

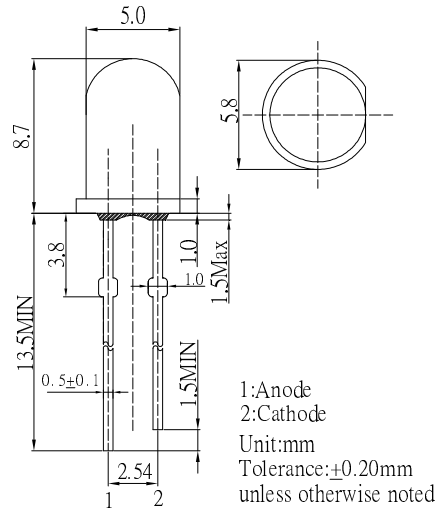
■ **Features**

- 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**

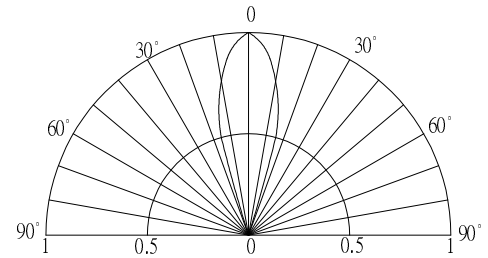


■ **Absolute Maximum Rating**

($T_a=25^\circ\text{C}$)

Item	Symbol	Value	Unit
DC Forward Current	I_F	30	mA
Pulse Forward Current#	I_{FP}	100	mA
Reverse Voltage	V_R	5	V
Power Dissipation	P_D	104	mW
Operating Temperature	T_{opr}	-30 ~ +85	$^\circ\text{C}$
Storage Temperature	T_{stg}	-40 ~ +100	$^\circ\text{C}$
Lead Soldering Temperature	T_{sol}	260 $^\circ\text{C}$ / 5sec	-

■ **Directivity**



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

■ **Electrical -Optical Characteristics**

($T_a=25^\circ\text{C}$)

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
DC Forward Voltage*	V_F	$I_F=20\text{mA}$	2.7	3.0	3.4	V
DC Reverse Current	I_R	$V_R=5\text{V}$	-	-	10	μA
Domi. Wavelength*	λ_D	$I_F=20\text{mA}$	465	470	475	nm
Luminous Intensity*	I_v	$I_F=20\text{mA}$	4200	5800	-	mcd
50% Power Angle	$2\theta_{1/2}$	$I_F=20\text{mA}$	-	30	-	deg

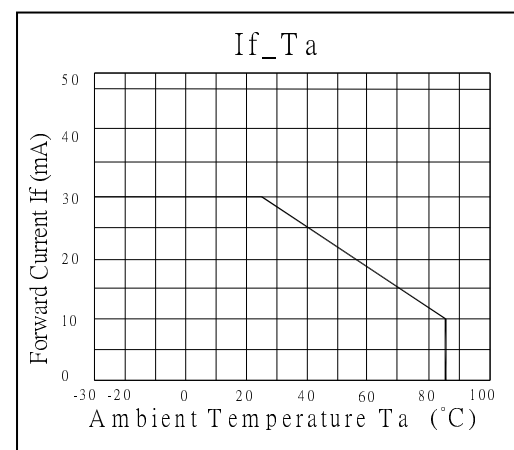
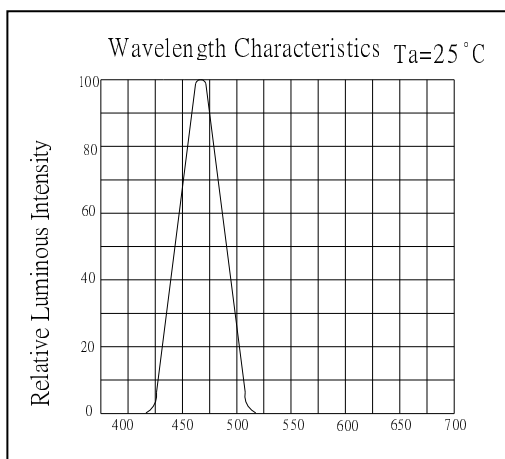
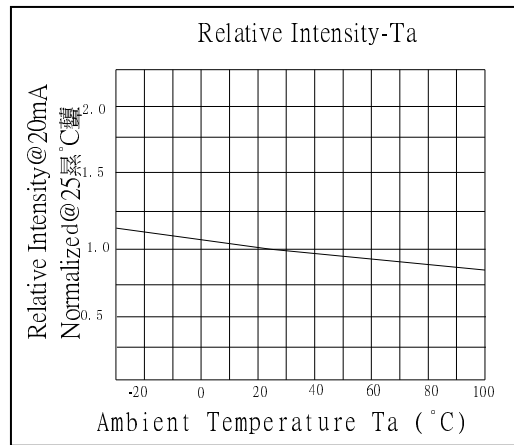
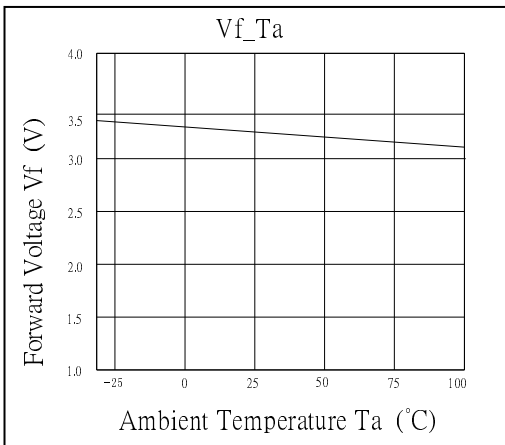
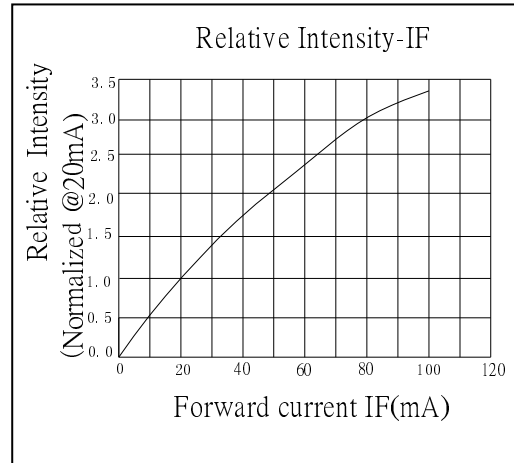
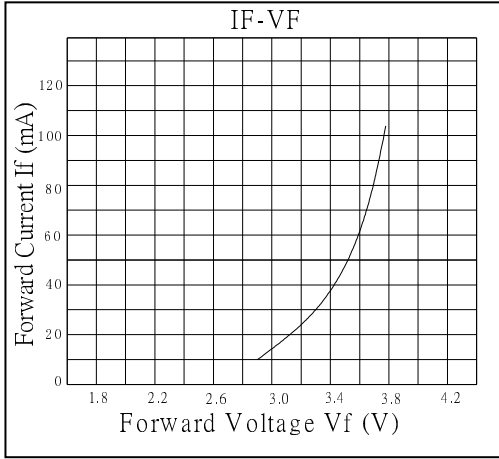
*1 Tolerance of measurements of dominant wavelength is ± 1 nm

