热
- 命名示例 example:

Hex-S6060-W270-P150-V6.0

TABLE 1. Performance @ 250 mA forward current (25°C 室温, packaged)

参数	符号	单位	最小值	典型值	最大值
峰值波长	λ_p	nm	265	270	277
辐射功率	ϕ_e	mW	80	100	110
			110	120	130
正向电压	VF	V	6.0	6.5	7.0
半峰宽	$\Delta\lambda$	nm		10	
辐射角	$2\theta_{\frac{1}{2}}$	°		150	
热阻	RJ-b	°C/W		<10 (TBD)	

FIG 1. Forward Current vs. Forward Voltage
Please also check typical value and BIN structure on page 8

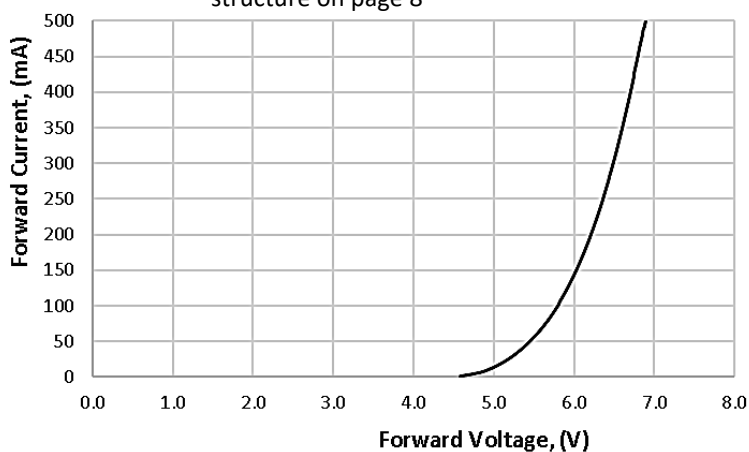


FIG 2. Relative Radiant Flux vs. Forward Current

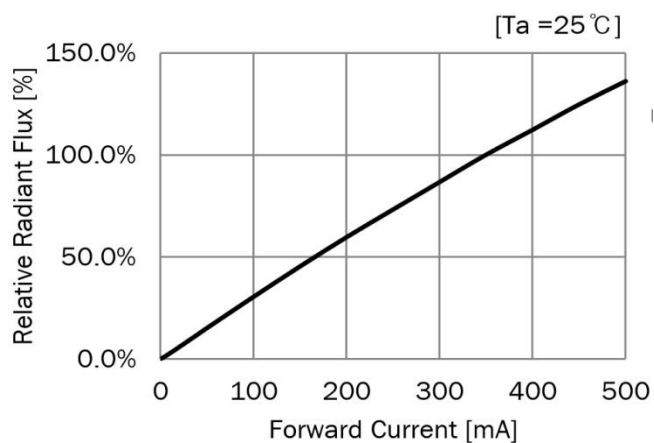


FIG 3. Peak Wavelength vs. Forward Current

