



乐清市裕林电子有限公司

Yueqing Yulin Electronic Co., Ltd

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SPECIFICATION FOR APPROVAL

规格说明书

CUSTOMER'S CODE

本厂代码:

DESCRIPTION

品 名: 塑料信号灯 Plastic Indicator Light

SPECIFICATION

规 格: 12.5mm

DATE

编制日期: 2019-04-08

PART NO.

本厂型号: FL1M-12.5QJ-2

REFERENCE No.

档案编号:

Form Designer 编 制	Qualified By 审 核	Approved By 批 准
陶 松	瞿 斌	陈 平



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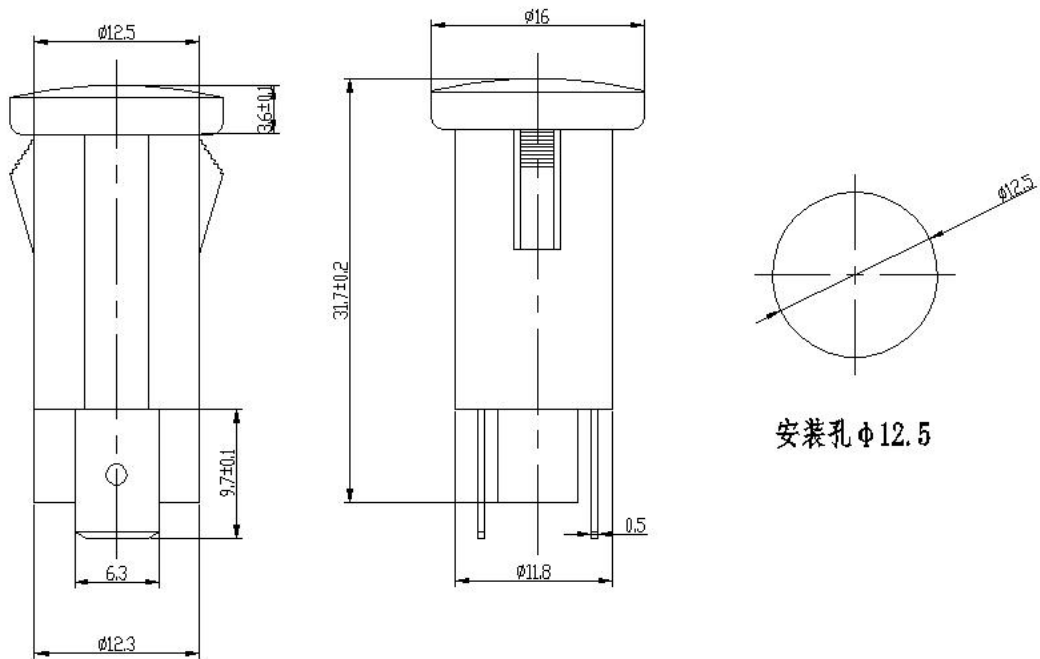
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1. 图片 Picture:



2. 图纸 Drawing:





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3. 配件材料 Component Material

名称 Component Name	材料 Material
灯罩 Lens	PC
外壳 Shell	PA66
底座 Base	PA66
发光源 Luminescent Source	LED
电阻 Resistance	碳膜电阻 Carbon Film Resistance
引脚 Pin Leading	黄铜 Brass

4. 性能参数 Performance Parameter

项目 Items	参数 Parameter
电压 Voltage	3V-250V
额定电流 Rated Current	20mA
额定功率 Rated Power	0.2W
绝缘耐压 Insulation and Voltage Resistance	2000V/10s
工作寿命 Working life	100,000h
耐寒 Cold-resistant	-40°C
耐热 Heat-Resistant	+80°C
LED 颜色 LED Color	红, 黄, 蓝, 绿, 白 Red, Yellow, Blue, Green, White



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5.详细图片 LED Detailed Picture



6. LED Specification 说明

6.1 Absolute Maximum Rating 极限工作参数

项目 Item	符号 Symbol	额定值 Rated Value	单位 Unit
最大顺向电流 Maximum Forward Current	IFP	20	mA
反向电压 Reverse Voltage	VR	5	V
功率 Power	PD	60	mW
工作温度 Working Temp.	TOPR	-40~+80	℃
储存温度 Storage temperature	TSTG	-40~+100	℃
无铅焊接温度 Lead-free Soldering temperature	TSOL	Max. 260℃ for 3sec Max. 260度不超过3秒	

