



樣品規格承認書

SAMPLE APPROVAL SHEET

客戶名稱

Company Name : _____

產品型號

Part Number: CGX-3528IRPC/D14A80

送樣日期

Sample Date: _____

APPROVED SIGNATURES (供應商確認)		
核准	品保	工程

客戶確認：樣品承認通過 不予承認需重新送樣 不予承認不用送樣

客戶建議：

APPROVED SIGNATURES (客戶確認)		
核准	工程	品保

請貴司確認回傳，謝謝！

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E-mail:szcgx@szcgx.com Http:www.szcgx.com



SMD Reflector Infrared LED



Features

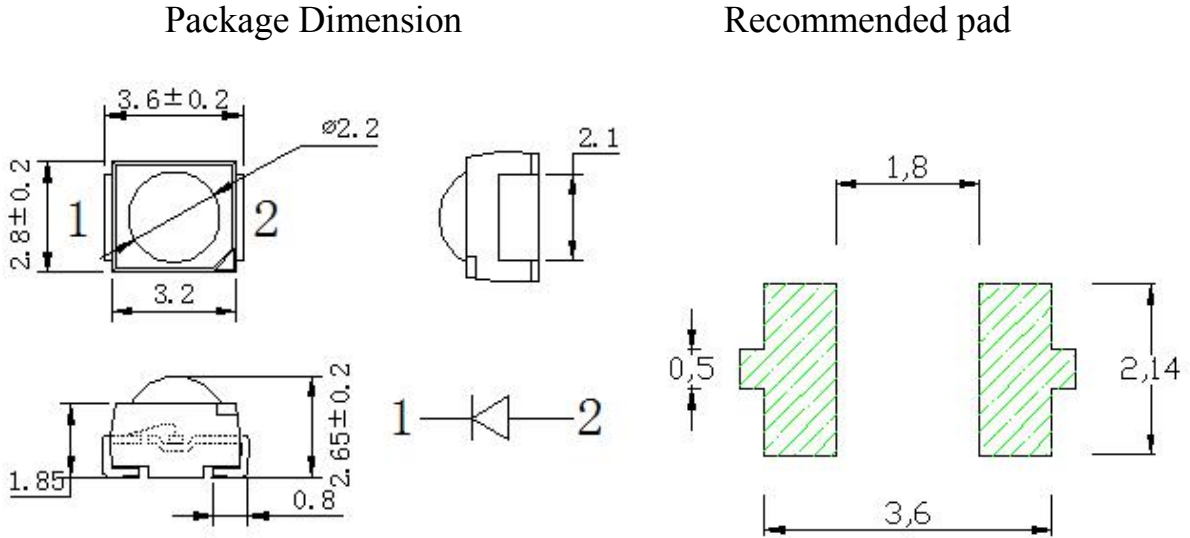
- ◆ Compact emitter size
- ◆ High luminous efficiency
- ◆ Luminous angle: 80°
- ◆ Suitable for vapor-phase reflow, Infrared reflow and wave solder processes
- ◆ Computable with automatic placement equipment
- ◆ Available on tape and reel
- ◆ Electrically neutral thermal path
- ◆ RoHS-compliant

Applications

- ◆ Infrared illumination for cameras
- ◆ Surveillance system
- ◆ Machine vision system
- ◆ CCTV
- ◆ Wireless communication



Package Dimension



- Notes: 1、 All dimensions are in millimeters.
 2、 Tolerance is ±0.25mm unless otherwise noted.

Device Selection Guide

Chip Materials	Lens Color
GaAlAs	Water clear



Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	MAX	Unit
Power Dissipation at(or below) 25 °C free air temperature	P _d	180	mW
Peak Forward Current (1/10 Duty Cycle,0.1ms Pulse Width)	I _{FP}	1.0	A
Continuous Forward Current	I _F	100	mA
Reverse Voltage	V _R	5	V
Operating Temperature Range	T _{opr}	-40°C to +85°C	
Storage Temperature Range	T _{stg}	-40°C to +100°C	
Reflow soldering temperature Max	T _{sol}	220°C for ≤10 seconds	

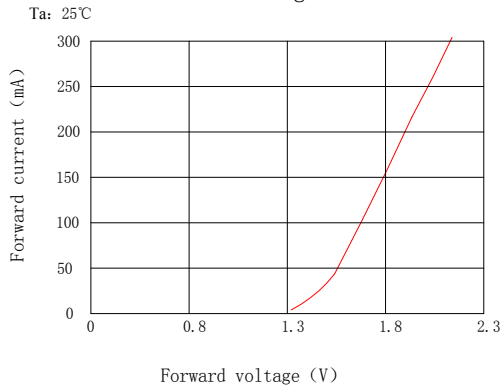
Electrical Optical Characteristics at Ta=25°C

