

产品特征 Product features

- * 叠层隧道结技术
Stacked Tunnel Junction Technology
- * 光功率峰值高达25瓦
Optical peak power up to 25 W
- * 激光波长：905纳米
Laser wavelength 905 nm
- * 适用于1至100纳秒的短激光脉冲
Suited for short laser pulses from 1 to 100 ns
- * 激光孔径：200 μm × 10 μm
Laser aperture 200 μm x 10 μm ;
- * 湿气敏感性等级（MSL）：2级
Moisture sensitivity level (MSL) : 2levels
- * 环保产品，符合ROHS要求
Environmental protection products meet ROHS requirements



模型图仅供参考

应用领域 Applications

- * 激光雷达（LiDAR/Tof）与测距
Lidar (LiDAR/Tof) and Range Measurement
- * 工业检测与安全传感
Industrial Detection and Safety Sensing
- * 医疗与生物光子学
Medical and Biophotonics
- * 军事与国防
Military and National Defense
- * 科研与量子技术
Research and Quantum Technology
- * 消费电子与安防
Consumer Electronics and Security Systems



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特性参数

natural parameter

极限参数 (Absolute Maximum Ratings) (Ta=25°C)

参数 parameter	符号 symbol	典型数值 Typical Value	单位 unit
功率 power	Po	25	w
工作模式 work pattern	脉冲Pulsed		
阈值电流 Threshold Current	Ith	1	A
工作电流 Working Current	Iop	13	A
工作电压 working voltage	Vop	15	V
工作脉宽 Work Pulse Width	T	100	ns
重复频率 repeat frequency rate	f	5	KHZ
占空比 Occupancy Ratio	D	0.05%	-
工作温度 working temperature	Topr	-20 ~ 85	°C
存储温度 Storage Temperature	Tstg	-40 ~ 85	°C
波长温度系数 Wavelength temperature coefficient	-	0.28	nm/°C
焊接条件 Welding conditions	Tsol	波峰焊 (reflow soldering) : 240°C, ≤ 6s 手动焊 (manual welding) : 300°C, 3s	

光特性参数 (Optical Property Parameters) (Ta=25°C)

参数 parameter	符号 symbol	典型数值 Typical Value	单位 unit
中心波长 Central wavelength	λ	905	nm
波长公差 Wavelength Tolerance	λ_0	± 10	nm
光谱宽度 spectrum width	$\Delta\lambda$	≤ 5	nm
发光尺寸 Luminance Size	L	70*10	um.um
光束发散角 beam divergence angle	$\theta_{\perp}$	≤ 28	°
		≤ 10	°
光束指向性 Beam Directionality	$\theta_{\parallel}$	$\leq \pm 1.5$	°

备注: remarks :

[1] $\theta_{\perp}$ 和 $\theta_{\parallel}$ 定义为 50%峰值处快轴、慢轴角度。 $\theta_{\perp}$ and $\theta_{\parallel}$ are defined as the angles of the fast axis and slow axis at the 50% peak value.

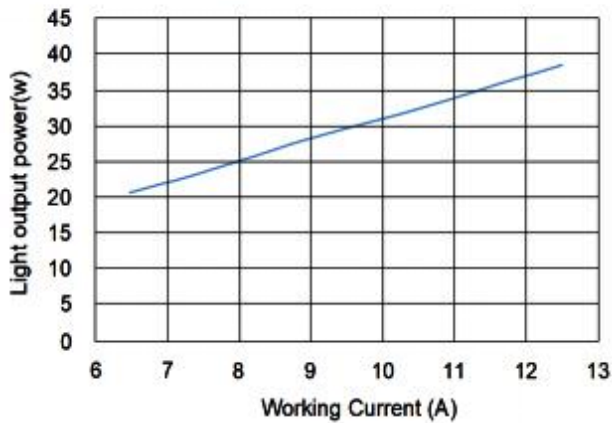
[2] 数据测试温度为25° , 环境温度过高工作温度,器件的寿命将会受到影响

[The data test was conducted at 25° C; operating at ambient temperatures higher than this will affect the device's lifespan.]

