



**OptoSupply**

Light It Up

3.5x2.8x0.7mm Power Top H Power LED

OSXX2835C1H-60mA

## ■Features

- Highest luminous flux
- Super energy efficiency
- Long lifetime operation
- Superior UV resistance
- W4/M5 Ra>80

## ■Applications

- Read lights (car, bus, aircraft)
- Portable (flashlight, bicycle)
- Bollards / Security / Garden
- Traffic signaling / Beacons
- Indoor / Outdoor Commercial lights
- Automotive Ext

## ■Absolute Maximum Rating

(Ta=25°C)

Item	Symbol	Value		Unit
		W/M/P//B/PG	Y/O/R	
DC Forward Current	I <sub>F</sub>	80	80	mA
Pulse Forward Current#	I <sub>FP</sub>	150	150	mA
Reverse Voltage	V <sub>R</sub>	5	5	V
Power Dissipation	P <sub>D</sub>	272	192	mW
Operating Temperature	Topr	-30 ~ +85		°C
Storage Temperature	T <sub>stg</sub>	-40 ~ +100		°C
Lead Soldering Temperature	T <sub>sol</sub>	260°C/10sec		-

#Pulse width Max.10ms Duty ratio max 1/10

## ■Electrical -Optical Characteristics

(Ta=25°C)

Part Number	Color	V <sub>F</sub> (V)*1			I <sub>R</sub> (μA)	IV(mcd)*2			Φ v(lm)*3			CCT(K)*4\Wd(nm)*5			201/2(deg)		
		Min.	Typ.	Max.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Typ.		
		I <sub>F</sub> =60mA			V <sub>R</sub> =5V	I <sub>F</sub> =60mA											
OSW62835C1H-60mA	Cool White	W		2.8	3.0	3.4	10	4200	5800	-	16	18	-	CCT:12000-14000-16000K	120		
OSW52835C1H-60mA	Cool White	W		2.8	3.0	3.4	10	4200	5800	-	16	18	-	CCT:9000~14000K	120		
OSWA2835C1H-60mA	Pure White	W		2.8	3.0	3.4	10	7000	8400	-	20	22	-	CCT:7500~8500K	120		
OSW42835C1H-60mA	White	W		2.8	3.0	3.4	10	7000	8400	-	20	22	-	CCT:4500~7000K	120		
OSM52835C1H-60mA	Warm White	M	■	2.8	3.0	3.4	10	5800	7000	-	18	20	-	CCT:2800~4500K	120		
OSB42835C1H-60mA	Blue	B	■	2.8	3.0	3.4	10	750	1120	-	2	4	-	455	460	470	120
OSG52835C1H-60mA	Pure Green	PG	■	2.8	3.0	3.4	10	3000	4200	-	10	15	-	520	525	530	120
OSY52835C1H-60mA	Yellow	Y	■	1.8	2.0	2.4	10	1120	1560	-	4	6	-	585	590	595	120
OSO52835C1H-60mA	Orange	O	■	1.8	2.0	2.4	10	1120	1560	-	4	6	-	600	605	610	120
OSR52835C1H-60mA	Red	R	■	1.8	2.0	2.4	10	1120	1560	-	4	6	-	620	625	630	120

\*1 Tolerance of measurements of forward voltage is  $\pm 0.1V$

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

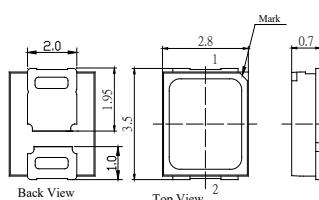
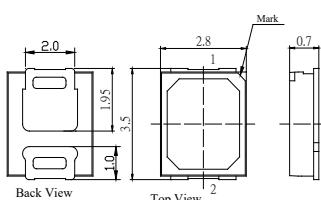
\*3 Tolerance of measurements of luminous flux is  $\pm 15\%$

\*4 Tolerance of measurements of color temperature is  $\pm 10\%$

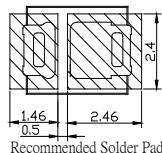
\*5 Tolerance of measurements of dominant wavelength is  $\pm 1nm$

\*6. Don't drive at rated current more than 5s without heat sink for Power Top H emitter series.