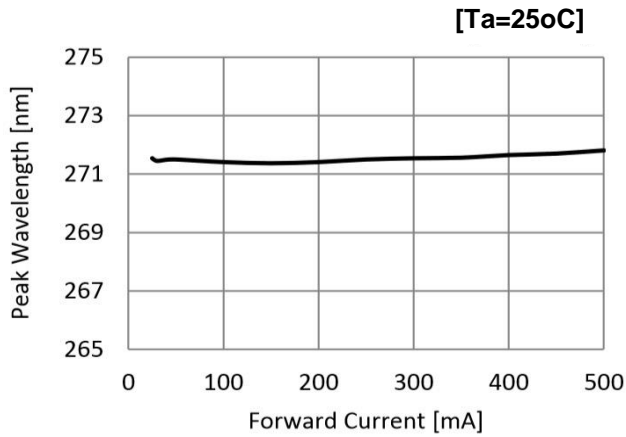


FIG 4. Spectrum 光谱

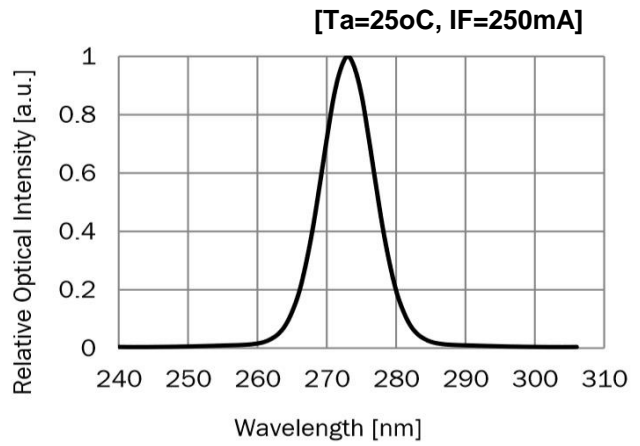


Fig 5. Forward Voltage vs Ambient Temperature

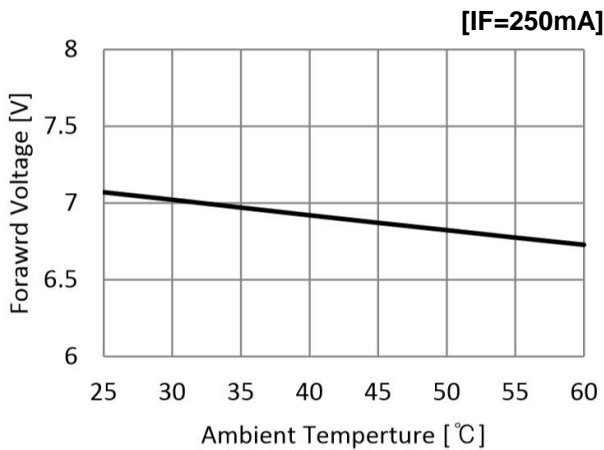


Fig 6. Relative Radiant Flux vs Ambient Temperature

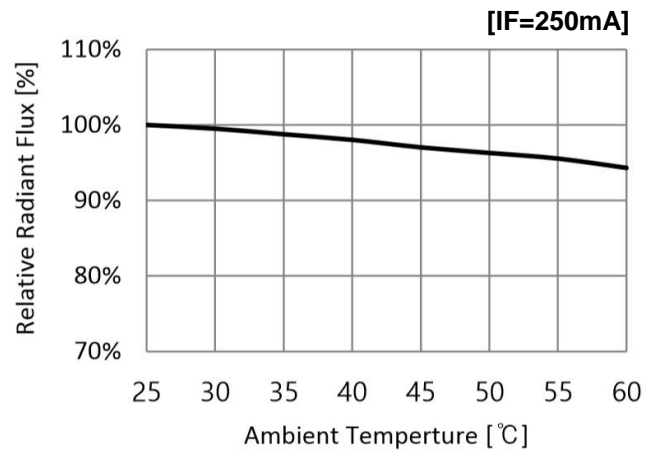


Fig 7. Far-field Emission Pattern

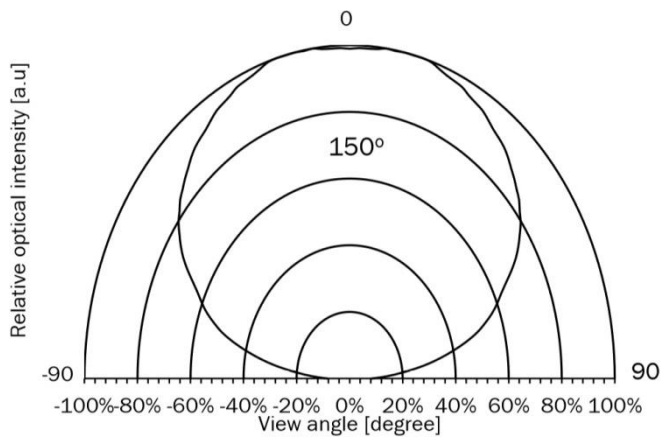


TABLE 2.器件寿命 (forward current =250mA, Tj < 55°C)

Parameter	Symbol	Unit	Min.	Typ.	Max
70% Power Lifetime	L70	hours	850*	1000*	2000*
50% Power Lifetime	L50	hours	1200*	3000*	5000*

