



乐清市裕林电子有限公司
Yueqing Yulin Electrical Co., Ltd

Address: F/6 No. 19 Keaisi road xiangyang industrial zone road tantou liushi yueqing wenzhou

Tel: 0577-27878383

website: www.indicatorlight.com

Fax: 0577-27878383-8027

SPECIFICATION FOR APPROVAL

规格说明书

CUSTOMER'S CODE

本厂代码:

DESCRIPTION

品 名: FLM22-11HJZ 高头环形电源符号插脚金属按钮

SPECIFICATION

规 格: 22mm

DATE

编制日期:

PART NO.

本厂型号:

REFERENCE No.

档案编号:

| Approved By Customer 编 制 | Qualified By 审 核 | Form Designer 批 准 |
|-----------------------------|---------------------|----------------------|
| | | |



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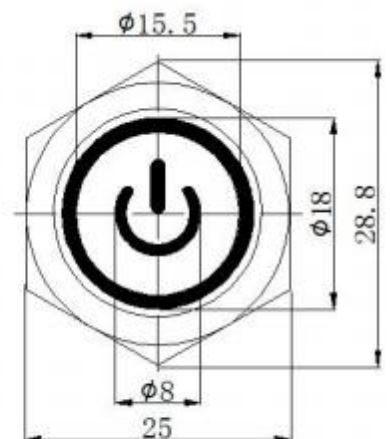
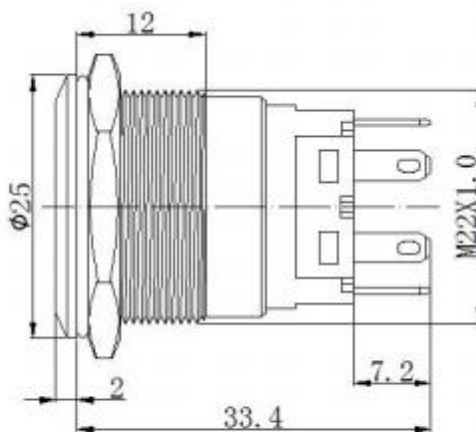
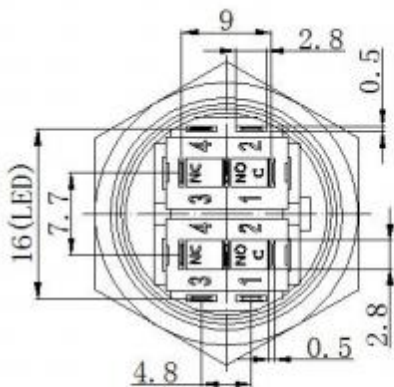
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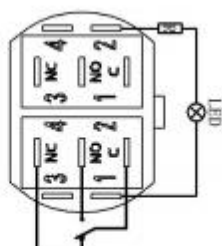
1. 图片 Picture:



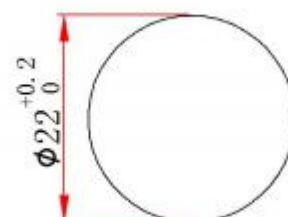
2. 图纸 drawing



电气简图



安装孔图





3 配件材料 component material

| 配件名 Component name | 材料 material |
|-----------------------|---|
| 导光按键 | PC 塑料 PC plastic |
| 按键 | 304 不锈钢 304Stainless steel |
| 外壳套筒 | H59黄铜/304不锈钢 H59 nickel plated brass/304Stainless steel |
| 按钮引脚 | H62 铜合金 |
| 防水圈 rubber ring | SIL 硅胶 SIL silica gel |
| 螺帽 nut | H59 黄铜 H59 nickel plated brass |
| 底座 housing | PA66+GF20%阻燃尼龙 PA66+GF20% nylon |
| 光源 Light source | LED LED 灯 |
| 电阻 Resistor | 金属膜电阻 Metal film |

4 性能参数 performance parameter

| 项目 items | 参数 parameter |
|--|-----------------------------------|
| 开关额定电压 Rated voltage | 36V DC 250V AC |
| 开关额定电流 rated current | 5A DC 5A AC |
| 指示灯额定电压 | 3V-380V |
| 指示灯额定电流 | ≤20mA |
| 额定功率 rated power | 180W (DC) 1250W (AC) |
| 绝缘耐压 Insulation and voltage resistance | 1800V |
| 接触电阻: Point resistanc: | ≤50mΩ |
| 绝缘电阻: Isolation resistance: | ≥1000MΩ |
| 机械寿命 | 50 万次 |
| 电气寿命 electrical life | 10 万次 (250V/3A) 5 万次 (250V/5A) |
| 工作环境温度 Operating temperature | -25℃~+85℃ |
| 防护等级 (头部) IP degree | IP67 IK09 |
| 指示灯颜色 | 红蓝绿黄白色 |



