

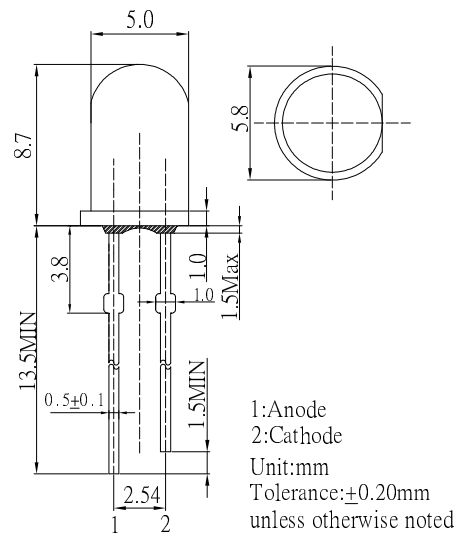
■ **Features**

- High Luminous LEDs
- 5mm Round Standard Directivity
- UV Resistant Epoxy
- Fewer Color Diffused Type

■ **Applications**

- Electronic Signs And Signals
- Small Area Illuminations
- Back Lighting
- Other Lighting

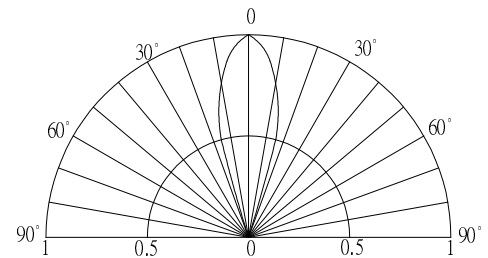
■ **Outline Dimension**



■ **Absolute Maximum Rating (Ta=25°C)**

Item	Symbol	Value	Unit
DC Forward Current	I <sub>F</sub>	50	mA
Pulse Forward Current#	I <sub>FP</sub>	100	mA
Reverse Voltage	V <sub>R</sub>	5	V
Power Dissipation	P <sub>D</sub>	130	mW
Operating Temperature	T <sub>opr</sub>	-30 ~ +85	°C
Storage Temperature	T <sub>stg</sub>	-40 ~ +100	°C
Lead Soldering Temperature	T <sub>sol</sub>	260°C / 5sec	-

■ **Directivity**



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

■ **Electrical -Optical Characteristics (Ta=25°C)**

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
DC Forward Voltage*	V <sub>F</sub>	I <sub>F</sub> =20mA	1.8	2.1	2.6	V
DC Reverse Current	I <sub>R</sub>	V <sub>R</sub> =5V	-	-	10	μA
Domi. Wavelength*	λ <sub>D</sub>	I <sub>F</sub> =20mA	600	605	610	nm
Luminous Intensity*	I <sub>v</sub>	I <sub>F</sub> =20mA	6600	8000	-	mcd
50% Power Angle	2θ <sub>1/2</sub>	I <sub>F</sub> =20mA	-	30	-	deg

