

Specification

规格书

Customer Name:

客户名称: _____

Customer P/N:

客户品名: _____

Factory P/N:

公司品名: _____

(双波紫外)

Rev.:

版次: _____

V01

Date:

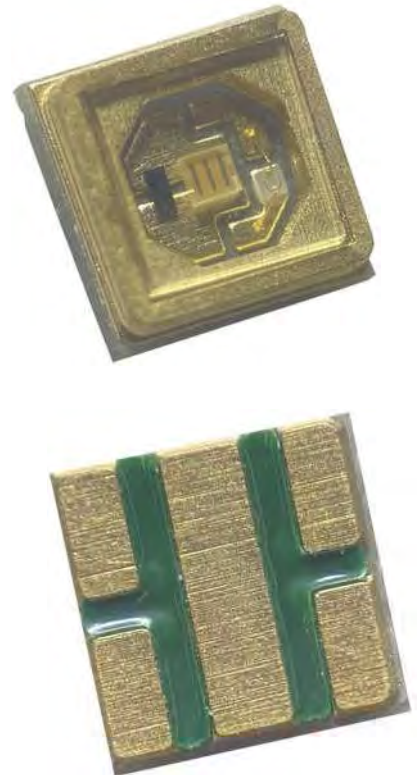
日期: _____

2020.2.21

Client approval			Lei Ri approval		
Approved	Checked	Audit	Approved	Checked	Prepared
<input type="checkbox"/> Qualified <input type="checkbox"/> Disqualified 接受 不接受			DATE: 日期: 2020-03-02		

■ Features 特点

- Deep ultraviolet LED
深紫外LED
- ●Cu Cavity AlN Au-plating Ceramic Package
铜杯氮化铝镀金陶瓷封装
- Dimension 3.50mm* 3.50mm* 1.47mm
封装尺寸：长*宽*后=3.5mm*3.5mm*1.47
- High Luminous Efficiency
发光效率高
- Long Operation Life
使用寿命长
- High anti-ESD Ability
抗静电能力强
- RoHS compliant
环保符合RoHS

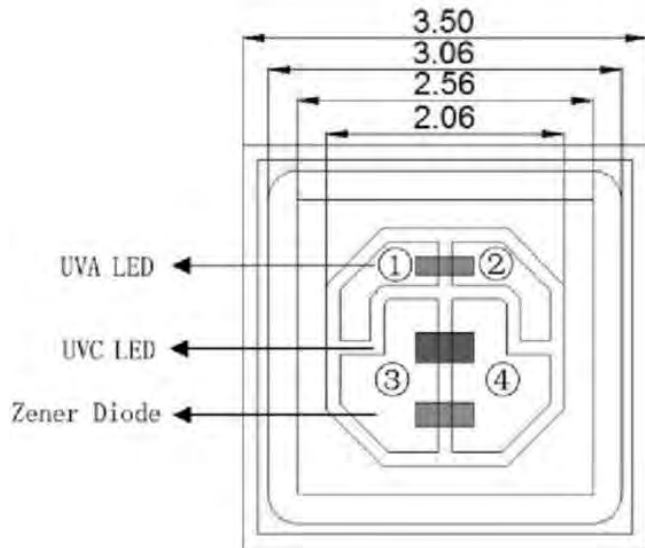


■ Applcatons 应用

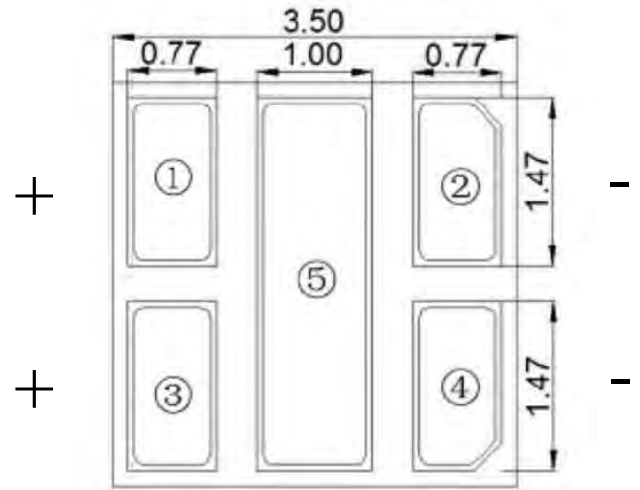
- UV Security Check
紫外线安检
- UV Sterilization System
紫外线消毒系统
- UV Photo-catalyst
紫外线光催化剂
- UV Sensor Light
紫外线感应灯
- UV Jewelry Appraisal
紫外线珠宝鉴定
- UV Plant Growth
紫外线植物生长