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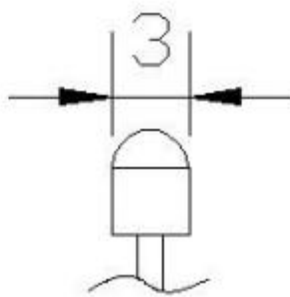
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4. Detailed Picture :

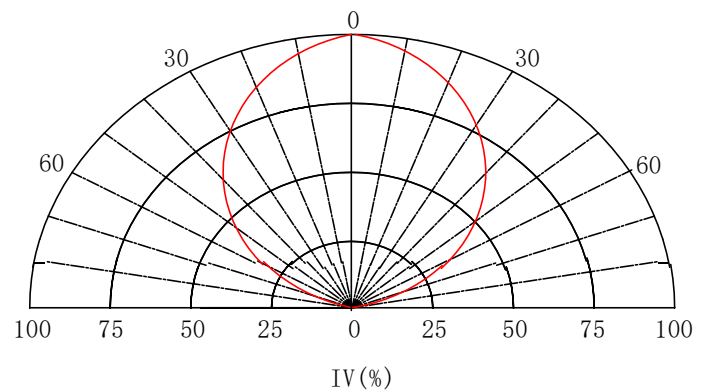


5.LED Specification:

■ Emitter 外型图



Spotial Distrrbution





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■ Absolute Maximum Rating 极限工作参数

| 参数 Parameter | 符号 Symbol | 单位 Unit | 极限参数 Maximum Rating |
|---------------------------------------|--------------|------------|------------------------|
| 耗散功率 Power Dissipation | P | MW | 60 |
| 连续正向电流 Continuous Forward Current | IF | MA | 25 |
| 反向电压 Reverse Voltage | VR | V | 5 |
| 工作温度范围 Operating Temperature Range | Top | °C | -25 to +80 |
| 存放温度范围 Storage Temperature Range | Tst | °C | -25 to +90 |
| 最高焊接温度 Soldering Temperature | Tso | °C | 260 (for 5 second) |

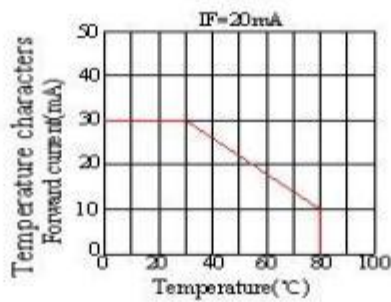
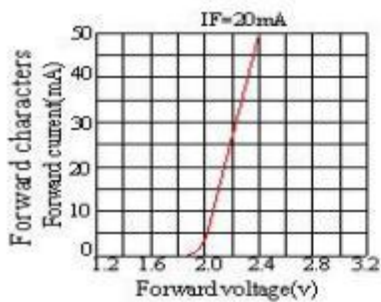
*Ifp Conditions: Pulse Wide $\leq 10\text{msec} \leq 1/10$

瞬间脉冲电流

*Tsol Conditions: 3mm from the base of epoxy bulb

最高焊接温度 距胶体 3mm

Typical electrical-optical Characteristics curvers

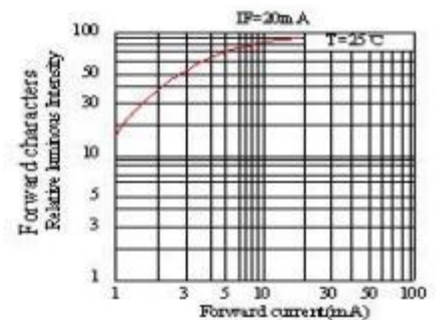
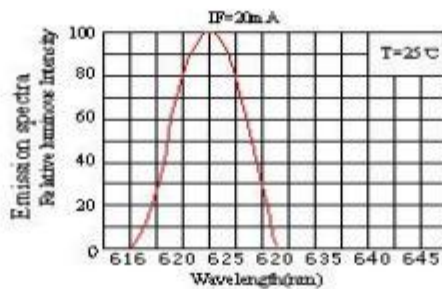
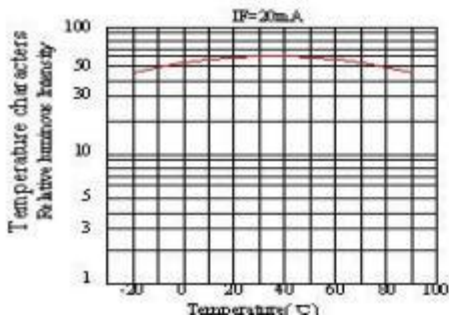


Notes:

The data are an typical presentation of the product, Contact customer service for details of technical information and warranty.

The product is sensitive to static anti-static operation environment is recommended

Products are shipped in either bulk bag package or taping.





