



Ciel Light



Data Sheet

Customer: _____
Part No: _____ CL-SFC506IR-850 _____
Sample No: _____
Description: _____ 5050 IR SMD _____
Item No: _____

| Customer | | | |
|----------|------------|----------|------|
| Check | Inspection | Approval | Date |
| | | | |



CL-SFC506IR-850

Features:

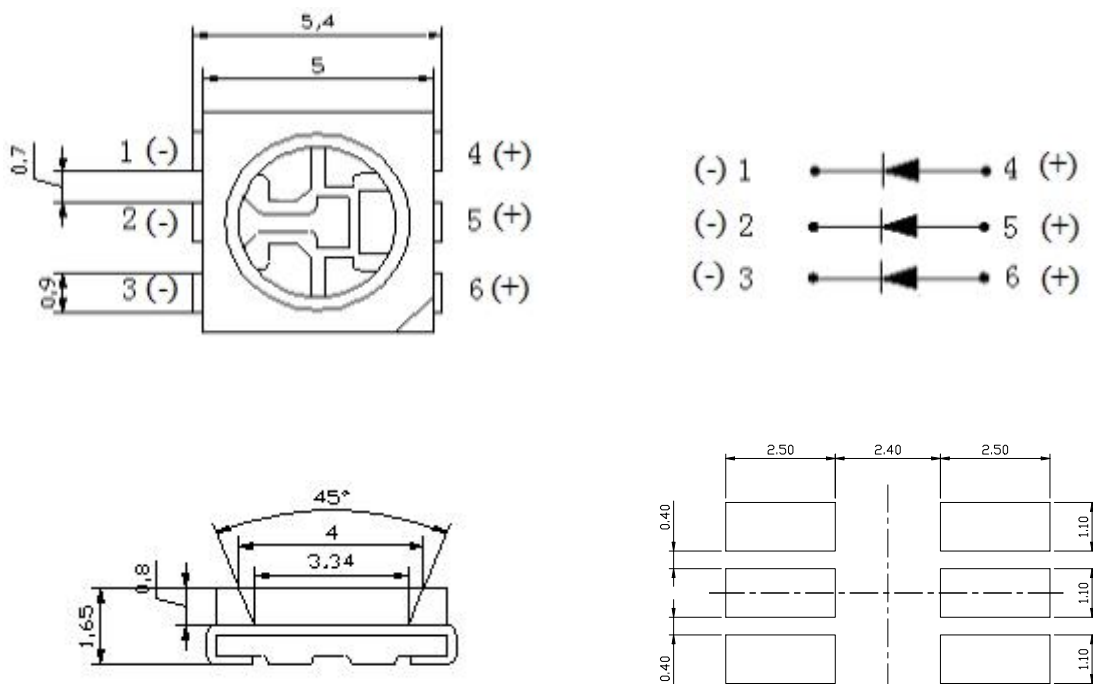
- . Reflow Solderable
- . High Luminous Intensity and Low Power Dissipation
- . Good Reliability and Long Life
- . Complied With RoHS Directive

Technical Data Sheet

This product is generally used as indicator and luminary for electronic equipment such as household appliance, communication equipment, and dashboard.

Applications

- Applicable to all kinds of mechanical keyboard launch requirements
- Suitable for all kinds of infrared transmitting and receiving equipment
- Infrared remote control transmitter is suitable for all kinds of electronic products
- Applicable to all kinds of small household electrical appliance products for reflection application



Notes:

- 1 . All dimension units are millimeters.
2. All dimension tolerance is $\pm 0.2\text{mm}$ unless otherwise noted.

Electrical / Optical Characteristics at Ta=25°C

| Parameter | Test Condition | Symbol | Value | | | Unit |
|--------------------|----------------|---------|-------|--------|------|-------|
| | | | Min. | Typ. | Max. | |
| Forward voltage | If=60mA | VF | -- | 1.90 | 2.30 | V |
| Emission intensity | If=60mA | Ee | -- | 9.00 | -- | mW\sr |
| Firing angle | If=60mA | 2 θ 1/2 | -- | 120.00 | -- | Deg |
| Wavelength | If=60mA | λP | -- | 850.00 | -- | nm |

Note:

- 1.2θ1/2 is the angle from optical centerline where the luminous intensity is 2θ1/2 the optical centerline value.
- 2.the above luminous intensity measurement allowance tolerance ±10%

Absolute Maximum Ratings at Ta=25°C

| Parameter | Symbol | Value | Unit |
|-----------------------------|--------|-----------|------|
| Power dissipation | Pd | 200 | mW |
| Forward current | If | 100 | mA |
| Reverse voltage | Vr | 5 | V |
| Operating temperature range | Top | -30 ~+85 | °C |
| Storage temperature range | Tstg | -40~+100 | °C |
| Peak pulsing current | Ifp | 200 | mA |
| Electrostatic Discharge | ESD | 2000(HBM) | V |