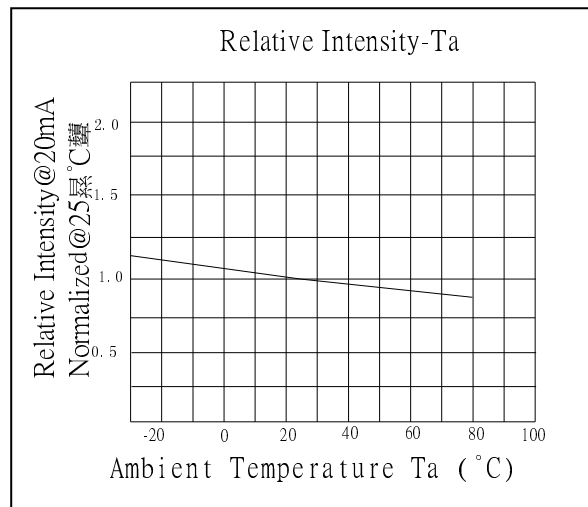
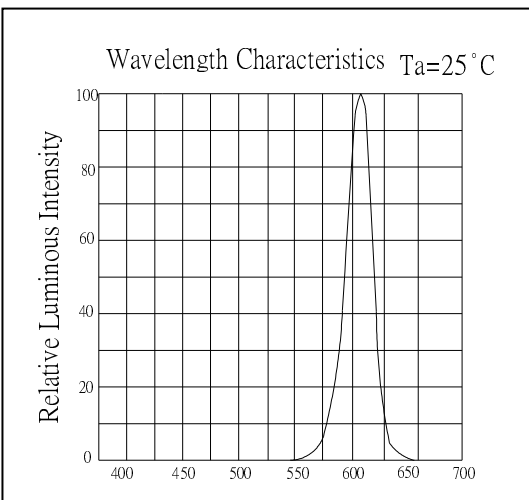
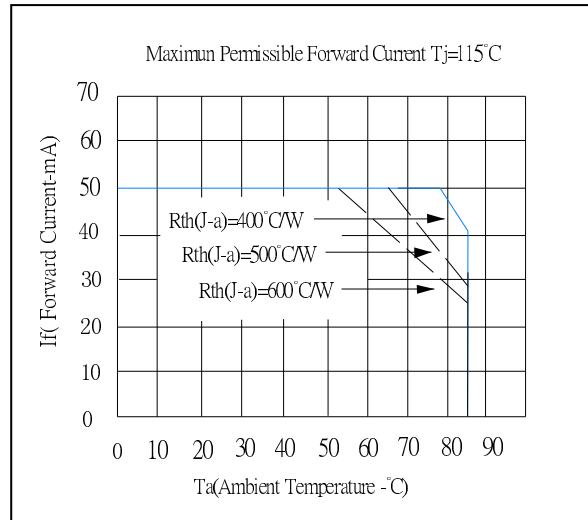
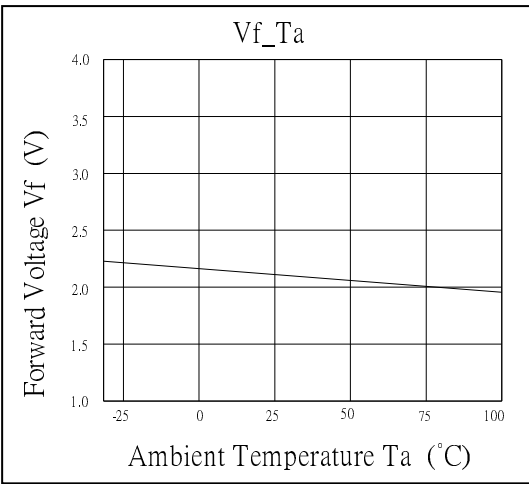
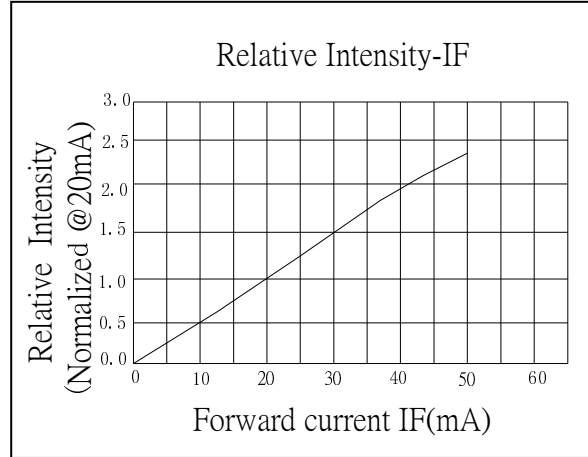
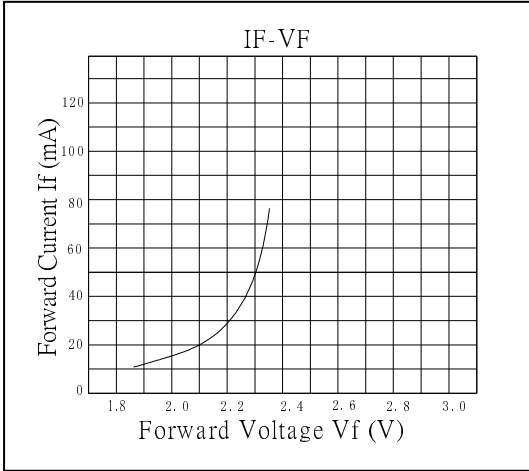
\*1 Tolerance of measurements of dominant wavelength is ±1nm