*Values subject to change: please inquire about latest update

器件通过4小时65oC的水浸测试而无故障

TABLE 3. Bin Structures

[Ta =25°C, I_F = 250mA]

Designate	Information	Code	Min	Typ.	Max.
W 波长Bin	Peak Wavelength	270	265	270	275
		275	275	277	280
P 功率Bin	Radiant Flux (Φ _e)	80	75	80	85
		90	85	90	95
		100	95	100	105
		110	105	110	115
		120*	115	120	125
		130*	125	130	135
V 电压Bin	Forward Voltage (V)	5.5	5.0	5.5	6.0
		6.5	6.0	6.5	7.0
		7.5	7.0	7.5	8.0

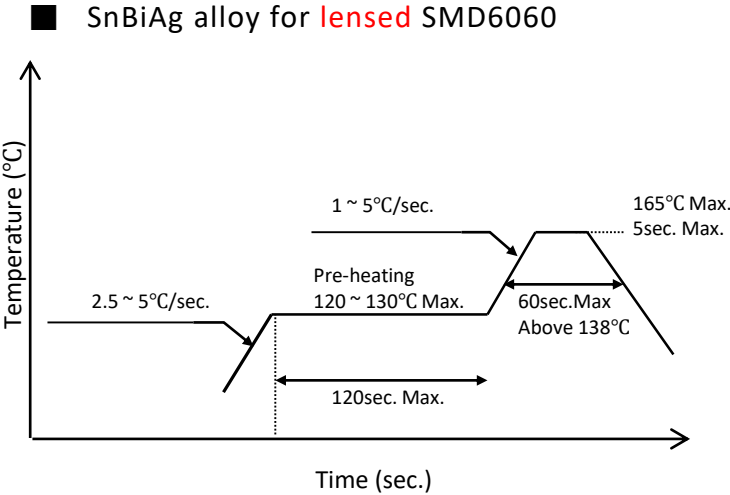
Dominant Bins
常见Bin

*Special Request

Note: Bin Code method

Bin Code (IF-W-P-V): Driving current= IF; Peak Wavelength = W ; Radiant Flux = P ; Forward Voltage = V

FIG 8.回流焊温度曲线



Reflow Soldering Instructions	
	SnBiAg alloy (Melting Temperature=138°C)
Pre-Heating	120 ~ 130°C
Pre-Heat Time	120sec. Max.
Peak Temperature	165°C Max.
Soldering Time	5sec. Max.

- 推荐的焊料成分: Sn42Bi57Ag1 alloy (MP= 138 °C)
 - 推荐的焊锡膏: T3
 - 警告: 焊接超过推荐的温度将会引起发光二极管的永久损坏.
 - 推荐模板厚度为60 ~ 80um
 - 推荐模板锡膏面积为60~80%
 - 为获得最佳结果, 焊接保护气体最好使用 (5%-7%H₂ in N₂) 的合成气体
 - 回流焊后, 应避免快速冷却
 - 焊接时, 不建议在空气环境中使用电热板. 建议使用对流式回流焊炉. (Fig 9.)
- Must not use heat gun (blower) for soldering

FIG 9. Do not use a hot plate to mount led-package onto PCB. A reflow oven is recommended.

静电保护措施

工作场所的设置应遵循JEDEC标准文件JESD625B “处理静电放电敏感 (ESDS) 器件的要求” 或IEC 61340-5-1,2和3中给出的建议。操作人员应接受过按照下列标准处理UVC倒装芯片相应的培训:

- 在操作或处理包含未保护芯片的组装板时, 请始终佩戴能具有持续监控能力的导电腕带。
- 使用离子吹风机来中和可能在储存和处理过程中积聚在UVC倒装芯片表面上的静电。
- 注意要将未使用的UVC倒装芯片一直存放在ESD保护性存储袋中。根据最终应用的不同,也许需要在有UVC倒装芯片的基板上安装其他ESD保护措施, 例如TVS保护二极管。Bolb Inc. 生产的每一个LED 封装里都具有TVS保护芯片。
- 使用镊子拾取UVC LED, 建议使用涂有特氟龙的镊子, 以免刮伤UVC LED。
- 建议用镊子夹取LED的边上, 注意不要划伤 芯片正面 (见图10.)