Package Dimensions 封装尺寸:

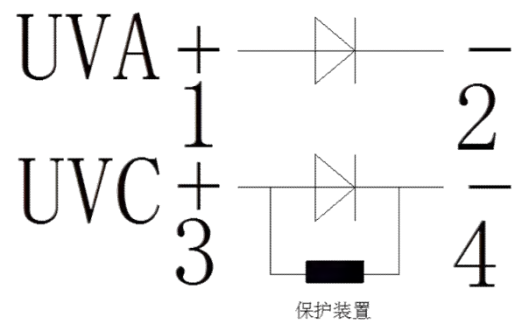
Top View



Bottom View



Side View



Notes: (备注)

1. All dimensions are in millimeters (所有标注尺寸单位为毫米)
2. All dimensions tolerance are $\pm 0.25\text{mm}$ unless otherwise noted. (除特别标注外, 所有尺寸允许公差 $\pm 0.25\text{mm}$)

■ Absolute Maximum Ratings@Ta=25°C 绝对最大额定值在 Ta=25°C

Item 名称	Symbol 符号	Absolute Maximum Rating 绝对最大额定值	Units 单位
Power dissipation[1] 功耗	Pd	0.5	W
DC Forward Current[1] 正向电流	I _F	60	mA
Reverse Voltage[1] 反向电压	VR	5	V
Operating Temperature 工作温度范围	Topr	-20°C - +60°C	
Storage Temperature 储存温度范围	Tstg	-40°C - +100°C	

■ Typical Optical/ Electrical Characteristics @T_a=25°C 典型的光学/电气特性在 T_a=25°C

Parameter (参数)		Symbol (符号)	Conditions (测试条件)	Min. (最小值)	Avg. (平均值)	Max. (最大值)	Units (单位)
Luminous Power (辐射功率)	UVA	Φ _e	IF=60mA	80	--	100	mW
	UVC	Φ _e	IF=30mA	2	--	6	
Peak Wavelength (峰值波长)	UVA	λ _P	IF=60mA	395	--	400	nm
	UVC		IF=30mA	265	--	280	
Forward Voltage (顺向电压)	UVA	V _F	IF=60mA	3.0	--	3.6	V
	UVC		IF=30mA	5	--	8	
Reverse leakage Current (反向漏电流)		IR	VR=5V	--	--	10	μA
Viewing Angle[1] (发光角度)		2θ _{1/2}	IF=30mA	--	120	--	degrees

Note: (备注)

1. 2θ_{1/2} is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

1. 2θ_{1/2} 是半值角, 指光强是光学中心线光强的1/2处到光学中心线的角度

2. The above Radiant Flux measurement allowance tolerance is ±10%.

上述的辐射通量测试允许公差为±10%

3. The above forward voltage measurement allowance tolerance is ±0.1V.

以上所示电压测量误差±0.1V

Bin Range of Forward Voltage 电压分档

Group	Bin Code	Min.	Max.	Unit	Condition
UVC	A	5.0	5.5	V	60mA
	B	5.5	6.0		
	C	6.0	6.5		
	D	6.5	7		
	E	7	7.5		
	F	7.5	8		
UVA	K	3.0	3.2		
	L	3.2	3.4		
	M	3.4	3.6		

Bin Range of Power density 辐射功率分档

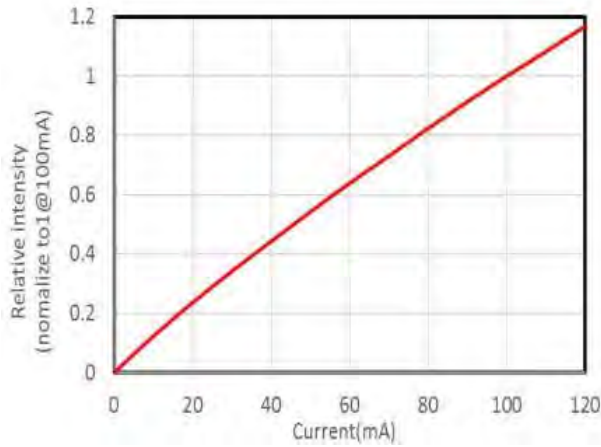
Bin Code	Min.	Max.	Unit	Condition
UVC-1	2	6	mW	30mA
UVA-1	80	100	mW	60mA