注意事项 Notes:

- 1) 产品光电性能级别, 各不同级别的产品光电性能有所差异, 请客户根据己方使用条件自行决定使用方法。
Product photoelectric performance level, different levels of product photoelectric performance is different, please customers according to their own conditions of use to decide the use method.
- 2) 光强度和主波长的测量根据人眼响应曲线的 CIE 国际标准校正。
The measurement of light intensity and dominant wavelength is corrected according to the CIE international



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standard of the human eye response curve.

3) 中心轴亮度的 50%时单边的发光角度为 $\theta_{1/2}$, $2\theta_{1/2} = \theta_{1/2} + \theta_{1/2}$.

When the brightness of the central axis is 50%, the luminous angle of one side is $\theta_{1/2}$, $2\theta_{1/2} = \theta_{1/2} + \theta_{1/2}$.

4) 发光强度的测量公差为 $\pm 15\%$.

The measurement tolerance of luminous intensity is $\pm 15\%$.

5) 电压的测量公差为 ± 0.1 V .

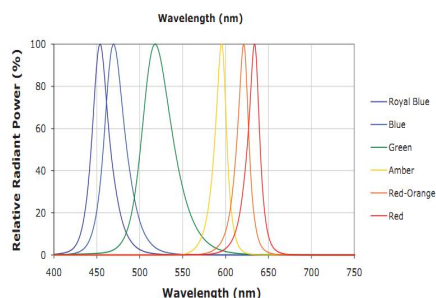
The voltage is measured with a tolerance of ± 0.1 V .

6) 色座标 X、Y 的测量公差为 ± 0.015 .

The measurement tolerance of color coordinates X and Y is ± 0.015 .

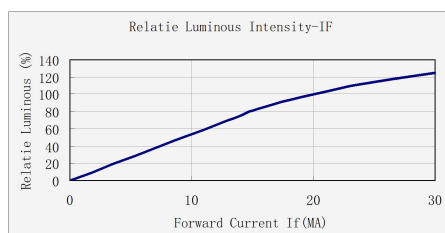
6.2 产品光电特性 Product Optoelectronic Characteristics ($T_a = 25^\circ\text{C}$)

项目 Item	符号 Symbol	条件 Condition	最小值 Min.	平均值 Average Value	最大值 Max.	单位 Unit
顺向电压 Forward Voltage	V _F	I _F =20mA	2.8	--	3.2	V
反向电流 Reverse Current	I _R	V _R =5v	--	--	5	μA
角度 Angle	$2\theta_{1/2}$	I _F =20mA	--	60	--	deg
亮度 Brightness	ϕ_V	I _F =20mA	500	--	800	mcd
建议使用电流 Recommend Current	I _F	--	--	20	--	mA
颜色 Color	cct& λ_d	I _F =20mA	520	--	525	nm
结点温度 Junction Temperature	T _J	I _F =20mA	--	125	--	°C
热阻 Thermal Resistance	R _{JP}	I _F =20mA	--	8	--	°C/W



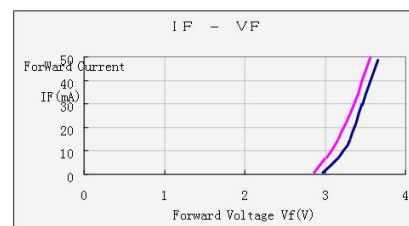
波长特征

Wavelength characteristics



光强与正向电流曲线图

Light intensity and forward current curves



反向电流与正向电压曲线图

Reverse current vs. forward voltage plot



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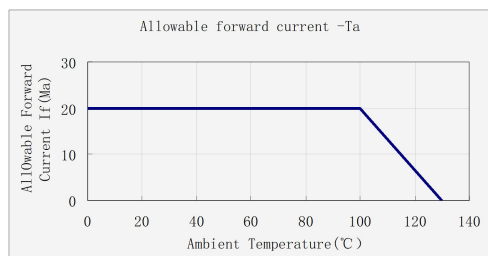
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最大正向直流电与温度曲线图

Maximum Forward DC vs. Temperature Graph

