Specification

规 格 书

Customer Name：

客户名称：_____

Customer P/N：

客户品号：3mm 接收管 PD

Factory P/N：

公司品号：PD302B-09

Part Number：

料号代码：_____

Client approval 客户审核			approval 审核		
Approval 核准	Audit 确认	Confirmation 制作	Approval 核准	Audit 确认	Confirmation 制作
					林荣亮
☐ Qualified 接受		☐ Disqualified 不接受	DATE: 日期：		

注:1.此规格书以中英文方式书写,若有冲突以中文版本为准文本.

2.此规格书的最终解释权归本公司

Features(特征）

- Choice of various viewing angles(选择不同的视角)
- High radiant intensity （高辐射强度）
- Reliable and robust（质量可靠）
- The product itself will remain within RoHS compliant version.（产品本身仍将在通过 RoHS 认证版本）
- Compliance with EU REACH（遵守欧盟 REACH）

Description（描述）

注意：操作时应注意静电敏感

Applications（应用）

■ Optical indicator（光学指示）

■VCRs , Video camera（摄像头）

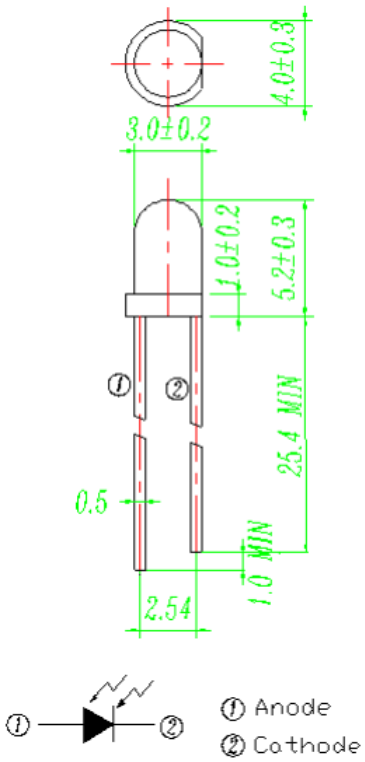
■Floppy disk drive（软盘驱动器）

■Infrared applied system（红外应用系统）

■Optoelectronic switch（光电开关）

■ General use（一般应用）

Package Dimensions（封装尺寸）



Notes:（备注）

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

2.All dimension tolerance is ±0.15mm unless otherwise noted.（除特别标注外，所有尺寸允许公差±0.15mm ）

Selection Guide（选择指南

Part No. 型号	Dice	Lens Type 胶体类型
PD302B-09	PD	Black

上述发光强度的测试允许公差为±10%

Electrical / Optical Characteristics at Ta=25°C　　电性与光学特性

Parameter 参数		Test Condition 测试条件	Symbol 符号	Value 值 Min.	Typ.	Max.	Unit 单位
Collector-Emitter Breakdown Voltage	集电极-发射极击穿电压	I_R=100uA E_e=0mW/cm^2	Bvceo	60	--	--	V
Emitter-Collector Breakdown Voltage	发射极-集电极击穿电压	I_R =100uA E_e=0mW/ cm^2	Bveco	5	--	--	V
Collector Emitter Saturation voltage	集电电极-发射极饱和电压	I_c =2mA E_e=0.5mW/ cm^2	Bvc(sat)		--	0.4	V
Rise Time	开启时间	VCE=5V　IC=1Ma RL=1KΩ	Tr		15	--	us
Fall Time	关闭时间	VCE=5V　IC=1Ma RL=1KΩ	Tf	--	15	--	us
Collector Dark Current	暗电流	VCE=5V Ee=0mW/cm2	ICEO	--	--	0.1	Ua
Range of spectral bandwidth			λ 0.5	850	---	1100	Nm
On State Collector Current	光电流	VCE=5V Ee=0.5mW/cm2 λ =940nm	ICEO	2	--	6	mA