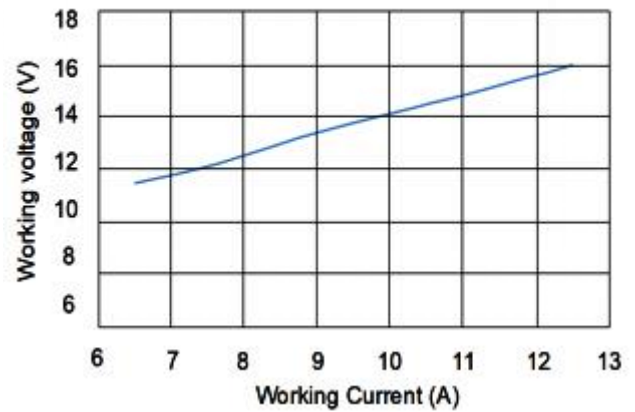
典型特性曲线

Typical Characteristics Curves

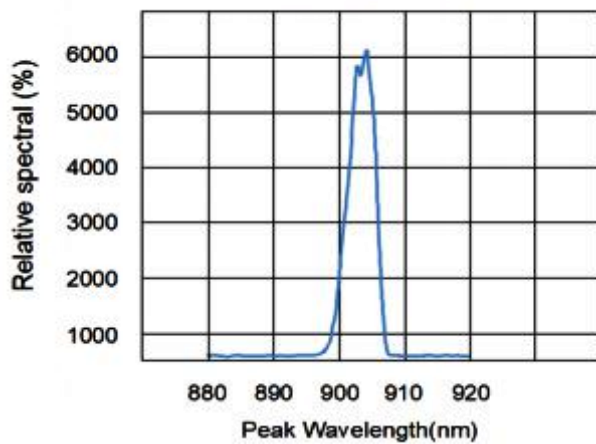
Light output power vs. current



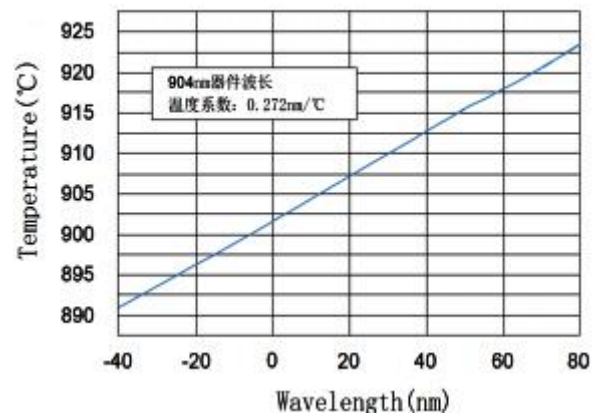
Working voltage vs. Working Current



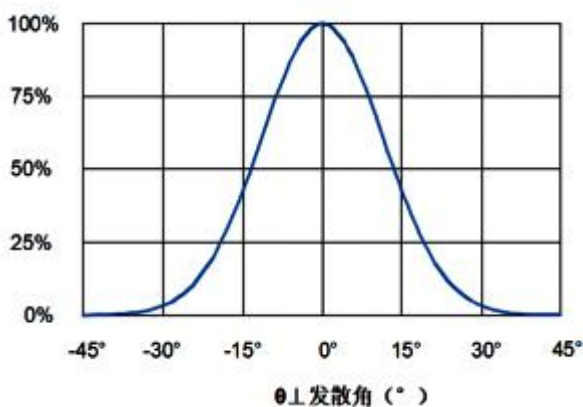
Relative Intensity Vs. Wavelength



