Under Development	
Mass production	●

Ciel Light

RoHS

Specification

Client Name：_____

：

Client P/N：_____

：

ProductP/N：CL-SFD3535IR-808-B-02

：

Sending Date: _____

：

Approval	Audit	Approval	Audit	Confirmation
☐ Qualified ☐ Disqualified		DATE:		

Features

3.45mm×3.45mm SMD LED, 2.26mm thickness

Low power consumption

Narrow view angle

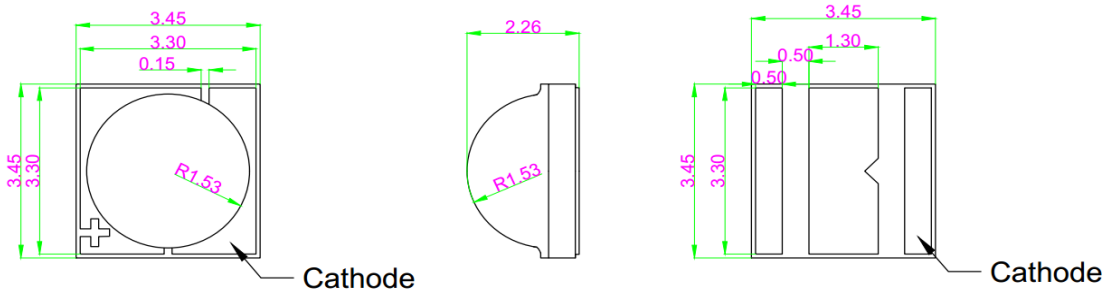
Package: 1000pcs/reel

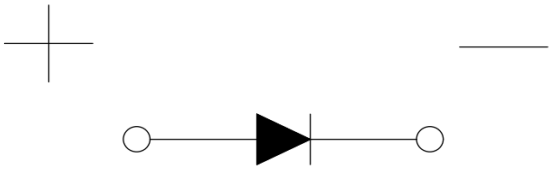
RoHS Compliant

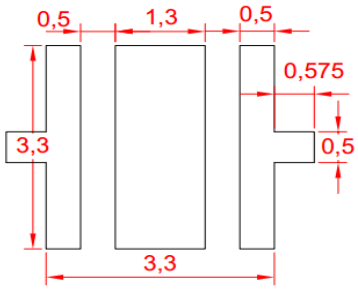
Applications

Ideal for automotive electronics

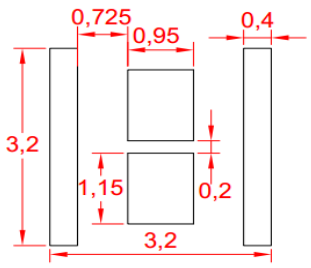
Various colors and lens types available







Recommended PCB Solder Pad



Stencil: 0.12mm
Recommended Stencil Pattern

Notes:

1. All dimensions are in millimeters (inches);
2. Tolerances are ±0.2mm (0.008inch) unless otherwise noted.

Absolute Maximum Ratings (Ta=25℃)

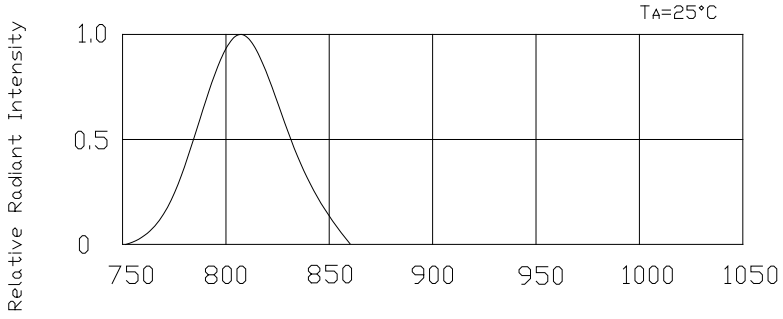
Parameter	Symbol	Value	Unit
Forward current	If	1000	mA
Reverse voltage	Vr	5	V
Power dissipation	Pd	2	W
Operating temperature	Top	-40 ~+85	℃
Storage temperature	Tstg	-40 ~+100	℃
Peak pulsing current (1/10 duty f=1kHz)	Ifp	1500	mA