Parameter	Symbol	Min	Typ	Max	Uni	Test Condition
Radiant Intensity	E _e	4.2	6.5	-----	Mw/sr	I _F =20mA
Viewing Angle	2 θ _{1/2}	----	75	-----	Deg	
Peak Emission Wavelength	λ _p	840	855	870	nm	I _F =100mA
Spectral Line Half-Width	Δ λ	----	40	----	nm	I _F =100mA
Forward Voltage	V _F	1.4	1.6	1.8	V	I _F =100mA
Reverse Current	I _R	----	----	10	μ A	V _R =5V

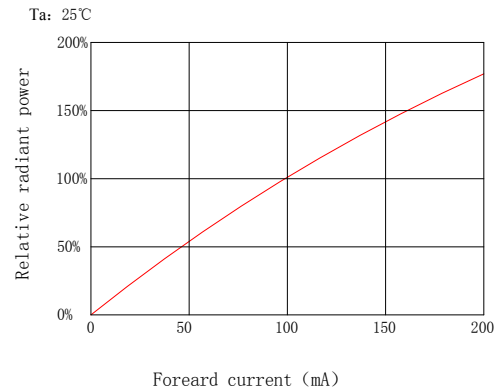


Typical Electro-Optical Characteristics Curve

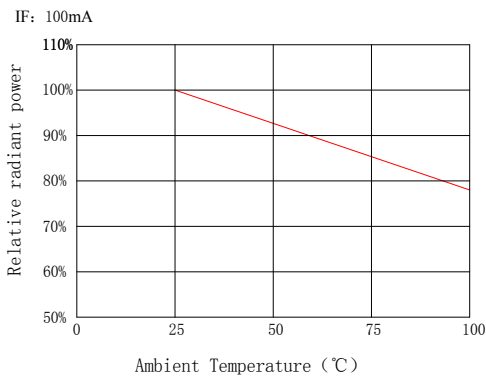
Forward current Vs.
Forward voltage



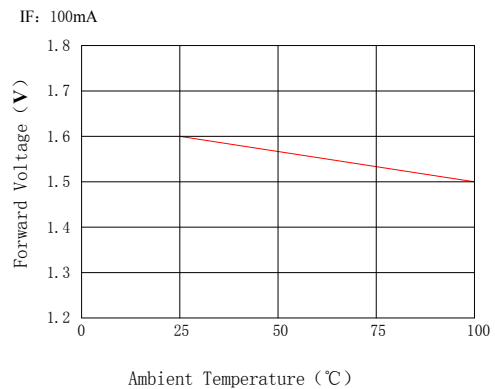
Relative Radiant power
vs. Forward Current



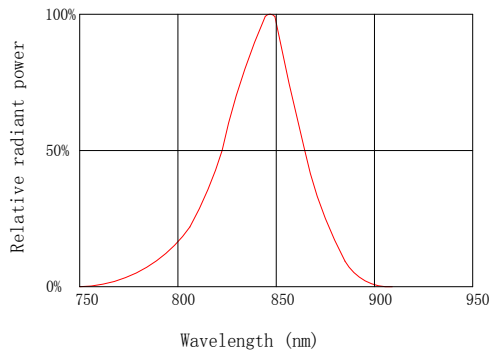
Relative Radiant power
vs. Ambient Temperature