Absolute Maximum Ratings at Ta=25°C 绝对最大额定值

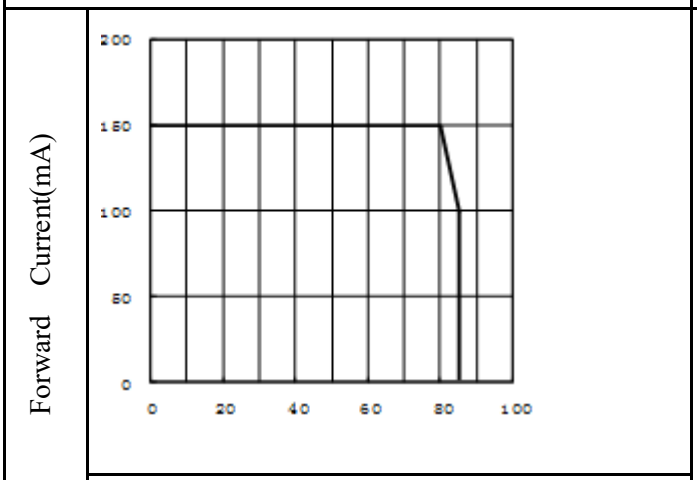
Absolute maximum ratings at Ta=25℃

Parameter 参数		Symbol 符号	Value 数值	Unit 单位
Power dissipation	功率耗损	Pd	100	mW
Collector-Emitter Voltage	集电极-发射极电压	Vceo	30	V
Emitter-Collector Voltage	发射极-集电极电压	Veco	5	V
Operating temperature range	工作温度范围	Top	-30 ~+85	℃
Storage temperature range	贮存温度范围	Tstg	-40~+100	℃
Soldering Temperature	焊接温度	Tsol	Max.260° C for 8 sec Max.	
Electrostatic Discharge	抗静电能力	ESD	2000(HBM)	V

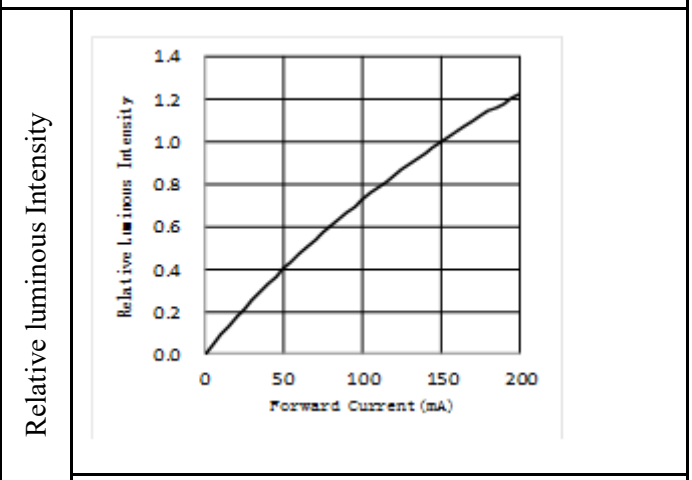
Note:（备注）
1. 1/10 Duty cycle, 0.1ms pulse width.（脉宽 0.1ms, 周期 1/10）
2. The above forward voltage measurement allowance tolerance is ±0.1V.（以上所示电压测量误差±0.1V）
3. The above dominate wavelength measurement allowance tolerance is ±1nm.（以上所示波长测量误差±1nm）

Typical optical characteristics curves 典型光学特性曲线

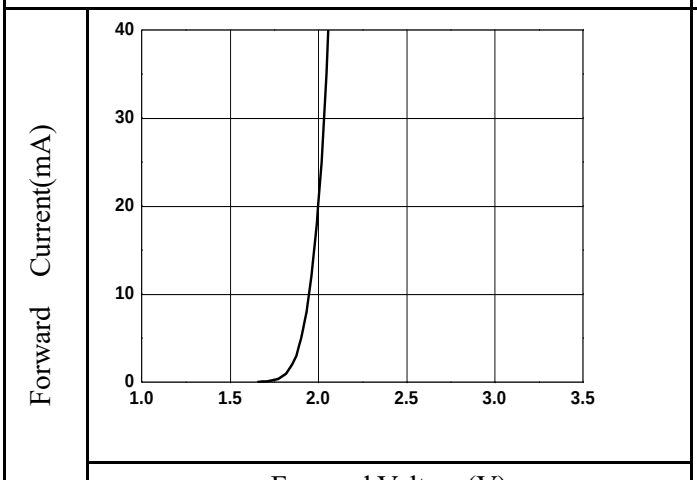
Ambient Temperature vs. Forward Current
环境温度与正向电流特性曲线