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

*3 Tolerance of measurements of forward voltage is $\pm 0.1\text{V}$

InGaN LED

TYPICAL ELECTRICAL/OPTICAL CHARACTERISTIC CURVES



RELIABILITY TEST REPORT

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

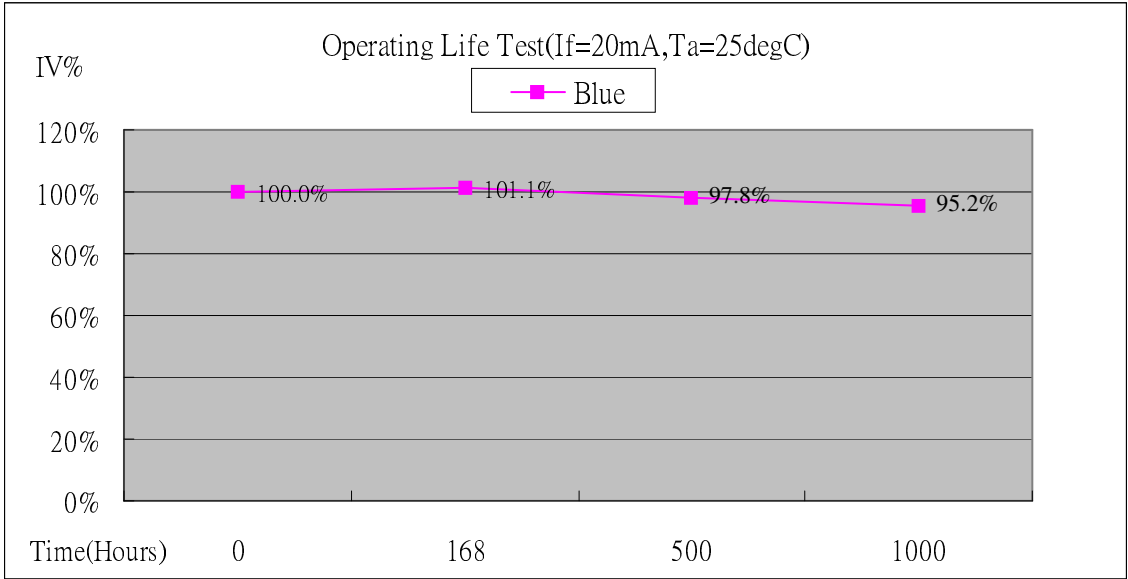
JUDGMENT CRITERIA OF FAILURE FOR THE RELIABILITY

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.