Bin Range of Peak Wavelength 峰值波长分档

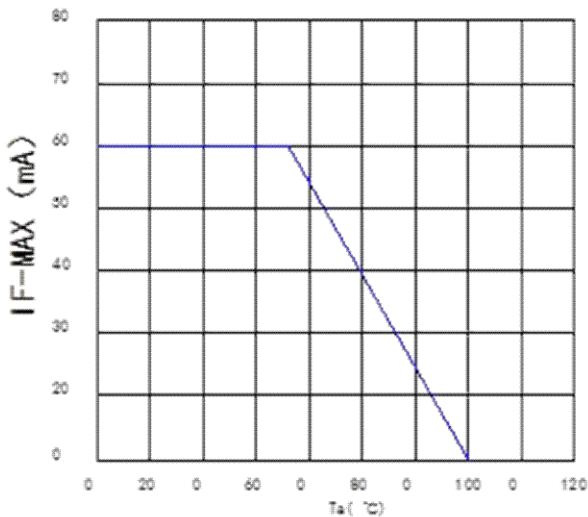
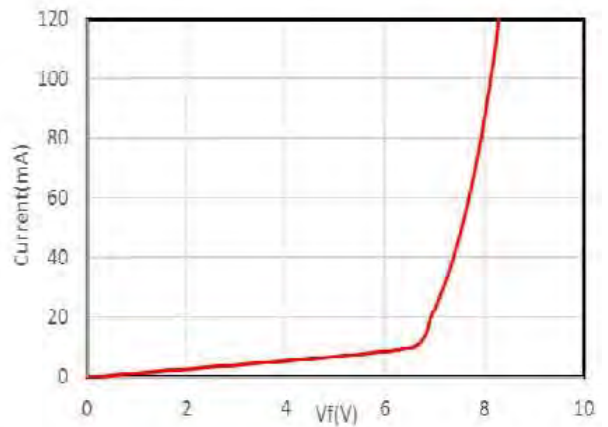
Bin Code	Min.	Max.	Unit	Condition
U26	265	270	NM	60mA
U27	270	275		
U28	275	280		
U39	395	400		

■ **Typical Optical/Electrical Characteristics Curves** 典型光学/电性特征曲线
 (Ta=25°C Unless Otherwise Noted) (Ta=25°C 除非另有注释)

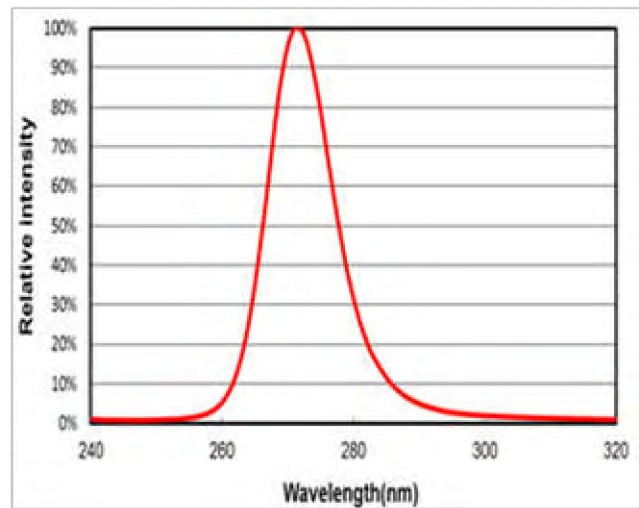
Radiant flux (Φ_e) vs Current (IF)