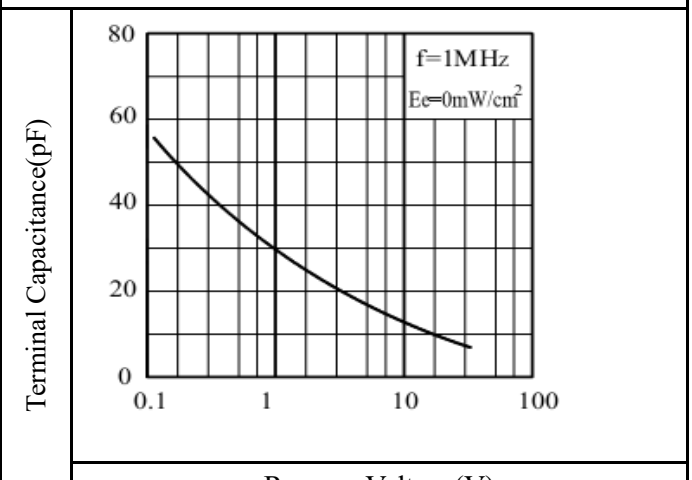
Forward Current VS. Relative Intensity
正向电流与相对光强特性曲线



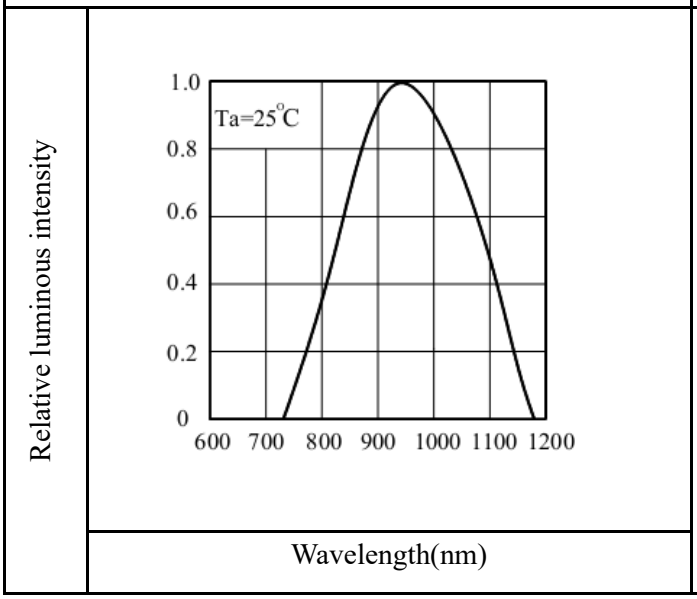
Forward Voltage VS. Forward Current
正向电压与正向电流特性曲线



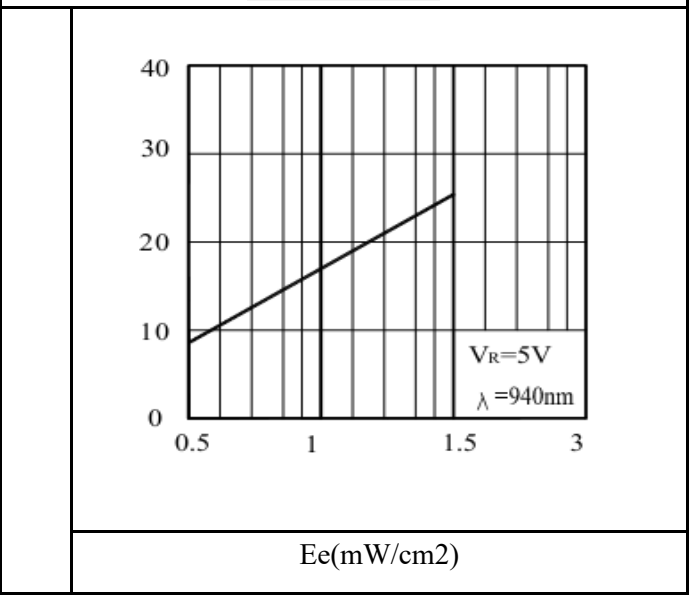
Terminal Capacitance vs. Reverse Voltage
终端电容与反向电压