Electro-Optical Characteristics (Ta=25℃)

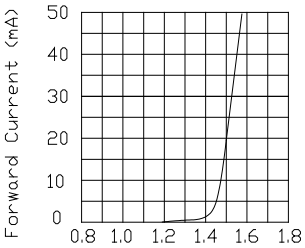
Parameter	Test Condition	Symbol	Value			Unit
			Min	Typ	Max	
Wavelength at peak emission	If=700mA	λ p	805	--	810	nm
Spectral half bandwidth	If=700mA	△ λ	--	25	--	nm
Forward voltage	If=700mA	Vf	1.6	1.7	1.8	V
Radiant intensity ＊1	If=700mA	Ie	600	--	650	mW/sr
Viewing angle at 50% Iv	If=700mA	2 θ 1/2	--	120	--	Deg
Reverse current	Vr=5V	Ir	--	--	10	μA

＊1 Note: The tolerance of Radiant intensity is ±10%.

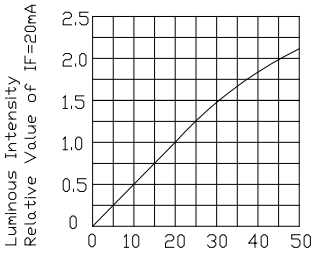
Optical Characteristic Curves



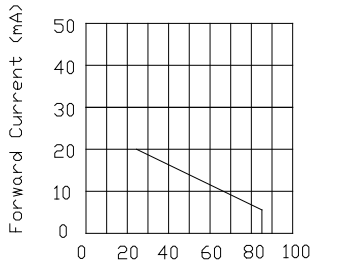
RELATIVE INTENSITY Vs.WAVELENGTH



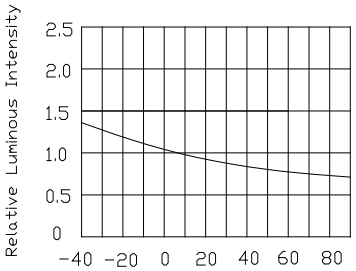
FORWARD CURRENT Vs.
FORWARD VOLTAGE



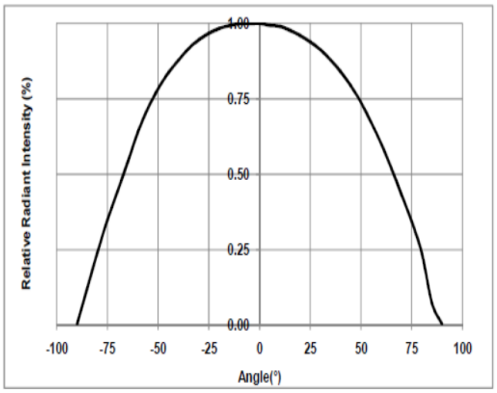
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE

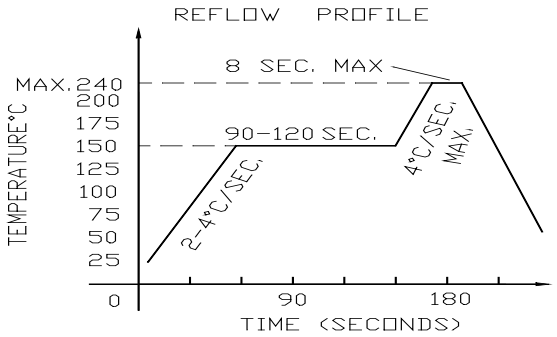


LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE



Reflow Profile

■ Reflow Temp/Time



Notes:

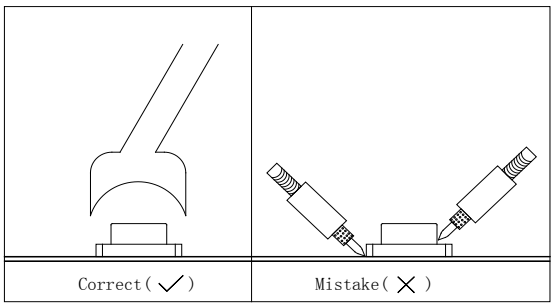
1. We recommend the reflow temperature 245℃ (±5℃).the maximum soldering temperature should be limited to 260℃.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

■Soldering iron

Basic spec is ≤ 5sec when 320℃ (±20℃). If temperature is higher, time should be shorter (+10℃→ -1sec). Power dissipation of iron should be smaller than 20W, and temperatures should be controllable .Surface temperature of the device should be under 350℃.

■Rework

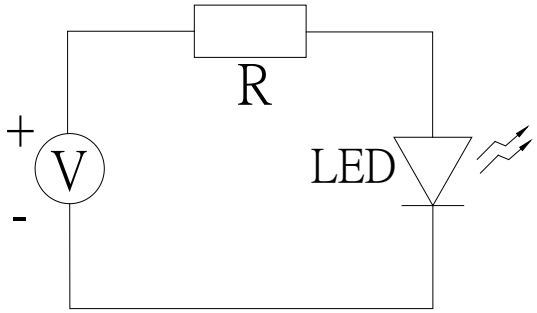
1. Customer must finish rework within 5 sec under 340℃.
2. The head of iron cannot touch copper foil
3. Twin-head type is preferred.



■ Avoid rubbing or scraping the resin by any object, during high temperature, for example reflow solder etc.

Test circuit and handling precautions

■ Test circuit



■ Handling precautions

1. Over-current-proof

Customer must apply resistors for protection; otherwise slight voltage shift will cause big current change (Burn out will happen).

2. Storage

2.1 It is recommended to store the products in the following conditions:

Humidity: 60% R.H. Max.

Temperature: 5℃~30℃

2.2 Shelf life in sealed bag: 12 month at ＜5℃~30℃ and ＜30% R.H. after the package is opened, the products should be used within 24hrs or they should be keeping to stored at≦20 R.H. with zip-lock sealed.

3. Baking

It is recommended to baking before soldering when the pack is unsealed after 24hrs. The Conditions are as followings:

3.1 60±3℃ x (12~24hrs) and ＜5%RH, taped reel type

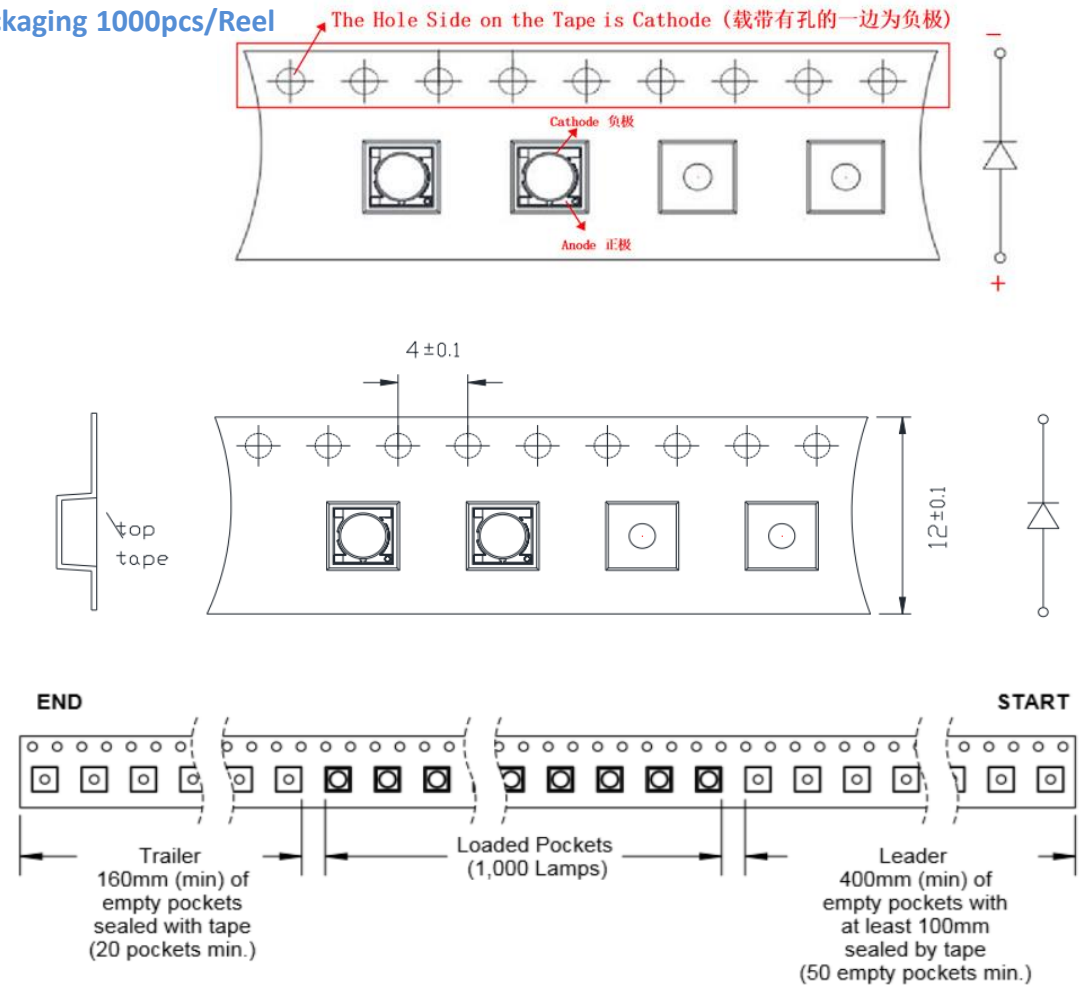
3.2 100±3℃ x (45min~1hr), bulk type

3.3 130±3℃ x (15~30min), bulk type

Test Items and Results of Reliability

Test Item	Test Conditions	Standard Test Method	Note	Number of Test
Reflow Soldering	Ta=260±5℃,Time=10±2S	JB/T 10845-2008	3times	0/22
Salt Atmosphere	Ta=35±3℃,PH=6.5～7.2	GB/T 2423.17-2008	24hrs	0/22
Temperature Cycling	-40±5℃ 30±1min ↑→(25℃/5±1min)↓ 100±5℃ 30±1min	GB/T 2423.22-2012	100cycles	0/22
Thermal Shock	Ta=-40±5℃～100±5℃, 15±1min dwell	GB/T 2423.22-2012	100cycles	0/22
High Humidity High Temp. Cycling	Ta=30±5℃～65±5℃, 90±5%RH,24hrs/1cycle	GB/T 2423.4-2008	10cycles	0/22
High Humidity High Temp. Storage Life	Ta=85±5℃,ψ(%)=85±5%RH	GB/T 2423.3-2006	1000hrs	0/22
High Temperature Storage Life	Ta=100±5℃,non-operating	GB/T 2423.2-2008	1000hrs	0/22
Low Temperature Storage Life	Ta=-40±5℃,non-operating	GB/T 2423.1-2008	1000hrs	0/22
Life Test	Ta=26±5℃,@20mA, ψ(%)=25%RH～55%RH	--	1000hrs	0/22
High Humidity High Temp. Operating Life	Ta=85±5℃,@20mA, ψ(%)=85%RH	GB/T 2423.3-2006	500hrs	0/22
Low Temperature Operating Life	Ta=-20±5℃,@20mA	GB/T 2423.1-2008	1000hrs	0/22

Fig 5. Reel Packaging 1000pcs/Reel



- Quantity : Max 1000pcs/Reel
- Cumulative Tolerance : Cumulative Tolerance/10 pitches to be ±0.25mm
- Adhesion Strength of Cover Tape Adhesion strength to be 0.1-0.7N when the cover tape is turned off from the carrier tape at the angle of 10˚ to the carrier tape.
- Package : P/N, Manufacturing data Code No. and Quantity to be indicated on a damp proof Package.