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Typical Optical/Electrical Characteristics 光电特性参数

| | | | |
|-------------------------------------|--------------|-----------------------------|------------------------|
| Color parameters 色参数 | | Optical Brightness 光亮度 | 0.00 cd/m ² |
| Main Wavelength 主波长 | 520.7.0 nm | light intensity 光强度 | 1000 mcd |
| Peak Wavelength 峰值波长 | 632.2 nm | luminous flux 光通量 | 4.8 lm |
| Peak width 峰值带宽 | 21.3 nm | luminous power 光功率 | 0.32 mW |
| colour coordinates xy 色坐标 xy | (.1404.7126) | luminous efficacy 发光效率 | 56.81 lm/W |
| colour coordinates u'v' 色坐标 u'v' | (.0498.5690) | forward current 正向电流 | 20.00 mA |
| colour purity 色纯度 | 0.758 | alternating voltage 交流电压 | 4.22 V |
| Color temperature 色温 | 8400k | AC power 交流电功率 | 0.084 W |

Notes:

1. Work absolute ratings Ta=25°C humidity=60% 工作常规值 温度=25°C 湿度=60%
2. Tolerance of measurement of forward voltage±0.1V 正向电压误差范围±0.1V
3. Test Machine: SSP6612 series LED test system



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LED LAMP RELIABILITY

| Type | Test Item | REF. Standard | Test Condition | Note | Number of Damaged |
|------------------------|------------------------------|------------------------|---|----------------------|-------------------|
| Environmental Sequence | Temperature Cycle | JIS C 7021 (1997) A-4 | -20℃→25℃→80℃→25℃ 30mins,5mins,30mins,5mins | 100 cycles | 0/100 |
| | High Humidity Heat Cycle | JIS C 7021 (1997) A-5 | 30℃→65℃ 90%RH 24hrs/ 1cycle | 10 cycles | 0/100 |
| | High Temperature Storage | JIS C 7021 (1997) B-10 | Ta=80℃ | 1000hrs | 0/100 |
| | Humidity Heat Storage | JIS C 7021 (1997) B-11 | Ta=60℃ RH=90% | 1000hrs | 0/100 |
| | Low Temperature Storage | JIS C 7021 (1997) B-12 | Ta= -30℃ | 1000hrs | 0/100 |
| Operation Sequence | Life Test | JIS C 7035 (1985) | Ta=25℃ I=20mA | 1000hrs | 0/100 |
| | High Humidity Heat Life Test | * | 60℃ RH=90% I=20mA | 500hrs | 0/100 |
| | Low Temperature Life test | * | Ta= -20℃ I=20mA | 1000hrs | 0/100 |
| Destructive Sequence | Resistance to Soldering Heat | JIS C 7021 (1997) A-11 | Tsol=260 ± 5℃, 10sec (3mm from the base of the epoxy bulb) | 1 time | 0/20 |
| | Solder ability | JIS C 7021 (1997) A-2 | Tsol=235 ± 5℃, 5sec (Using flux) | 1 time (over 95%) | 0/20 |
| | Lead Pull/Bend Test | JIS C 7021 (1997)A-11 | Load 2.5N (0.25kgf) 0°→90°→0° Bending 3 times | No noticeable damage | 0/20 |

● Test Items And Results

* Refer to reliability test standard specification for in this line.

📏 Criteria for Judging The Damage

| Item | Symbol | Test Condition | Criteria for Judgment | |
|--------------------|----------------|----------------------|-----------------------|--------------------|
| | | | Min. | Max. |
| Forward Voltage | V _F | I _F =20mA | --- | Initial data x 1.1 |
| Reverse Current | I _R | V _R = 5V | --- | Initial data x 2.0 |
| Luminous Intensity | I _V | I _F =20mA | Initial data x 0.7 | --- |



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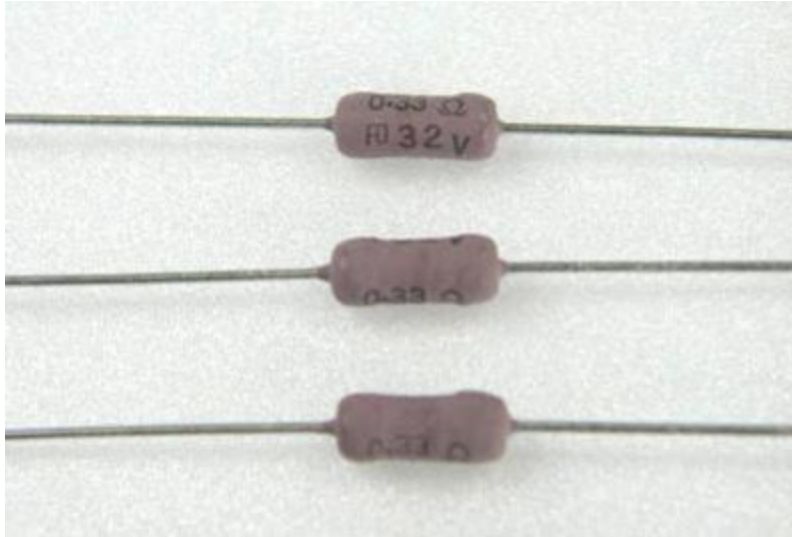
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6. Resistor Specification (RMS 1/4W 200kΩ):