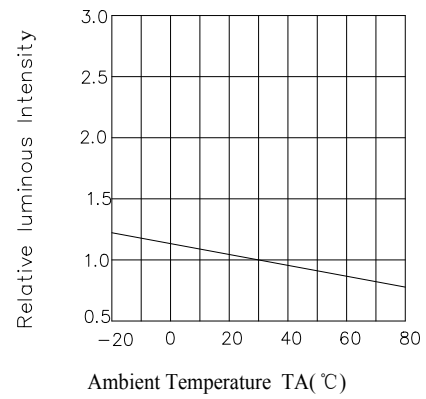
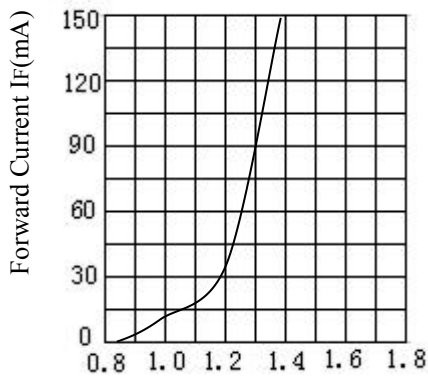
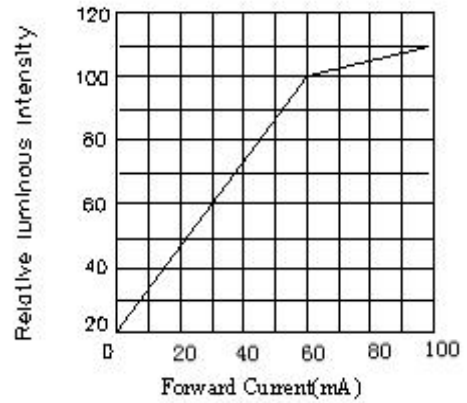
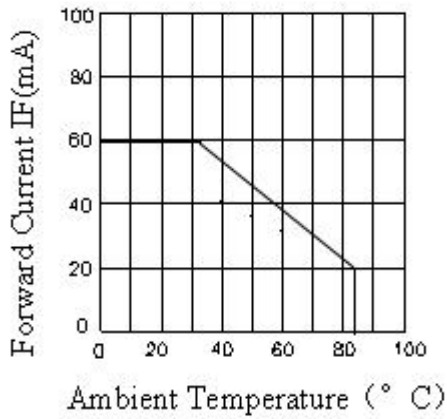
Note:

1. 1/10 Dut cycle,0.1ms pulse width.

CL-SFC506IR-850

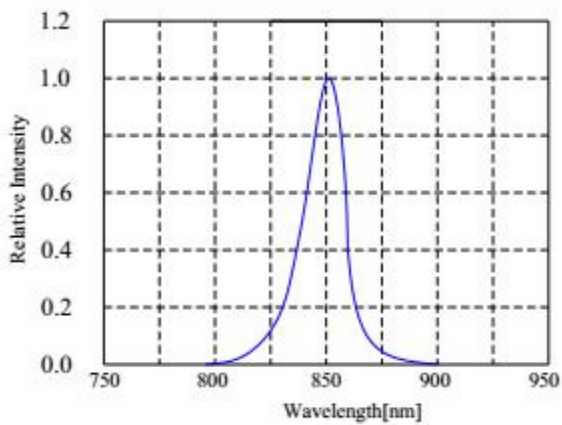
Typical optical characteristics curves

Ambient Temperature VS. Forward Current

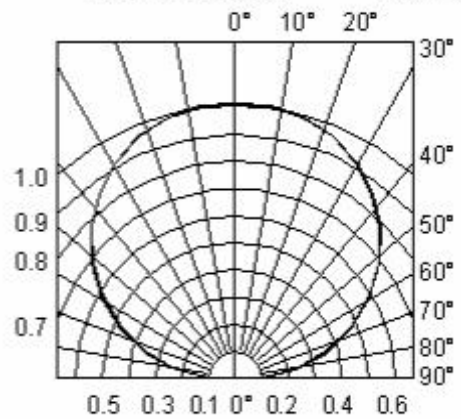


Forward Voltage VF(V)

Relative Intensity vs. Wavelength (Ta=25°C)



Radiation Diagram Ta=25°C



Reliability Test Items And Conditions

The reliability of products shall be satisfied with items listed below.

