HUIYUAN OPTO-ELECTRONIC CO.,LTD

TECHNOLOGY DATA SHEET & SPECIFICATIONS

MODEL: 3528SURGBC



Features

- P-LCC-4 package.
- Optical indicator.
- Ideal for backlight and light pipe application.
- Wide viewing angle.
- Suitable for vapor-phase reflow, Infrared reflow and wave solder processes.
- Computable with automatic placement equipment.
- Available on tape and reel (8mm Tape).
- Pb-free.

Descriptions

• The 3528 series is available in red, green, blue Due to the package design, the LED has wide viewing angle and optimized light coupling by inter reflector. This feature makes the ideal for light pipe application. The low current requirement makes this device ideal for portable equipment or any other application where power is at a premium.

Usage Notes:

˙The LED is an electrostatic insensitive device, so static electricity and surge will damage the LED. It is required to wear a wrist-band when handling the LED. All device, equipment, machinery, desk and ground must be properly grounded

Applications

- Automotive: Backlighting in dashboard and switch.
- Telecommunication: Indicator and backlighting in telephone and fax.
- Flat backlight for LCD's, switches and symbols.
- Light pipe application.
- General use.

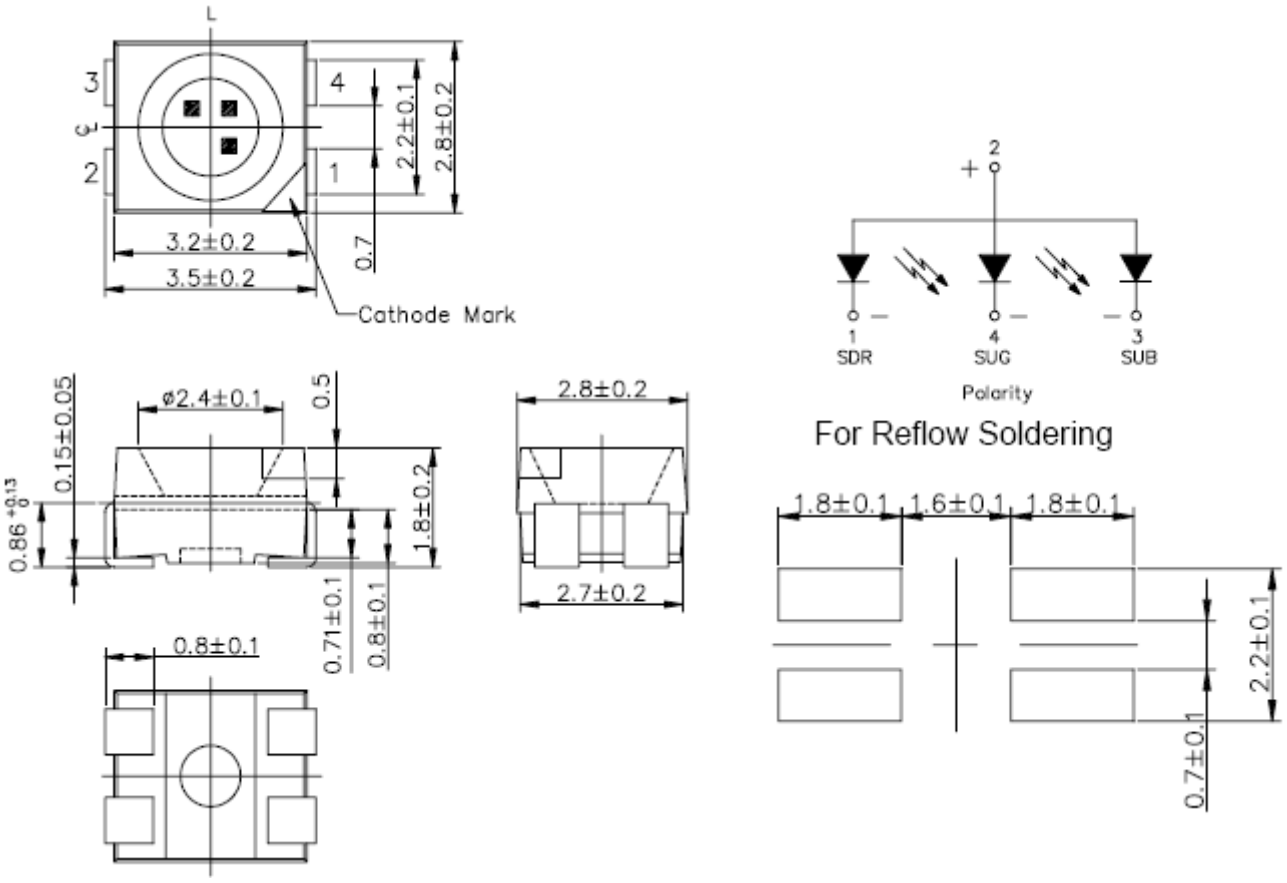
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Device Selection Guide