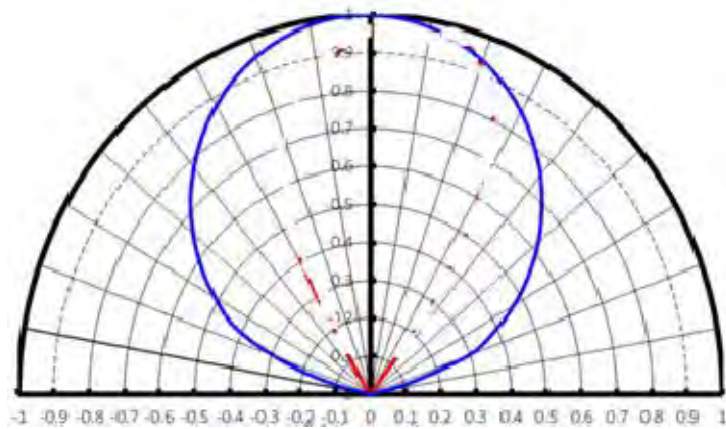
Current (IF) vs Voltage (VF)



Forward Current VS Ambient Temperature



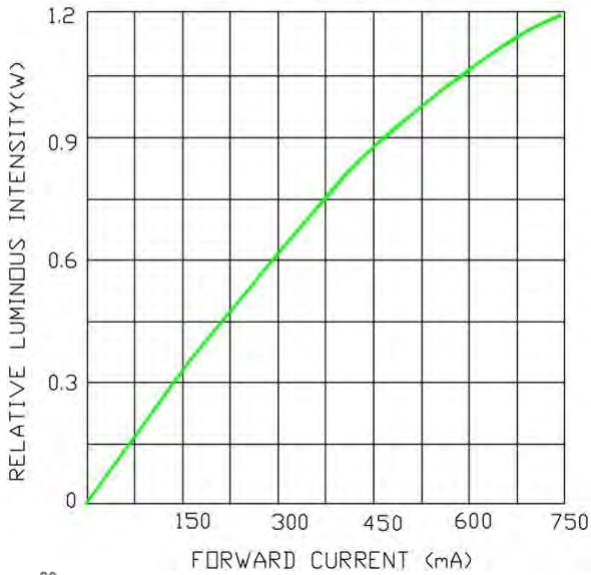
Spatial radiation pattern



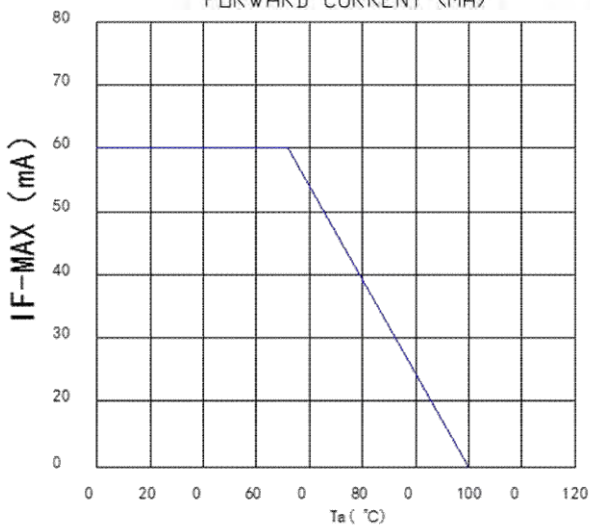
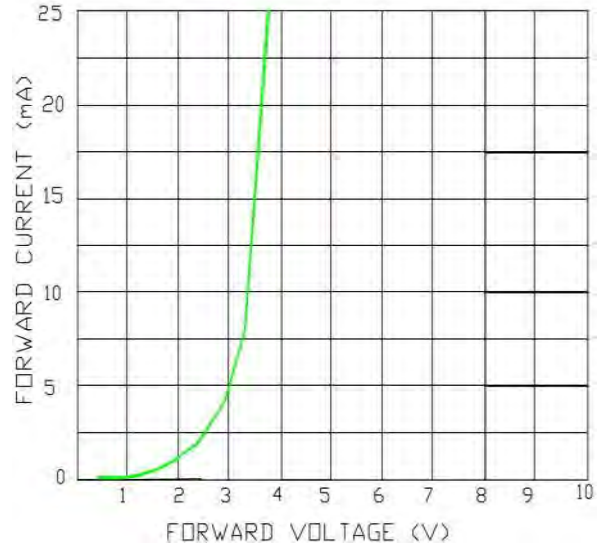
■ Typical Optical/Electrical Characteristics Curves 典型光学/电性特征曲线

(Ta=25°C Unless Otherwise Noted) (Ta=25°C 除非另有注释)