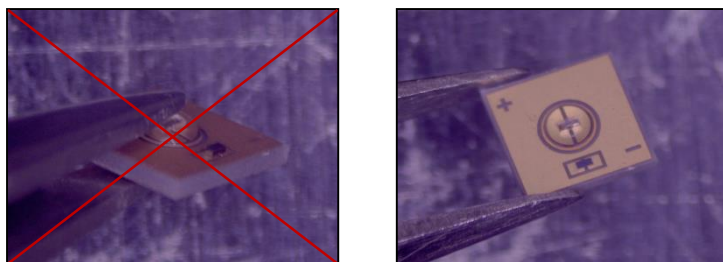
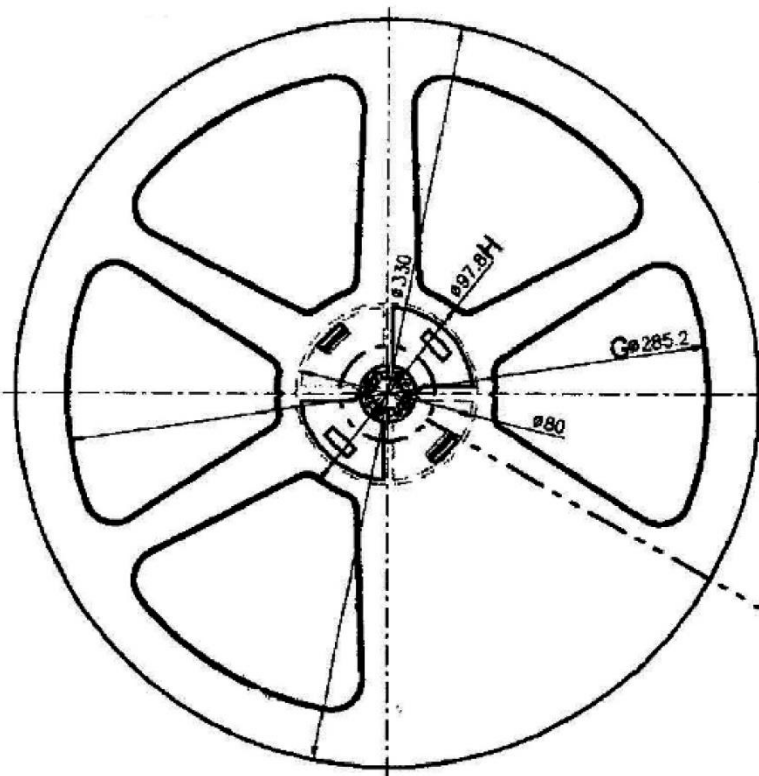
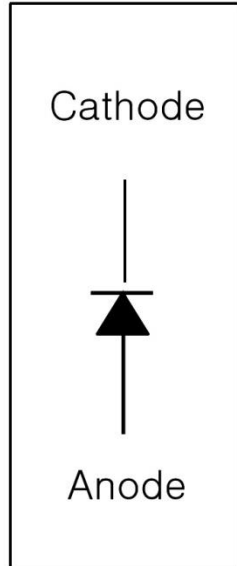
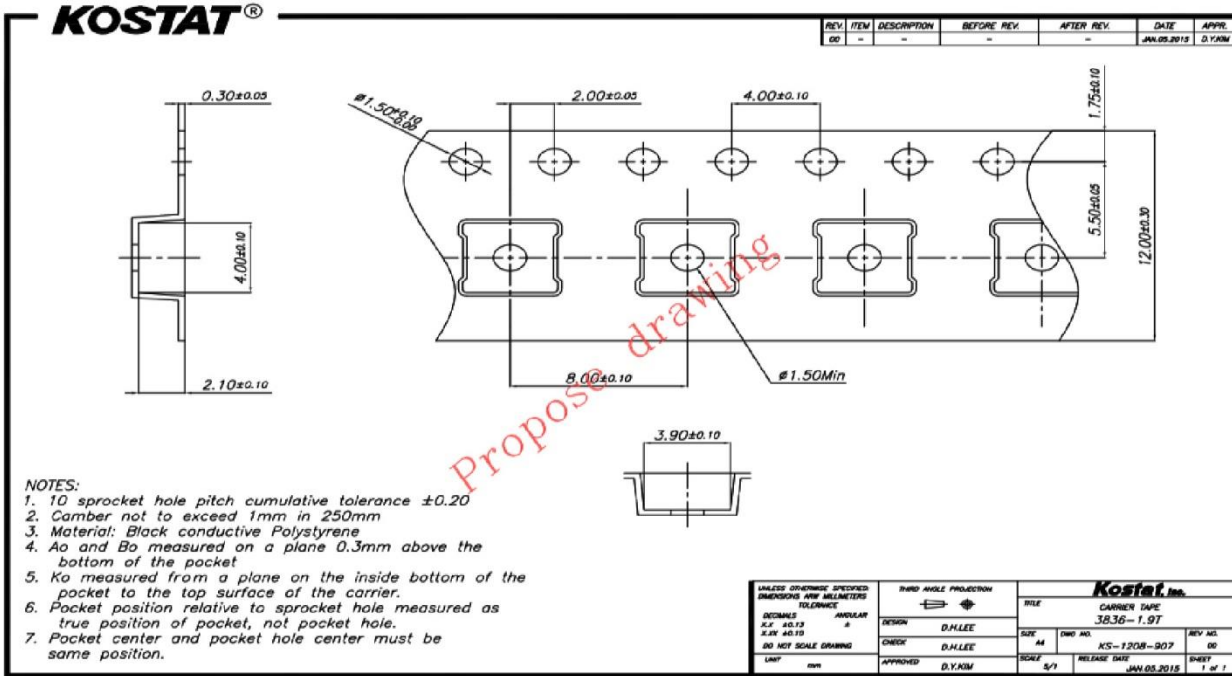