Relative spectral emission
相对光谱分布特性曲线



Reverse Light Current vs. Ee
反向光电流与辐射



Reliability Test Items And Conditions 信赖性测试项目及条件

Test Items 项目	Ref. Standard 参考标准	Test Condition 测试条件	Time 时间	Quantity 数量	Ac/Re 接收/拒收
Reflow 回流焊	JESD22-B106	Temp:260℃max T=10 sec	3 times.	22Pcs.	0/1
Temperature Cycle 温度循环	JESD22-A104	100 ℃ ±5 ℃ 30 min. ↑↓5 min -40 ℃ ±5 ℃ 30 min.	100 Cycles	22Pcs.	0/1
High Temperature Storage 高温保存	JESD22-A103	Temp:100℃±5℃	1000Hrs.	22Pcs.	0/1
Low Temperature Storage 低温保存	JESD22-A119	Temp:-40℃±5℃	1000Hrs.	22Pcs.	0/1
Life Test 常温通电	JESD22-A108	Ta=25℃±5℃ IF=20mA	1000Hrs.	22Pcs.	0/1
High Temperature High Humidity Life Test 高温高湿通电	JESD22-A101	85 ℃ ±5 ℃ / 85%RH IF=100mA	1000Hrs.	22Pcs.	0/1

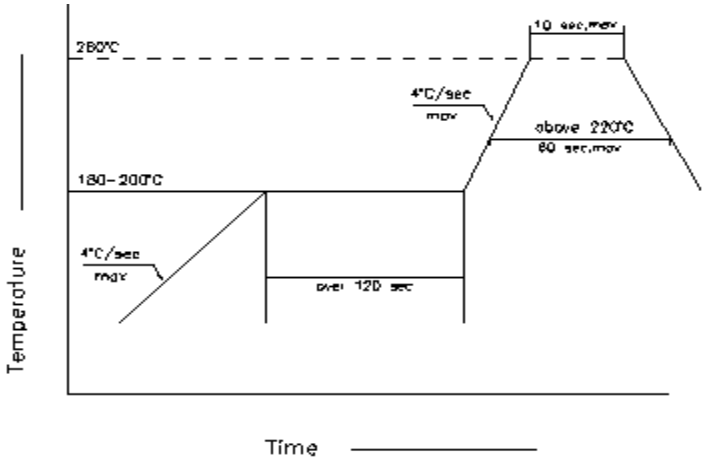
Failure Criteria 失效判定标准

Test Items 项目	Symbol 符号	Test Condition 测试条件	Failure Criteria 判定标准	
			Min. 最小	Max. 最大
Forward Voltage 正向电压	VF	IF=20mA	- -	U.S.L*)x1.1
Reverse Current 反向电流	IR	VR = 5V	- -	U.S.L*)x2.0
Luminous Flux 光通量	mcd	IF=20mA	L.S.L*)x0.7	- -

U.S.L: Upper Specification Limit 规格上限 L.S.L: Lower Specification Limit 规格下限

*The technical information shown in the data sheets is limited to the typical characteristics and circuit examples of the referenced products. It does not constitute the warranting of industrial property nor the granting of any license.
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.

SMT Reflow Soldering Instructions SMT 回流焊说明



1.Reflow soldering should not be done more than two times. 回流焊不可以做两次以上

2.When soldering , do not put stress on the LEDs during heating

当焊接时，不要在材料受热时用力压胶体表面

Soldering iron 烙铁焊接

1.When hand soldering, keep the temperature of iron below less 300℃ less than 3 seconds

当手工焊接时，烙铁的温度必须小于 300℃，时间不可超过 3 秒

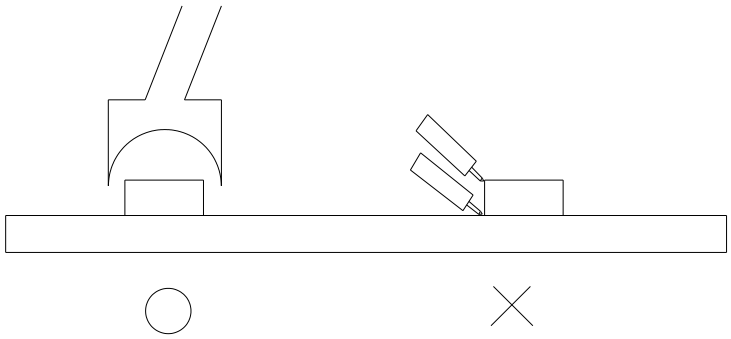
2.The hand solder should be done only one times

手工焊接只可焊接一次

Repairing 修补

Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as below figure). It should be confirmed in advance whether the characteristics of LEDs will or will not be damaged by repairing.