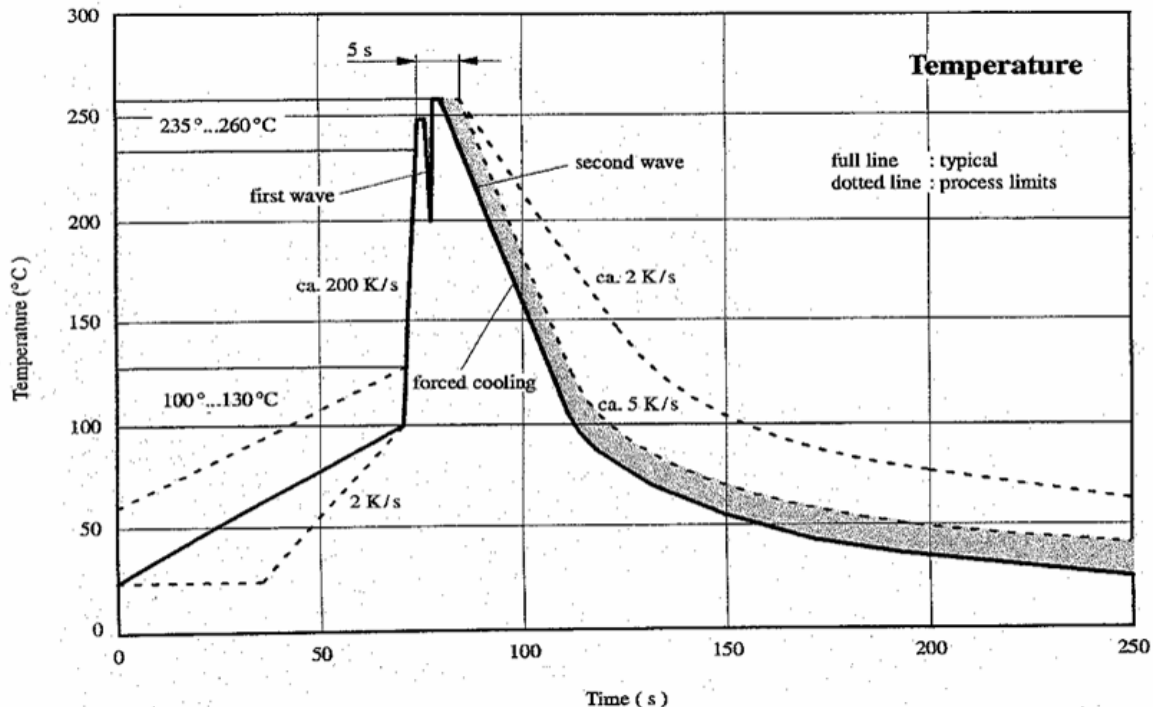
Description:

(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)

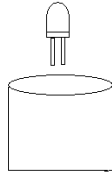
- (2.1) Leave 3mm of minimum distance from the base of the epoxy.
Soldering beyond the base of the tie bar (stand off) is recommended.
- (2.2) When soldering, do not put stress on the LEDs during heating.
- (2.3) Cutting the lead frames at high temperatures may cause LED failure.
- (2.4) Never take next 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

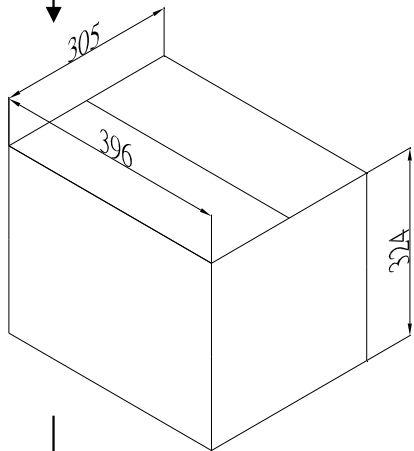
LAMP PACKING

500pcs/Bag

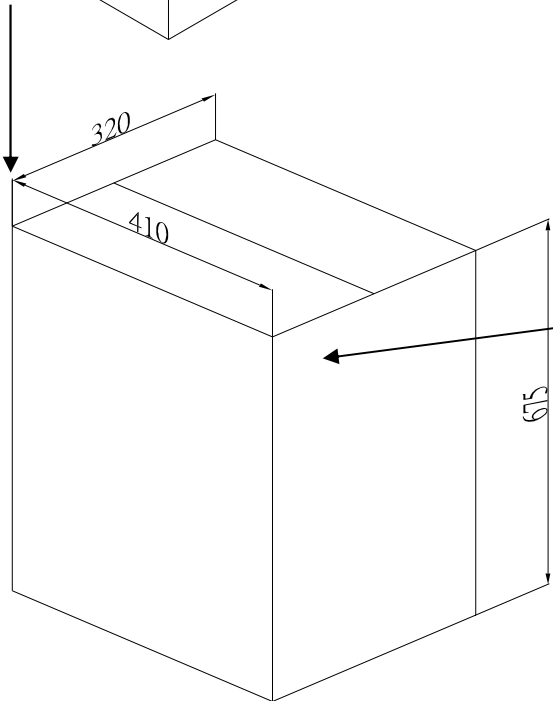


LED LAMPS	
PART NO:	_____
LOT NO:	_____
IV:	_____
VF:	_____
COLOR:	_____
QTY:	_____
QC:	_____

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:	_____

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