LED Part No.	Chip		Lens Color
	Material	Emitted Color	
3528SURGBC	AlGaInP	Red	Water clear
	InGaN	Green	
	InGaN	Blue	

Package Dimensions



NOTES:

1. All dimensions are in millimeters (inches).
2. Tolerances are ±0.1mm (0.004inch) unless otherwise noted.
3. Polarity referring onto the cathode mark is reversed on the red.

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Electro-Optical Characteristics (Ta=25□)

Parameter	Symbol	Device	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	Iv	Red Green Blue	500 1000 800	--- --- ---	700 1300 1000	mcd	IF=20mA
Viewing Angle	2θ1/2	Red Green Blue	---	120	---	Deg	(Note 1)
Peak Emission Wavelength	λp	Red Green Blue	620 520 460	-- --- ---	630 530 470	nm	IF=20mA
Spectral Line Half-Width	△λ	Red Green Blue	--- --- ---	20 36 26	--- --- ---	nm	IF=20mA
Forward Voltage	V_F	Red Green Blue	1.9 2.9 2.9	--- --- ---	2.4 4.0 4.0	V	IF=20mA
Reverse Current	I_R	Red Green Blue	---	---	10	μA	VR=5V

Note:

1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. θ1/2 is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

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APPLICATION NOTES：

1)Soldering：

① Manual soldering by soldering iron：

The use of a soldering iron of less than 25W is recommended and the temperature of the iron must be kept at no higher than 300℃.

② Reflow soldering：

a. The temperature profile as shown in Fig.3 is recommended for soldering SMD LED by the reflow furnace.

b. Care must be taken that the products be handled after their temperature has dropped down to the normal room temperature after soldering.

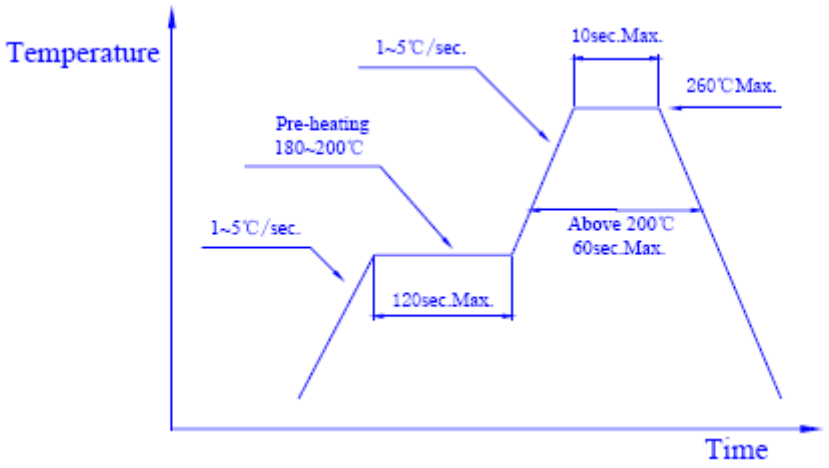


Fig.3

2)Post solder cleaning：

When cleaning after soldering is needed，the following conditions must be adhered to.

① Cleaning solvents：Freon TF or equivalent or alcohol.

② Temperature：50℃ Max.for 30 seconds or 30℃Max.for 3 minutes

③ Ultrasonic：300W Max.

3) OTHERS：

a. Care must be taken not to cause stress to the epoxy resin portion of SMD LED while it is exposed to the high temperature.

b. Care must be taken not to the rub the epoxy resin portion of SMD LED with a hard or sharp edged article such as the sand blast and the metal hook as the epoxy resin is rather soft and liable to be damaged.