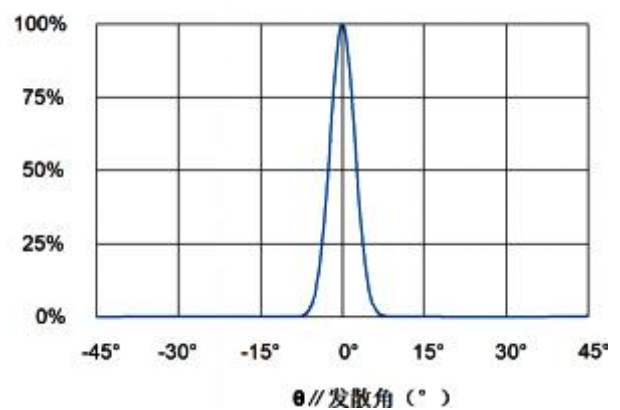
Temperature Vs. Wavelength



Relative intensity

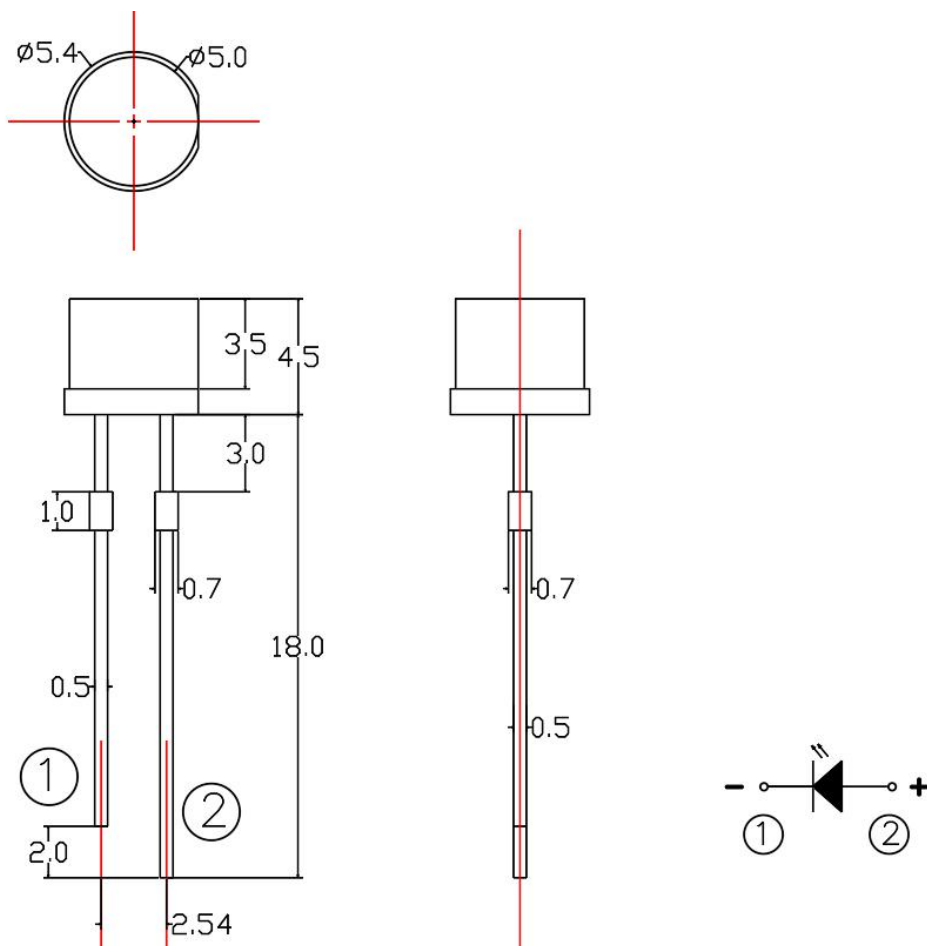


Relative intensity



外形尺寸

Outline Dimension



备注(Note):

1. 标注尺寸单位为毫米

Dimensions are in millimeters.

2. 除特别标注外，所有尺寸允许公差 $\pm 0.50\text{mm}$ 。

Tolerances unless mentioned are $\pm 0.50\text{mm}$.