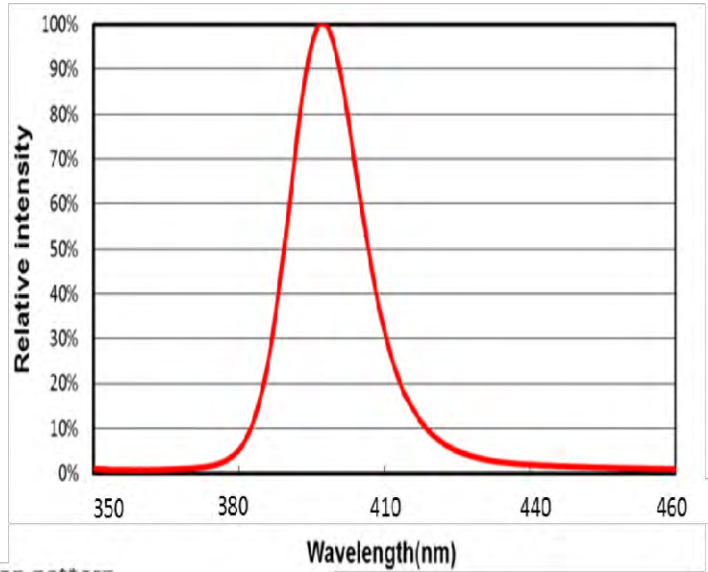
RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



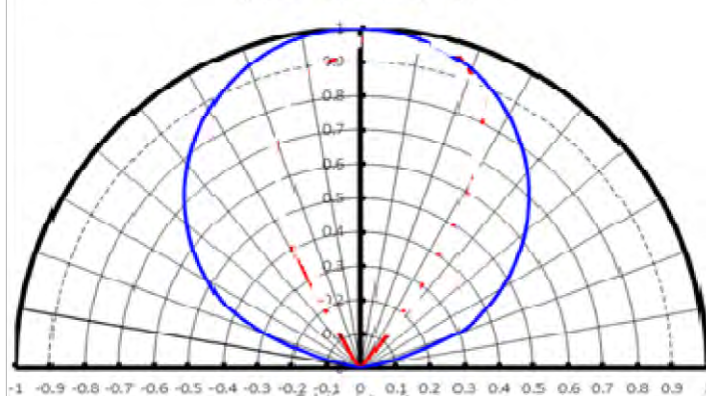
FORWARD CURRENT VS. FORWARD VOLTAGE



Forward Current VS Ambient Temperature



Spatial radiation pattern



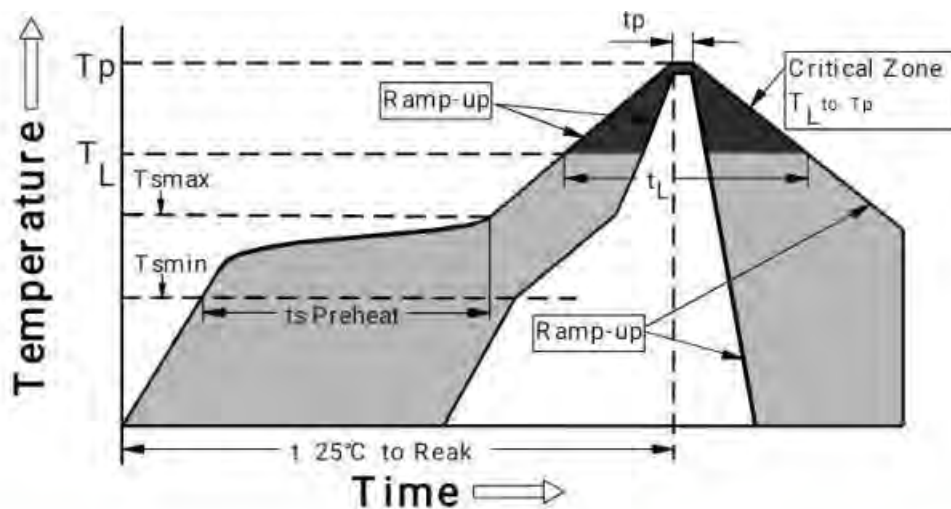
■ Soldering 焊接:

1. Manual Soldering 手工焊接

The temperature of the iron tip should not be higher than 350°C and Soldering time to be within 3seconds per solder-pad. 烙铁头温度不高于 350°C，每个焊点焊接时间不超过 3 秒。