\*2 Tolerance of measurements of luminous intensity is ±15%

\*3 Tolerance of measurements of forward voltage is ±0.1V

**AlGaInP LED**

**TYPICAL ELECTRICAL/OPTICAL CHARACTERISTIC CURVES**



**RELIABILITY TEST REPORT**

CLASSIFICATION	TEST ITEM	TEST CONDITION
ENDURANCE TEST	ROOM TEMPERATURE OPERATION LIFE	If: 20mA Ta:25±5 °C TEST TIME=1000HRS
	HIGH TEMPERATURE HIGH HUMIDITY STORAGE	R.H:90~95% Ta:65±5°C TEST TIME=240HRS(+2HRS)
	HIGH TEMPERATURE STORAGE	Ta:100°C TEST TIME=500HRS(-24HRS,+48HRS)
	LOW TEMPERATURE STORAGE	Ta:-40°C TEST TIME=500HRS(-24HRS,+48HRS)
ENVIRONMENTAL TEST	TEMPERATURE CYCLING	-40°C ~25°C ~100°C ~25°C 30min 5min 30min 5min 20cycles
	RESISTANCE TO SOLDERING HEAT	Ta:260±5°C TEST TIME=10±1sec
	SOLDERABILITY	Ta:245±5°C TEST TIME=5±1sec

