

### OSB5STS4C1A

#### Features

- High Luminous PLCC6 Top SMD LEDs
- 5.0x5.0x1.5mm Standard Directivity
- Superior Weather-resistance ٠
- UV Resistant Epoxy
- Water Clear Type

## Applications

- Backlighting (switches, keys, etc.)
- Marker lights (e.g. steps, exit ways, etc.)
- Signal and Channel Letter
- Marker lights (e.g. steps, exit ways, etc.)
- Other Lighting

# **Absolute Maximum Rating**

Absolute Maximum Rating		(Ta=25°C)		
Item	Symbol	Value	Unit	
DC Forward Current	$I_{\rm F}$	75	mA	
Pulse Forward Current*	$I_{FP}$	100	mA	
Reverse Voltage	V <sub>R</sub>	5	V	
Power Dissipation	P <sub>D</sub>	270	mW	
Operating Temperature	Topr	-30 ~ +85	°C	
Storage Temperature	Tstg	-40~ +100	°C	
Lead Soldering Temperature	Tsol	260°C/5sec	-	

\*Pulse width Max.10ms Duty ratio max 1/10

### **•**Electrical -Optical Characteristics

Symbol	Condition	Min.	Тур.	Max.	Unit
V <sub>F</sub>	I <sub>F</sub> =60mA	2.9	3.1	3.6	V
I <sub>R</sub>	V <sub>R</sub> =5V	-	-	10	μΑ
$\lambda_{D}$	I <sub>F</sub> =60mA	465	470	475	nm
Iv	I <sub>F</sub> =60mA	1120	1560	-	mcd
2θ1/2	I <sub>F</sub> =60mA	-	120	-	deg
	$V_F$ $I_R$ $\lambda_D$ $Iv$	$V_F$ $I_F=60mA$ $I_R$ $V_R=5V$ $\lambda_D$ $I_F=60mA$ $IV$ $I_F=60mA$	$\begin{array}{c cccc} V_{\rm F} & {\rm I}_{\rm F}{=}60{\rm mA} & 2.9 \\ \hline {\rm I}_{\rm R} & {\rm V}_{\rm R}{=}5{\rm V} & - \\ \hline \lambda_{\rm D} & {\rm I}_{\rm F}{=}60{\rm mA} & 465 \\ \hline {\rm Iv} & {\rm I}_{\rm F}{=}60{\rm mA} & 1120 \end{array}$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c c c c c c c c c c c c c c c c c c c $

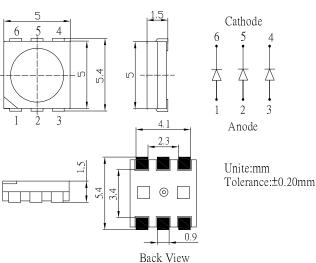
(Ta=25°C)

\*2 Tolerance of luminous intensity is  $\pm 15\%$ 

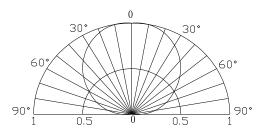
# **LED & Application Technologies**



# **•**Outline Dimension



# Directivity





5x5x1.5mm Super Blue Top SMD LED

OSB5STS4C1A

# Precautions in Use for Surface Mount Diode

#### ■ Storage

· Storage Conditions

Before opening the package:

The LEDs should be kept at 30°C or less and 60%RH or less. The LEDs should be used within a year. When storing the LEDs, moisture proof packaging with absorbent material (silica gel) is recommended.

• After opening the package:

Soldering should be done right after opening the package (within 24hrs).

Keeping of a fraction, sealing and Temperature: 5~40°C Humidity: Less than 30%.

If the package has been opened more than 1 week or the color of desiccant changes, components should be dried for 10-12hrs, at  $60\pm3^{\circ}$ C.

• Optosupply LED electrode sections are comprised of a silver plated copper alloy. The silver surface may be affected by environments which contain corrosive gases and so on. Please avoid conditions which may cause the LED to corrode, tarnish or discolor. This corrosion or discoloration may cause difficulty during soldering operations. It is recommended that the User use the LEDs as soon as possible.

· Please avoid rapid transitions in ambient temperature, especially in high humidity environments where condensation can occur.

### Soldering Conditions

Reflow Soldering		Hand Soldering		
Pre-Heat	180 ~ 200°C			
Pre-Heat Time	120 sec. Max.		250°C Max	
Peak temperature	temperature 260°C Max.		350°C Max. 3 sec. Max.	
Dipping Time	5 sec. Max.	Soldering time	(one time only)	
Condition	Refer to Temperature-profile			

\*Recommended soldering conditions vary according to the type of LED

\*Although the recommended soldering conditions are specified in the above table, reflow, or hand soldering at the lowest possible temperature is desirable for the LEDs.

\*A rapid-rate process is not recommended for cooling the LEDs down from the peak temperature.

•All SMD LED products are pb-free soldering available.

• Occasionally there is a brightness decrease caused by the influence of heat or ambient atmosphere during air reflow.

It is recommended that the User use the nitrogen reflow method.

• Repairing should not be done after the LEDs have been soldered. When repairing is unavoidable

double-head soldering iron should be used. It should be confirmed beforehand whether the characteristics of the LEDs will or will not be damaged by repairing.

- Reflow soldering should not be done more than two times.
- When soldering, do not put stress on the LEDs during heating.
- After soldering, do not warp the circuit board.

# LED & Application Technologies









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