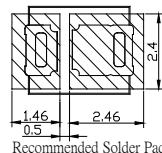
## ■Outline Dimension



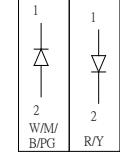
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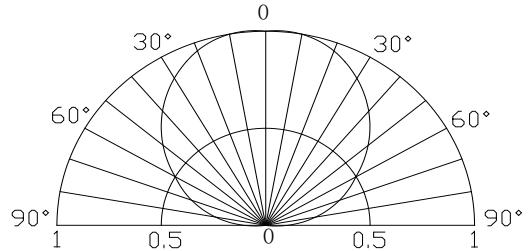
Unit:mm  
Tolerance:@0.20mm  
unless otherwise noted



Recommended Solder Pad



## ■Directivity



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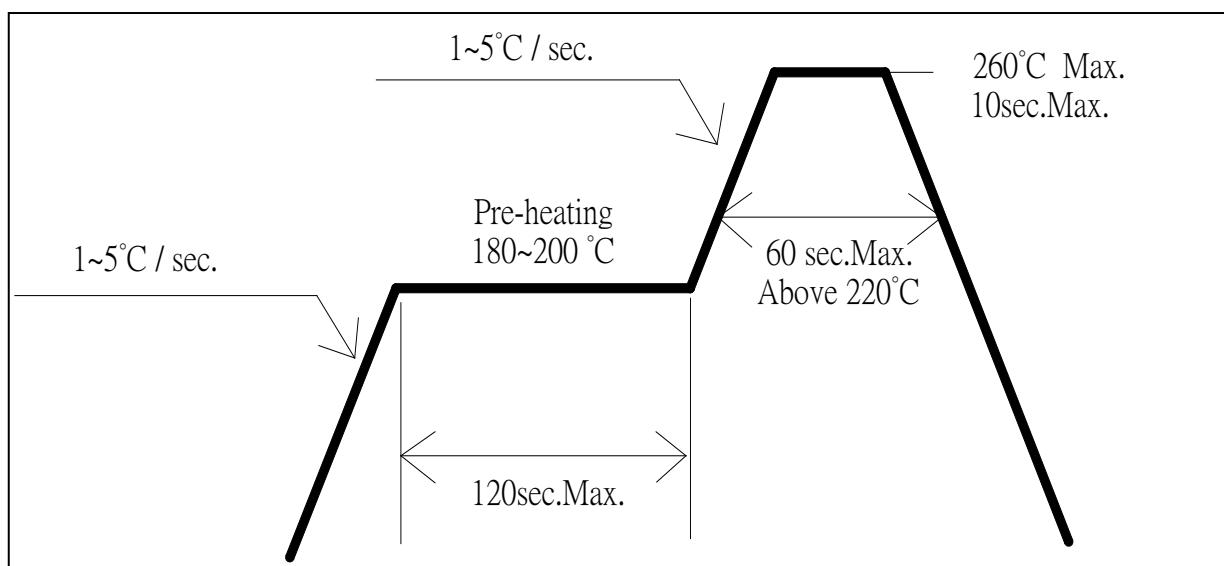
**3.5x2.8x0.7mm Power Top H Power LED**

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■ **Soldering Conditions**

<b>Reflow Soldering</b>		<b>Hand Soldering</b>	
Pre-Heat	180 ~ 200°C	Temperature Soldering time	350°C Max. 3 sec. Max. (one time only)
Pre-Heat Time	120 sec. Max.		
Peak Temperature	260°C Max.		
Dipping Time	<b>10 sec. Max.</b>		
Condition	Refer to Temperature-profile		

• **Reflow Soldering Condition(Lead-free Solder)**



\*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 a 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.