CHARACTERISTICS 性能

| ITEM 项目 | SPEC 规格 | REMARKS 备注 |
|--|--|---|
| Load life under high temperature 高温负荷寿命 | ±1.5% | JIS C 5201-1 (4.25.1) Rated voltage at 70°C for 1,000 hours 额定电压70°C 1,000小时 |
| Load life under high humidity 耐湿负荷寿命 | ±5% | JIS C 5201-1 (4.24) Rated voltage at 40°C, 95% RH for 1,000 hours 额定电压40°C, 95% RH 1,000小时 |
| Temp. coeff of resistance 温度系数 | < 1K=±500 PPM/°C ≤ 100KΩ=±300 ppm/°C > 100KΩ=±200 ppm/°C | JIS C 5201-1 Room temp. + 100°C, 30min 室温 + 100°C, 30分钟 |
| Short time overload 短时间过负荷 | ±1% | JIS C 5201-1 (4.13) 6.25 times the rated power for 5 seconds 6.25倍额定功率 5秒 |
| Temperature cycling 温度循环 | ±1% | JIS C 5201-1 (4.19) 5 cycles for -25°C±3°C(30min); room temp.(30min) ~ +85°C±3°C(30min) room temp. (30min) |
| Resistance to soldering heat 焊锡耐热 | ±1% | JIS C 5201-1 (4.18) 260°C±5°C for 10 seconds(焊锡槽) 350°C±10°C for 3.5 seconds(手焊锡) |
| Insulation resistance 绝缘电阻 | >1,000MΩ | JIS C 5201-1 (4.6.1.1) 500 volt Insulation test 1min 500 V绝缘测试电压1分钟 |



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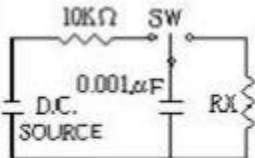
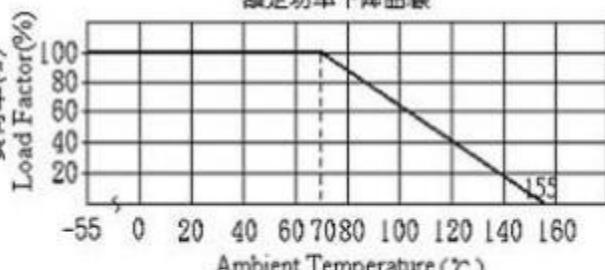
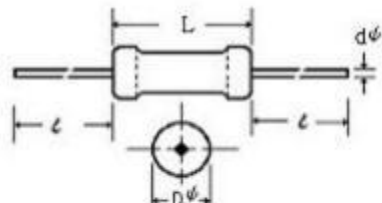
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| | | |
|--|-------------|--|
| <p>Pulse withstanding voltage 脉冲</p> | <p>±20%</p> | <p>■The following discharge cycle is repeated in the circuit of the left fig. 2.5 sec. ON 2.5 sec. OFF 50 cycles. With following DC pulse test voltage ■ Pulse voltage:1/6W,S1/4W: 3KV. ≥1/4W: 100KΩ: (3KV); 100KΩ-620KΩ: (5KV); > 620KΩ: (10KV)</p>  |
| <p>DERATING CURVE 额定功率下降曲线</p>  | |  |
| <p>Various type of forming & taping are available</p> | | |
| <p>提供插装的造型与带装</p> | | |
| <p>Coating color: RMU1/4W,RMU1/6W、dark blue, other、pink。</p> | | |
| <p>涂装颜色: RMU1/4W,RMU1/6W蓝色,其他粉红色。</p> | | |

■ CHARACTERISTICS 性能

| Model 型名 | Power Rating 额定功率 (W) | Resistance Range E-24 阻值范围 Ω | Maximum Working Voltage 最高使用 电压 | Dielectric Withstandi ng Voltage 耐电压 | Dimension 尺寸 (mm) | | | |
|-------------------------|--------------------------------|---------------------------------------|---|--|-------------------|---------|------|----------|
| | | | | | L | D φ | t | d φ |
| RMU1/4W 、 RMS1/2W | 1/4,1/2 | 10Ω ~ <100M | 1600V | 700V | 6±0.3 | 2.4±0.1 | 28±2 | 0.6±0.05 |