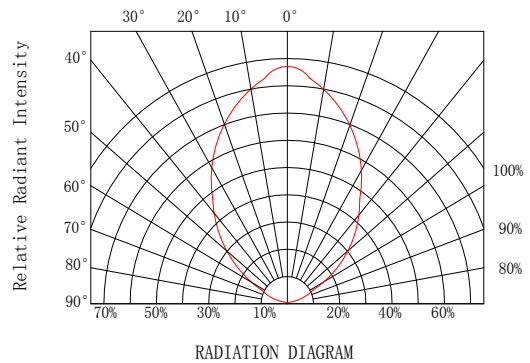
Forward Voltage vs.
Ambient Temperature



Spectral Distribution



Relative Radiant Intensity
vs. Angular Displacement

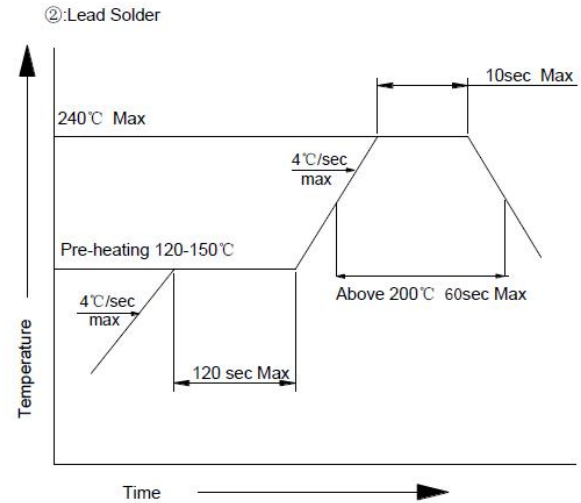
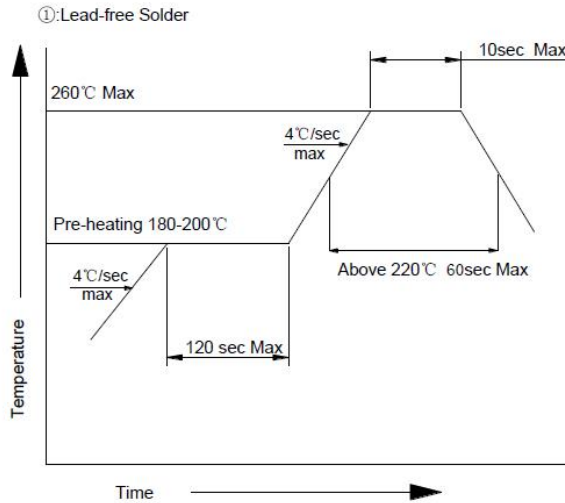




Reflow Soldering Characteristics

For Reflow Process

1. 3528 series are suitable for SMT processes.
2. Curing of glue in oven must be according to standard operation flow processes.



3. Although the recommended soldering conditions are specified in the table above, a lower soldering temperature is desirable for the LEDs;
4. The cooling of the LEDs from the peak temperature should not too fast;
5. Reflow soldering should not be done more than twice.
6. In soldering process, stress on the LEDs during heating should be avoided.
7. 350°C(max), 3sec(max) for manual soldering (just one time only);



Reliability test items and test conditions

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

Confidence level: 90%

LTPD (group of permitted defect rate): 10%

No.	Item	Test Conditions	Test Hours/ Cycles	Sample Sizes	Ac/Re	Reference Standard
1	REFLOW Soldering	Temp. : 225°C±5°C	5secs	22PCS	0/1	JEITA ED-4701 300 302
2	Temperature Cycle	H : +100°C 15min ~5 min L : -40°C 15min	100Cycles	22PCS	0/1	JEITA ED-4701 100 305
3	Thermal Shock	H : +100°C 5min ~ 10 sec L : -40°C 5min	100Cycles	22PCS	0/1	MIL-STD-202G
4	High Temperature Storage	Temp. : 100°C	1000Hrs	22PCS	0/1	JEITA ED-4701 200 201
5	Low Temperature Storage	Temp. : -40°C	1000Hrs	22PCS	0/1	JEITA ED-4701 200 202
6	DC Operating Life	IF = 100 mA	1000Hrs	22PCS	0/1	Tested with CGX standard
7	High Temperature/ High Humidity	85°C/RH85%	1000Hrs	22PCS	0/1	JEITA ED-4701 100 103

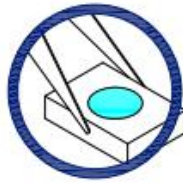
Notes: Failure Judgement Criteria: $IR \geq U \times 2$ $I_e \leq L \times 0.8$ $VF \geq U \times 1.2$

U: Upper Specification Limit L: Lower Specification Limit

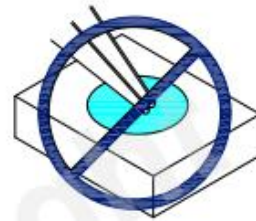
Handling Precautions

Compare to epoxy encapsulant that is hard and brittle, As a result, special handling precautions need to be observed during assembly using epoxy encapsulated LED products. Failure to comply might lead to damage and premature failure of the LED.

1. Handle the component along the side surfaces by using forceps or appropriate tools.



2. Do not directly touch or handle the silicone lens surface. It may damage the internal circuitry.



3. Do not stack together assembled PCBs containing exposed LEDs. Impact may scratch the silicone lens or damage the internal circuitry.



- 4.1. The inner diameter of the SMD pickup nozzle should not exceed the size of the LED to prevent air leaks.

- 4.2. A pliable material is suggested for the nozzle tip to avoid scratching or damaging the LED surface during pickup.

- 4.3. The dimensions of the component must be accurately programmed in the pick-and-place machine to insure precise pickup and avoid damage during production.