包装

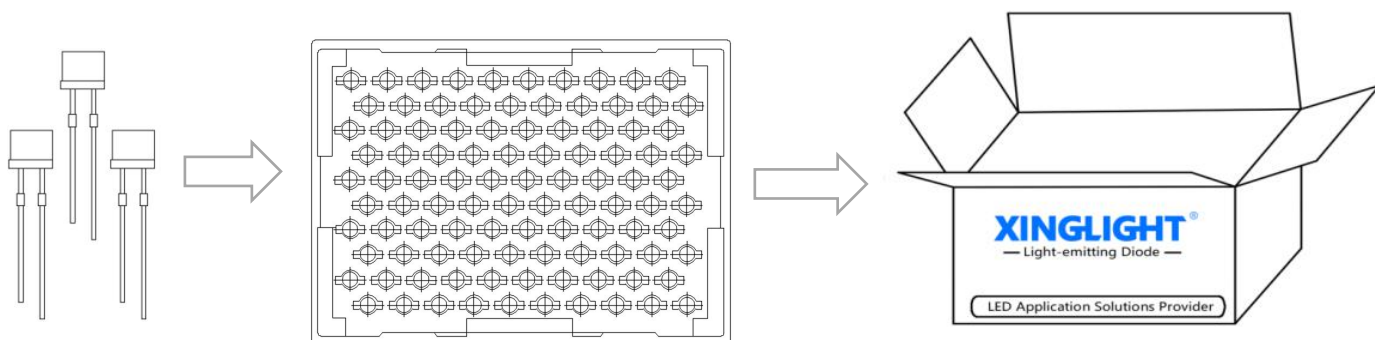
Packaging

*袋装

In Bags

*防潮抗静电包装

Moisture Proof and Anti-Electrostatic Foil Bag



使用注意事项

Precautions

1. 清洗 Clean

当用化学品清洗胶体时必须特别小心，因为有些化学品对胶体表面有损伤并引起褪色如三氯乙烯、丙酮等。可用乙醇擦拭、浸渍，时间在常温下不超过3分钟。

Special care must be taken when cleaning colloids with chemicals, as some chemicals have damage to the colloidal surface and cause fading such as trichloroethylene, propylene, ketone, etc. It can be wiped and soaked with ethanol for no more than 3 minutes at room temperature.

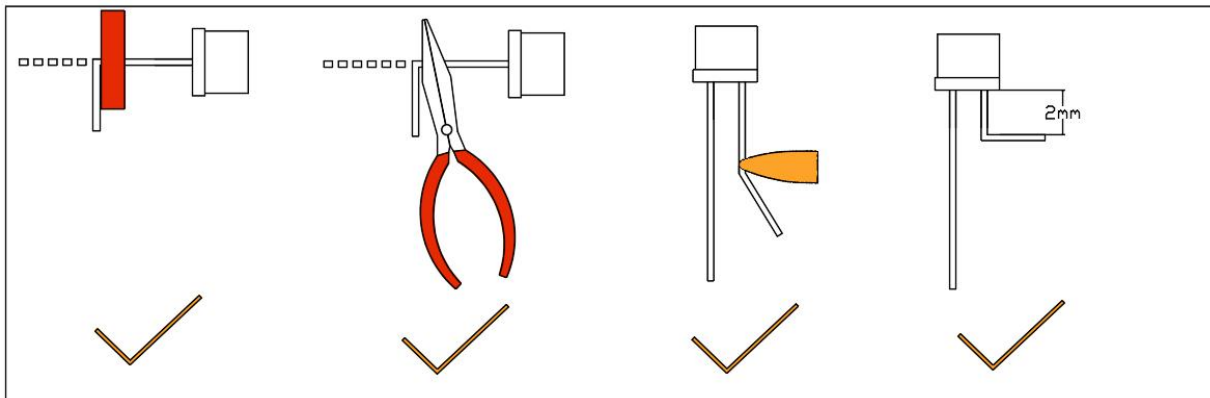
2. 引脚配置 Feet assembly

(1) 必需离胶体2毫米才能折弯支架。

It must be 2 mm from the colloid to bend the bracket.

(2) 焊接必须在正常温度下进行，当激光二极管正常焊接到PCB板上后，应尽量避免在激光二极管的引脚处施加机械压力。

Welding must be performed at normal temperatures. Once the laser diode has been properly mounted onto the PCB, avoid applying mechanical pressure to its pins whenever possible.



3. 静电防护 Electrostatic protection

塑封激光二极管本身无固定“防护电压”值，其静电敏感度通常为HBM 人体模型 <800V，实际耐受往往仅250V-500V，需按<100V 操作标准实施防护。

Plastic-coated laser diodes do not have a fixed "protection voltage" value; their electrostatic sensitivity typically ranges from <800 V on the HBM human model, with actual tolerance usually limited to 250–500 V. Protection measures must be implemented according to the <100 V operating standard.

4. 眼睛皮肤保护忠告：

激光器工作时，避免激光照射眼睛和皮肤。

During laser operation, avoid exposure of the eyes and skin to laser radiation.

规格书如有修改，不另行通知

If there are any modifications to the specification sheet, no further notice will be given.