LED 回流焊后不应该修复，当修复是不可避免时，必须使用双头烙铁（如下图），但必须事先确认此种方式会或不会损坏 LED 本身的特性。



Cautions 注意事项

The encapsulated material of the LEDs is silicone. Therefore the LEDs have a soft surface on the top of package. The pressure to the top surface will be influence to the reliability of the LEDs. Precautions should be taken to avoid the strong pressure on the encapsulated part. So when use the picking up nozzle, the pressure on the silicone resin should be proper.

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，因此应有预防措施避免在封装的零件上的强大压力

4.Other points for attention, please refer to our LED user manual.

其它注意事项请参照我们的 LED 使用手册

Label 标签

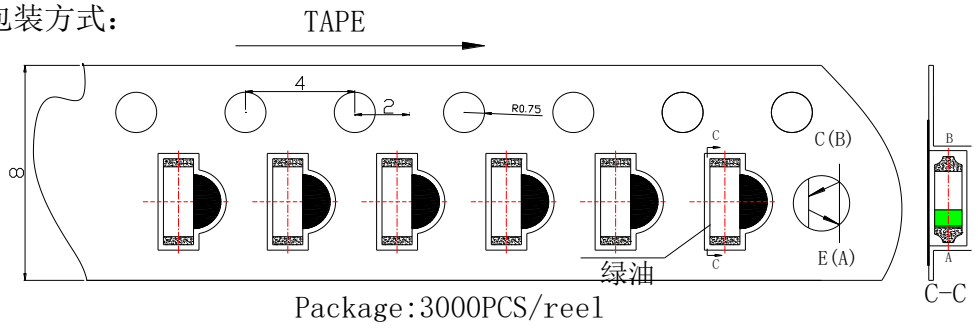
IV: Luminous intensity rank 亮度等级

WD: Dominate Wavelength 波长等级

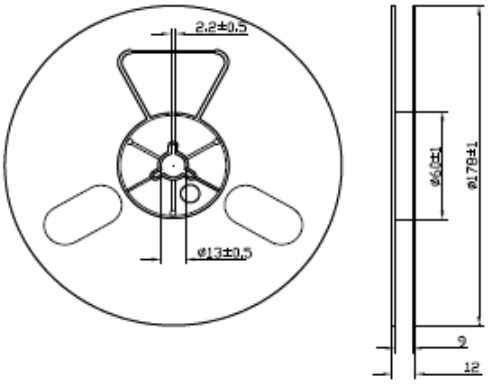
VF: Forward voltage rank 电压等级

Tape Specifications (Units : mm) (500PCS/Bag) 载带规格（单位：mm）

包装方式：

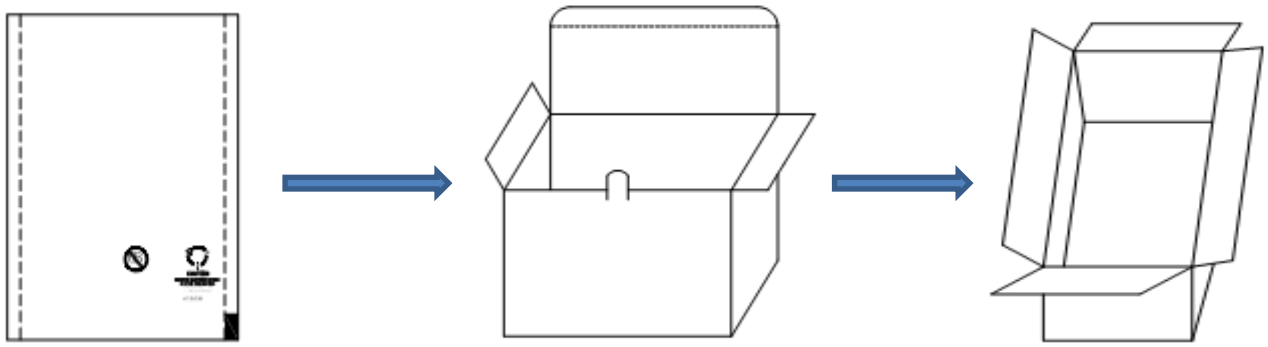


Package:3000PCS/reel



■ Anti-electrost

■ Outside Carton



Note: The tolerances unless mentioned is ±0.1mm , Unit: mm 注：标注公差为±0.1mm ，单位：mm