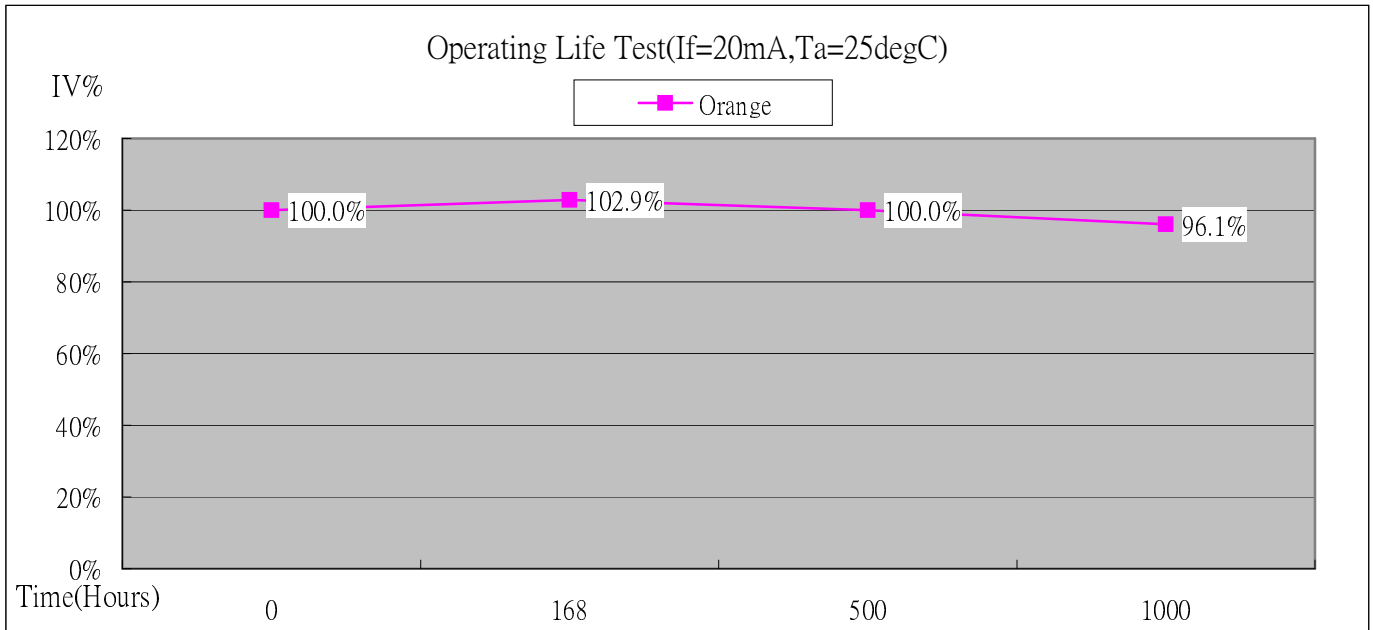
**JUDGMENT CRITERIA OF FAILURE FOR THE RELIABILITY**

MEASURING ITME	SYMBOL	CONDITIONS	FAILURE CRITERIA
LUMINOUS INTENSITY	IV	IF=20mA	IV<0.5*L.S.L
FORWARD VOLTAGE	VF	IF=20mA	VF>1.2*U.S.L
REVERSE CURRENT	IR	Vr=5V	IR>2*U.S.L
SOLDERABILITY	-	-	LESS THAN 95% SOLDER COVERAGE

U.S.L : Upper Specification Limit

L.S.L : Lower Specification Limit

**OPERATION LIFE TEST LUMINANCE RATE CURVE**



\*Burn-in condition: 20mA

\*Projection of Statistical Average Light Output Degradation Performance for LED Technology  
Extrapolated from OptoSupply QA Dept. Test Data.

\*According to OptoSupply outgoing Packaged Products Specification

\*MTBF:50,000hrs, 90% Confidence (A Failure is Any LED Which is Open, shorted or fails to Emit Light)

\*The Projected Data is Base on The Feature of LED Itself Under Normal Operation Conditions.

\*Any Improper Circuit Design or External Factors Might Cause a Different Result.

## LAMP APPLICATION (PB FREE SOLDERJING)

Apply to LAMP (DIP) SERIES.

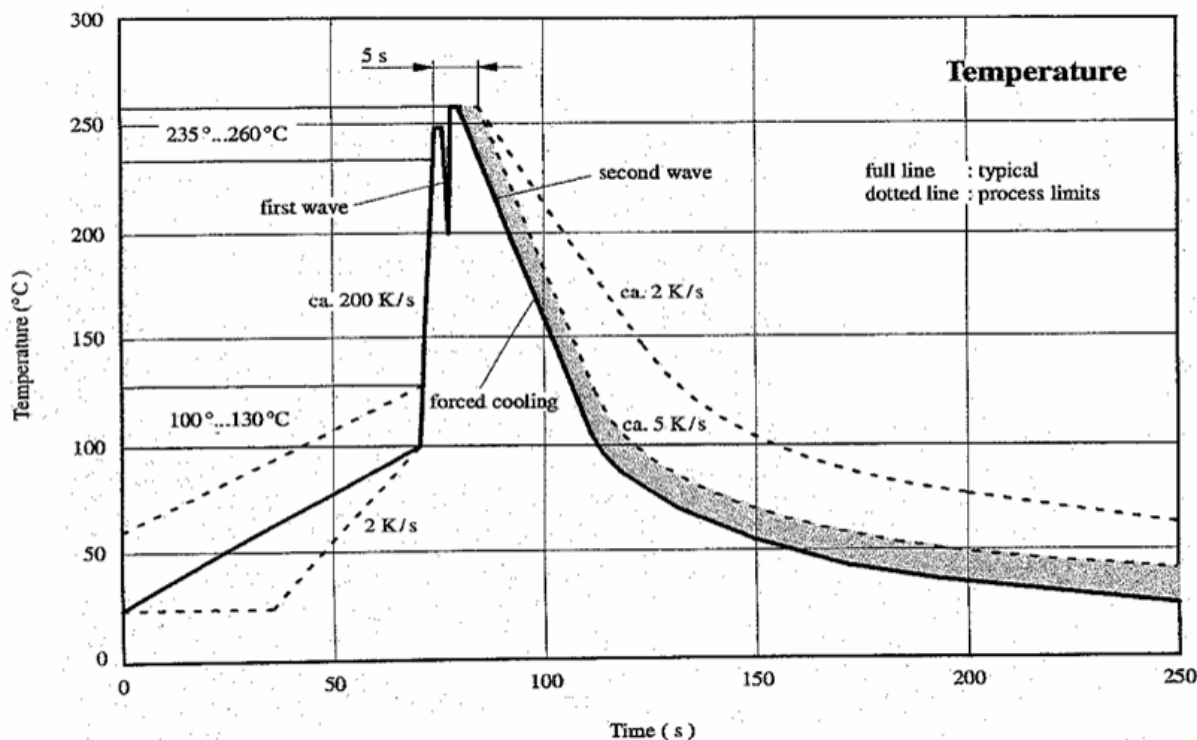
### Description:

#### (1) Manual soldering (Solder Iron)

- (1.1) Temperature at tip of the iron: 350°C Max.
- (1.2) It's banned to load any stress on the resin during soldering.
- (1.3) Soldering time: 3sec.Max.(one time only.)
- (1.4) Leave 3mm of minimum distance from the base of the epoxy.

#### (2) Dip Soldering (Wave Soldering-Solder Bath)

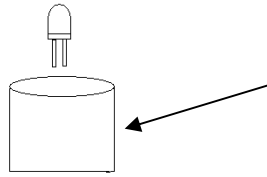
- (2.1) Leave 3mm of minimum distance from the base of the epoxy.  
Soldering beyond the base of the tie bar (stand off) is recommended.
- (2.2) When soldering, do not put stress on the LEDs during heating.
- (2.3) Cutting the lead frames at high temperatures may cause LED failure.
- (2.4) Never take next process until the component is cooled down to room temperature after reflow.
- (2.5) After soldering, do not warp the circuit board.
- (2.6) The recommended dip soldering profile is the following.



Wave soldering of double wave optodevices

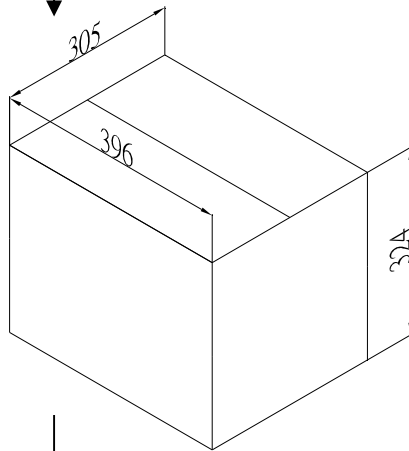
## LAMP PACKING

500pcs/Bag

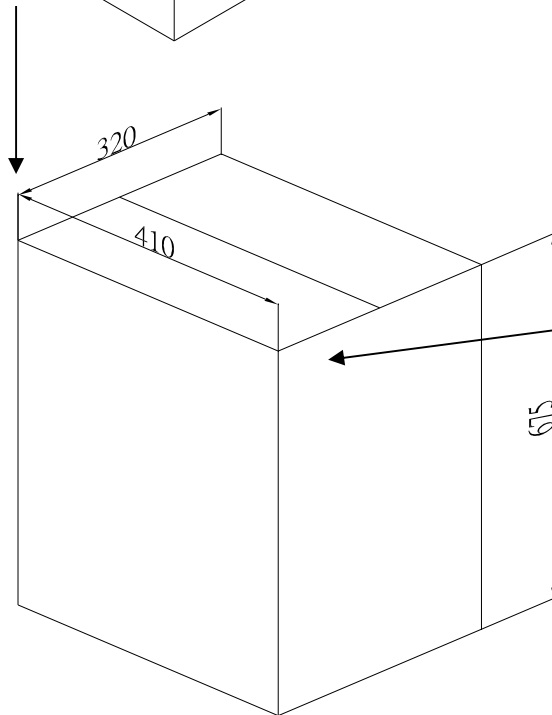


LED LAMPS	
PART NO:	_____
LOT NO:	_____
IV:	_____
VF:	_____
COLOR:	_____
QTY:	_____
QC:	_____

**BOX**  
Dimension (mm)  
396\*305\*324  
40Bags/Box



**Carton**  
Dimension (mm)  
675\*410\*320  
2Boxes/Carton



LED LAMPS	
PART NO:	_____
LOT NO:	_____
IV:	_____
VF:	_____
COLOR:	_____
QTY:	_____
QC:	_____