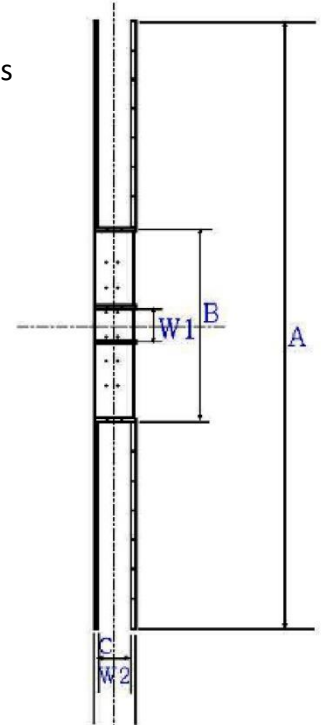
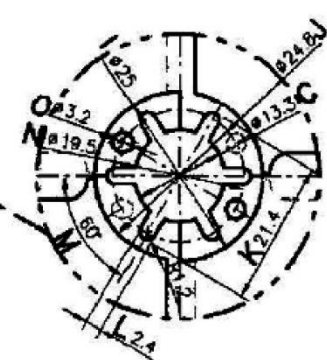
FIG 10. incorrect handling (left) and correct handling (right) of UVC LED Package

Packing

Carrier Tape & Reel Dimensions (unit = mm)



Quantity < 3,000 units/reel
 Cover tape adhesion < 0.7 Newtons
 Leader tape < 200 empty pockets
 Trailer < 60 empty pockets





UVC芯片能发出深紫外线，并且在芯片表面深紫外线辐射强度非常高。这样可以快速消毒，但同时要注意，在组装和测试期间必须严格遵守安全预防措施。

购买此UVC LED，客户必须同意：如果客户未能遵守本规范所包含的预防措施、警告和准则而造成的任何人身伤害的，以及未能采取常识性防护措施的，制造商不负有任何责任。

当UVC LED通电时，所有装配工人，研究人员和旁观者都必须戴好防护眼镜和皮肤保护设备。禁止裸眼观察（包括通过显微镜）和用没有保护的手去操作工作中的UVC LED芯片。

UVC光很容易被吸收，因此，禁止任何油或其他吸收性液体或固体物质接触UVC芯片的蓝宝石表面或封装的LED上的圆顶透镜。请带干净手套操作。

请勿对已包装的LED上的半球形透镜施加任何压力