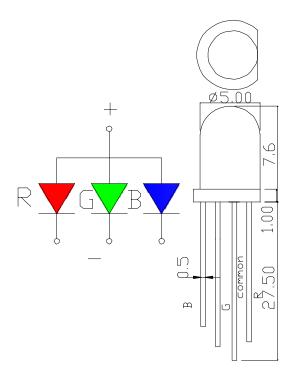
SPECIFICATION FOR APPROVAL

承 认 书

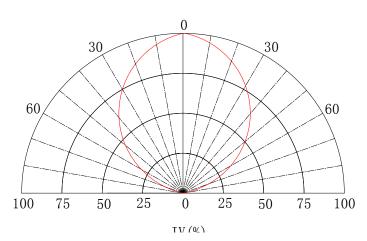
| CUSTOMER'S CODE | | | | |
|--------------------------|----------------------------------|--|--|--|
| 客户代码: | Jeff Crispino | | | |
| DESCRIPTION | | | | |
| 品 名: | Led Lamps | | | |
| SPECIFICATION | | | | |
| 规 格: | 5mm RGB Diffused Common Anode | | | |
| DATE 送样日期: | | | | |
| PART NO. 本厂型号: | 50CHH-RGBW -共阳 | | | |
| REFERENCE No. 档案号: | | | | |
| NUMBER OF SAMPLE 送样数量 | COPY OF ACKNOWLEDGEMENT 承认书份数 | | | |

| Approved By Customer | Qualified By | Form Designer |
|----------------------|--------------|---------------|
| 客户承认 | 核准 | 制作 |
| | | |
| | | |
| | | |

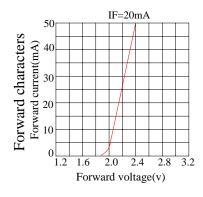
Emitter 外型图:

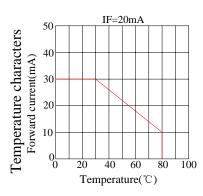


Spotial Disttrbution



Typical electrical-optical Characteristics curvers





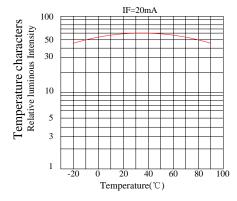
Notes:

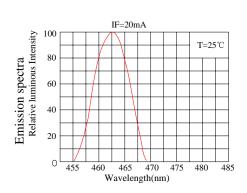
The data are an typical presentation of the product, Contact customer service for details of technical information and warranty.

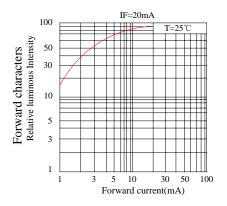
The product is sensitive to static

antistatic operation environment is recommended

Products are shipped in either bulk bag package or taping.







■ Absolute Maximum Rating 极限工作参数

| Item 项目 | | Symbol 代号 | Absolute Maximum Rating 极限工作参数 | Unit 单位 |
|----------------------------|--------|--------------|--------------------------------|----------------------|
| Forward Current 正向电流 | | IF | 20 | mA |
| Peak Forward Current | 瞬间脉冲电流 | IFP | 50 | mA |
| ReverseVoltage | 反向电压 | VR | 5 | V |
| Power Dissipation | 消耗功率 | PD | 100 | mw |
| Electrostatic discharge | 静电释放 | ESD | 1000 | V |
| Operation Temperature | 工作温度范围 | TOPR | -25∼+80 | $^{\circ}$ |
| Storage Temperature | 存放温度范围 | TSTG | -40∼+80 | $^{\circ}\mathbb{C}$ |
| Lead Soldering Temperature | 最高焊接温度 | TSOL | 330 ℃ for 3sec Max。 | |

^{*}Ifp Conditions: Pulse Wide≤10msec≤1/10

■ Typical Optical/Electrical Characteristics 光电特性参数

| Item 项目 | | Symbol 代号 | Condition 件 | 测试条 | Min 最小值 | Typ 典型值 | Max 最大值 | Unit 单位 |
|-------------------------------------|------|--------------|----------------|-----|------------|------------|------------|------------|
| | | | | R | 1.9 | 2.0 | 2.1 | |
| Forward Voltage | 正向电压 | VF | IF=20mA | G | 3.1 | 3.2 | 3.3 | V |
| | | | | В | 3.0 | 3.1 | 3.2 | |
| | | | | R | 3000 | 3500 | 4000 | |
| Light intensity | 光强度 | IV | IF=20mA | G | 7000 | 7500 | 8000 | mcd |
| | | | | В | 6000 | 6500 | 7000 | |
| | | | | R | 620 | 623 | 625 | |
| Wavelength | 波长 | WD | IF=20mA | G | 517 | 520 | 523 | nm |
| | | | | В | 465 | 468 | 471 | |
| Reverse current | 逆向电流 | IR | IF=20mA | | 0 | / | 5 | uA |
| Viewing Angle | 半光全角 | 2 θ 1/2 | IF=20mA | | | | 40 | deg |
| Recommend Forward Current 持续正向电流 | | IF(rec) | IF=20mA | | | | 20 | mA |

Notes:

- 1.Work absolute ratings Ta=25℃ 工作常规值 温度=25℃
- 2.Tolerance of measurement of forward voltage ±0.1V 正向电压误差范围±0.1V

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

LED LAMP RELIABLITY

• Test Items And Results

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

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

• Criteria for Judging The Damage

| Itama | Cryss b ol | Test Condition | Criteria for Judgment | | |
|--------------------|------------------|----------------------|-----------------------|--------------------|--|
| Item | Symbol | Test Condition | 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 | Iv | $I_F = 20 \text{mA}$ | Initial data x 0.7 | | |