

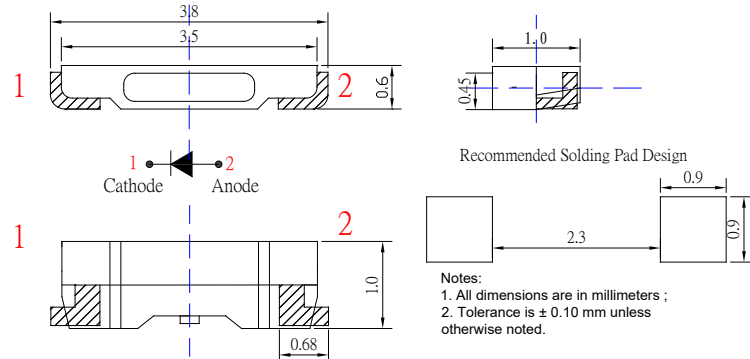
## ■Features

- Single chip
- Suitable for all SMT assembly methods.
- Sorting for  $I_v$  and  $V_f$  @ 20mA of  $I_f$
- Compact package outline  
(LxWxT) of 3.8mm x 0.6mm x 1.0mm
- Compatible to IR reflow soldering.

## ■Applications

- Mobile communications equipment (iPad, iPhone, etc.)
- Digital products (MP3,MP4, etc.)

## ■Outline Dimension



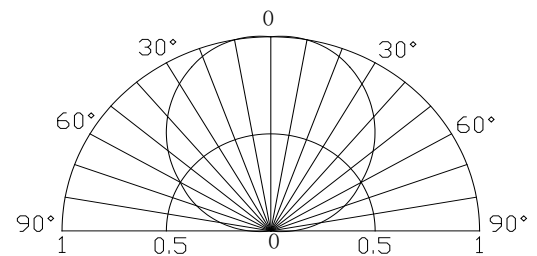
## ■Absolute Maximum Rating

(Ta=25°C)

Item	Symbol	Value		Unit
		W/M/PG//B	Y/R	
DC Forward Current	$I_F$	30	30	mA
Pulse Forward Current#	$I_{FP}$	100	100	mA
Reverse Voltage	$V_R$	5	5	V
Power Dissipation	$P_D$	108	78	mW
Operating Temperature	$T_{opr}$	-30 ~ +85		°C
Storage Temperature	$T_{stg}$	-40 ~ +100		°C
Lead Soldering Temperature	$T_{sol}$	260°C/10sec		-

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

## ■Directivity



## ■Electrical -Optical Characteristics

(Ta=25°C)

Part Number	Color			$V_F$ (V)			$I_R$ (μA)	$I_v$ (mcd)			CCT(K)\Wd(nm)*			2θ1/2(deg)
				Min.	Typ.	Max.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Typ.
				$I_F=20mA$			$V_R=5V$	$I_F=20mA$			$I_F=20mA$			
OSW63806C1F	Cool White	W		2.8	3.1	3.6	10	1560	1900	-	CCT:25000~45000K			120
OSW43806C1F	Pure White	W		2.8	3.1	3.6	10	1900	2180	-	CCT:5500-6500K			120
OSM73806C1F	Natural White	M		2.8	3.1	3.6	10	1560	1900	-	CCT:4000~4500K			120
OSM53806C1F	Warm White	M		2.8	3.1	3.6	10	1560	1900	-	CCT:2700~3400K			120
OSB53806C1F	Blue	B		2.8	3.1	3.6	10	200	300	-	460	465	470	120
OSG53806C1F	Pure Green	PG		2.8	3.1	3.6	10	900	1120	-	517	525	535	120
OSY53806C1F	Yellow	Y		1.8	2.1	2.6	10	300	500	-	585	590	595	120
OSR53806C1F	Red	R		1.8	2.1	2.6	10	300	500	-	615	625	630	120

\*1 Tolerance of measurements of chromaticity coordinate is ±10%

\*2 Tolerance of measurements of dominant wavelength is ±1nm

\*3 Tolerance of measurements of luminous intensity is ±15%

\*4 Tolerance of measurements of forward voltage is ±0.1V



**OptoSupply**

Light It Up

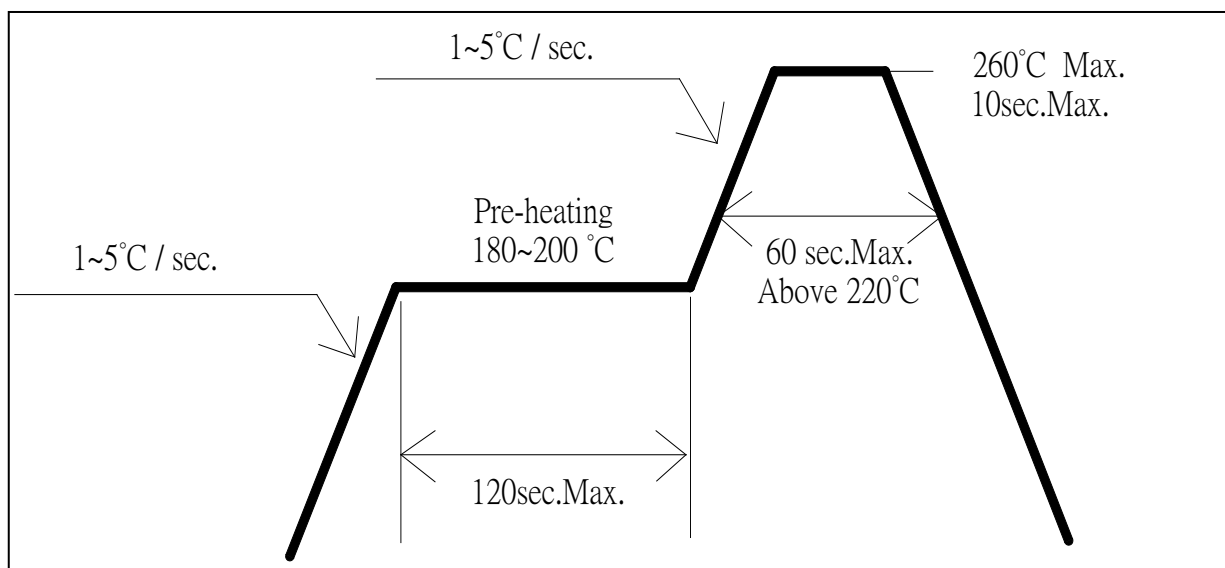
**3.8\*0.6\*1.0mm Side View SMD**

**OSXX3806C1F**

### ■ Soldering Conditions

Reflow Soldering		Hand Soldering	
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	10 sec. Max.		
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.

## 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.