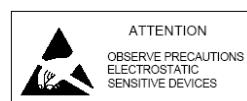
• When soldering, do not put stress on the LEDs during heating.

• After soldering, do not warp the circuit board.

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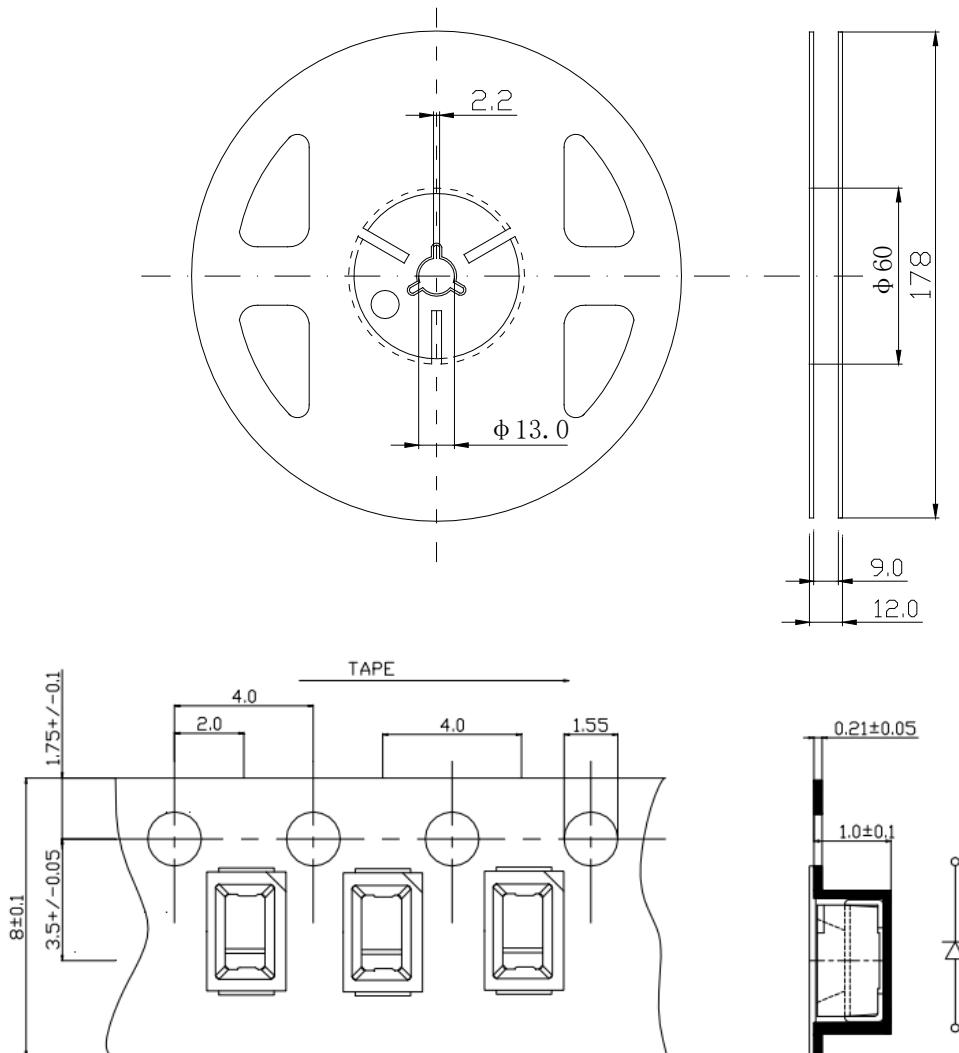
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## PACKAGING DIMENSIONS



### Notes:

1. Unit: mm
2. 4000pcs/Reel

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## 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: 5~30°C Humidity: Less than 30%.

If the package has been opened more than 24 Hours, components should be dried for 12hrs, at  $60 \pm 5^\circ\text{C}$ .

· 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.

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