

# 3.2 x 1.6 x 0.9mm Yellow & White Chip LED

### **OSYW1206C1F**

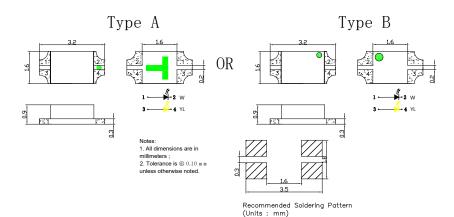
### **■Features**

- Bi-color
- Super high brightness of surface mount LED
- Water clear flat mold
- Compact package outline (LxWxT) of 3.2mm x 1.6mm x 0.9mm
- Compatible to IR reflow soldering.

# **Applications**

- Backlighting (switches, keys, etc.)
- Marker lights (e.g. steps, exit ways, etc.)

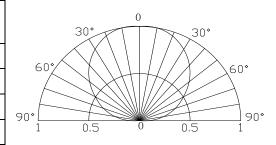
### **■Outline Dimension**



# ■Absolute Maximum Rating

T4	C11	Value				
Item	Symbol	YL	W	Unit		
DC Forward Current	$I_F$	20	20	mA		
Pulse Forward Current#	$I_{FP}$	100	100	mA		
Reverse Voltage	V <sub>R</sub>	5	5	V		
Power Dissipation	$P_{\mathrm{D}}$	46	66	mW		
Operating Temperature	Topr	-40 ~·	°C			
Storage Temperature	Tstg	-40~	°C			
Lead Soldering Temperature	Tsol	260°C/10sec				
			-			

# **■**Directivity



#Pulse width Max 0.1ms, Duty ratio max 1/10

# **■**Electrical -Optical Characteristics

### (Ta=25°C)

		Color		$V_{F}(V)$		$I_R(\mu A)$	Iv(mcd)			λD(nm)/CCT(K)			2θ1/2(deg)		
	Part Number			Min.	Тур.	Max.	Max.	Min.	Тур.	Max.	Min.	Тур.	Max.	Тур.	
					I <sub>F</sub> =5mA		V <sub>R</sub> =5V	I <sub>F</sub> =5mA							
	OSWW1204C1E	Yellow	YL		-	1.7	2.3	10	-	30	-	585	590	595	120
OSYW1206C1F		White	W		-	2.7	3.3	10	-	200	-	CCT:	8000-18	8000K	120

<sup>\*1</sup> Tolerance of measurements of chromaticity coordinate is ±10%

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<sup>\*2</sup> Tolerance of measurements of dominant wavelength is  $\pm 1$ nm

<sup>\*3</sup> Tolerance of measurements of luminous intensity is ±15%

<sup>\*4</sup> Tolerance of measurements of forward voltage is  $\pm 0.1$ V



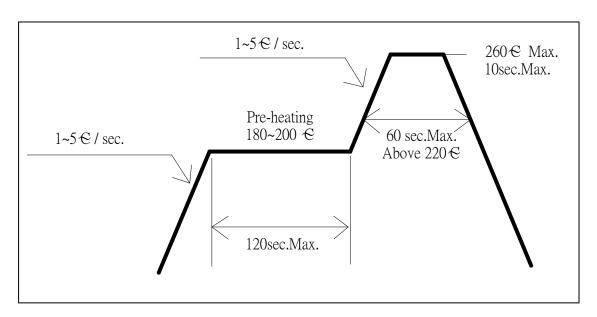
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### **■** Soldering Conditions

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

# • 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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### **■** Cautions:

- 1. After open the package, the LED's floor life is 4 Weeks under 30°C or less and 60%RH or less(MSL:2a).
- 2. Heat generation must be taken into design consideration when using the LED.
- 3. Power must be applied resistors for protection, over current would be caused the optic damage to the devices and wavelength shift.
- 4. Manual tip solder may cause the damage to Chip devices, so advised that heat of iron should be lower than 15W with temperature control under 5 seconds at 230-260 deg. C. (The device would be got damage in re working process, recommended under 5 seconds at 230-260 deg. C)
- 5. All equipment and machinery must be properly grounded. It is recommended to use a wristband or anti-electrostatic glove when handing the LED.
- 6. Use IPA as a solvent for cleaning the LED. The other solvent may dissolve the LED package and the epoxy, Ultrasonic cleaning should not be done.
- 7. Damaged LED will show unusual characteristics such as leak current remarkably increase, turn-on voltage becomes lower and the LED get unlight at low current.

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