2. Reflow Soldering Characteristics 回流焊焊接

Temperature Profile



Profile Feature	Sn-Pb Eutectic Assembly
Average Ramp-Up Rate ($T_{smax.}$ to T_p)	3°C / second max.
Preheat Temperature Min. ($T_{smin.}$)	100°C
Preheat Temperature Max. ($T_{smax.}$)	150°C
Preheat Time ($t_{smin.}$ to $t_{smax.}$)	60-120 seconds
Time Maintained Above Temperature (T_L)	183°C
Time Maintained Above Time (t_L)	60-150 seconds
Peak / Classification Temperature (T_p)	215°C
Time Within 5°C of Actual Peak Temperature (t_p)	10-30 seconds
Ramp - Down Rate	6°C / second max.
Time 25°C to Peak Temperature	6 minutes max.

● Lens Cleaning :

In the case where a minimal level of dirt and dust particles can not be guaranteed, a suitable cleaning solution can be applied to the lens surface

在不能保证灰尘和灰尘颗粒含量最低的情况下，一个合适的清洗液可涂在镜头表面

1. Try a gentle swabbing using a lint-free swab

1. 使用不起毛的棉签轻轻擦拭

2. If needed, the use of lint-free swab and isopropyl alcohol used gently removes dirt from the lens surface

2 可使用棉签+异丙醇擦拭 LED Lens

3 Do not use other solvents as they may directly react with the LED assembly 不要使用其他溶剂，因

3. 为它们可能与LED 组件直接反应，破坏LED 结构。

4 Do not use ultrasonic cleaning that the LED will be damaged

4. 不要使用超声波清洗，以免损坏LED。

● Handling:

Care must be taken not to damage LED' s silicon while exposing to high temperature or contact LED' s epoxy resin with hard or sharp objects, such as metal hook, tweezer or sand blasting. 当LED 处于高温状态是，要注意避免环氧树脂与硬或尖锐的物体（如金属钩，镊子或喷砂）触碰 LED，而造成损坏

● Storage Conditions :

1、 Before the package is opened :The LEDs should be stored at 30° C or less and 85%RH or less after being shipped from Everlight and the storage life limits are 1 year. The LEDs can be stored up to 3 years if in a sealed container with a nitrogen atmosphere and moisture absorbent material.

1、 包装打开前:led 应储存在 30℃以下，湿度 85%RH 以下储存，储存期限为 1 年。如果在密封的容器中，使用氮气及吸湿材料，则可保存 3 年

2、 After opening the package: The LED' s floor life is 168hrs when environment is 30℃ or less and 60%RH or less. The LED should be soldered within 168hrs (7days) after opening the package.

If unused LEDs remain, it should be stored in moisture proof packages.

2、 打开包装后: 温度 30℃以下，湿度 60%RH 或以下， LED 使用寿命为 168hrs。LED 应在打开包装后的 168hrs (7 天)内进行焊接。如未使用完材料可放在防潮柜存放。

3、 If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions. Baking treatment: 60±5℃ for 24 hours.

3、如果吸湿材料(硅胶)已经退色或已经超过贮存时间，需要烘烤处理，烘烤条件： $60\pm 5^{\circ}\text{C}$ ，24 小时。

● ESD

Static electricity and high volt can damage led, The production whose Die material is InGaN must strictly required to prevent ESD, Must put on static glove and static fillet, Soldering tool and the cover of device must connect the ground, oldering condition follows the related stating of production specification manual.

静电和高压会损坏 led，其生产工装、治具、模具必须的严格要求防止静电，必须戴上静电手套和静电手环，并将其与焊锡工具连接设备外壳必须接地，老化情况符合有关规定生产规范手册。



●Eye Safety

1、Please proceed with caution when handling any UVLEDs driven at low or high current. Since UV light can be harmful to eyes and skin, do Not look directly into the UV light, even through anoptical instrument.

在处理低电流或高电流驱动 UV LED 时，请小心操作。由于紫外线对眼睛、皮肤有害，即使通过非光学仪器，也不要直视紫外线。

2、UV protective glasses are required to use in order to avoid damage by UV light in case of viewing UV light directly.

需要使用紫外线防护眼镜，以避免在直接观看紫外线时受到紫外线的损害。

■ Tape Specifications(Units:mm)载带规格 (单位:mm)

● 包装数量: 1K/盘