Confidence level :90%

LTPD :10%

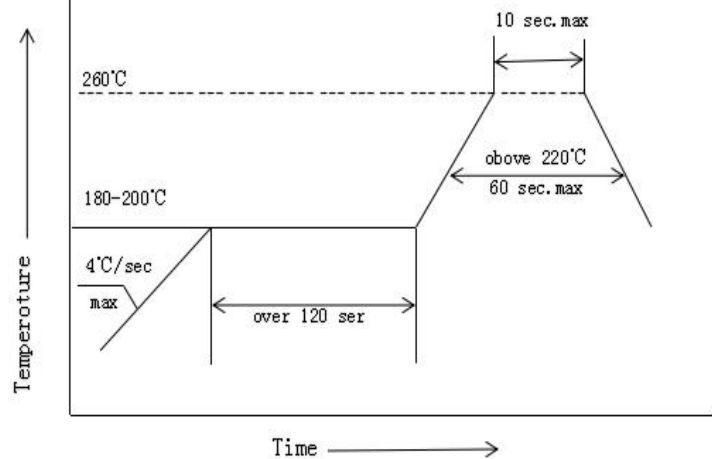
| Test Items | Test conditions | Quantity | Judging Criteria |
|---|--|----------|-----------------------------|
| Solderability | Solder Temperature: 240°C Solder Duration: (3.5±0.5) sec. | 22 | Solderable Area Over 95% |
| Thermal Shock Followed by High Temperature And High Humidity Cyclic | -40° → 10min 5 Cycles ↑ ↓ shift(2~3)min 100°C → 10 min. ☰ 25°C~55°C (90%~95%) RH 2 Cycles for 48 hrs., Recover for 2 hrs | 22 | C=0 & I** |
| Resistance For Soldering Heat | Reflow Soldering | 22 | C=0 & I** |
| DC Operating Life | 1000 hrs. Forward Current: 70mA | 22 | C=0 & I** |
| High Temperature Storage | 100°C ☐ → 1000 hrs | 22 | C=0 & I** |
| High Temperature And High Humidity Cyclic | 25°C~55°C (90%~95%) RH 6 Cycles for 144 hrs., Recover for 2 hrs. | 22 | C=0 & I** |

The technical information shown in the data sheets are limited to the typical characteristics and circuit examples of the referenced products. It does not constitute the warranting of industrial property nor the granting of any license.

CL-SFC506IR-850

SMT Reflow Soldering Instructions

1. Reflow soldering should not exceed once.
2. In soldering process, do not stress on the LEDs during heating.

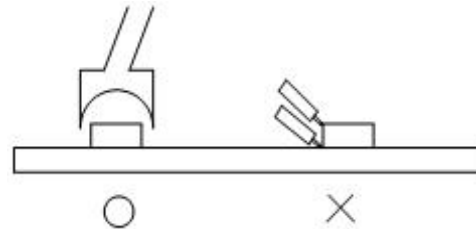


Soldering iron

1. When hand soldering, the temperature of the iron must be lower than 300°C for 3 seconds.
2. The hand solder should be done only one time.

Repairing

Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as shown in the figure below). It should be confirmed beforehand whether the characteristics of LEDs will or will not be damaged by repairing.



Storage

The package is sealed:

1. Recommended storage condition: At 5°C~30°C and relative humidity 90% RH max.
2. It is recommended that SMD out of their original packaging are used within one year.

The package is opened:

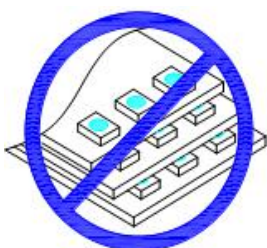
1. Completed within 168 hours.
2. Stored at 5°C~30°C and 60% RH or less.
3. LEDs stored more than 168 hours should be baked at about 65°C±5°C

for at least 12 hours before solder assembly.

Handling Precautions

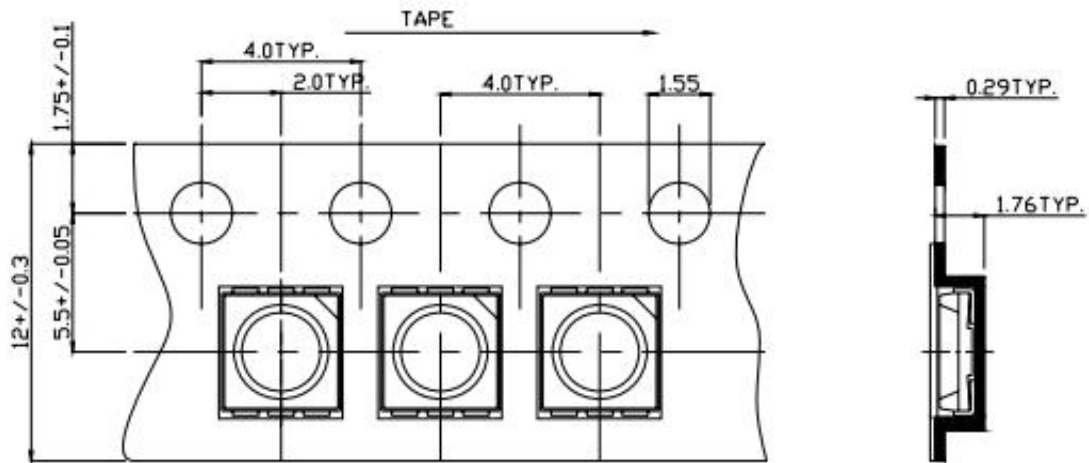
1. Do not stack together assembled PCBs containing LEDs. Impact may scratch the silicone lens or cause damage.

2. Not available in the situation of acidity for PH.



Packaging

Carrier tape (MPQ:1000PCS/reel)


 Note: The tolerances unless mentioned is ± 0.1 mm, Unit: mm

Moisture Resistant Packaging
