



SPECIFICATION FOR APPROVAL

Customer: _____

Description: LED LAMP

Model: GL-500URCC

Lot No.: _____

No.: _____

Date: 2008-08-06

Enclosure is the specification

SHENZHEN GUOYEXING OPTOELECTRONICS CO., LTD.			
Production Dept.	Quality Dept.	Engineering Dept.	Marketing Dept.

APPROVED SIGNATURES			

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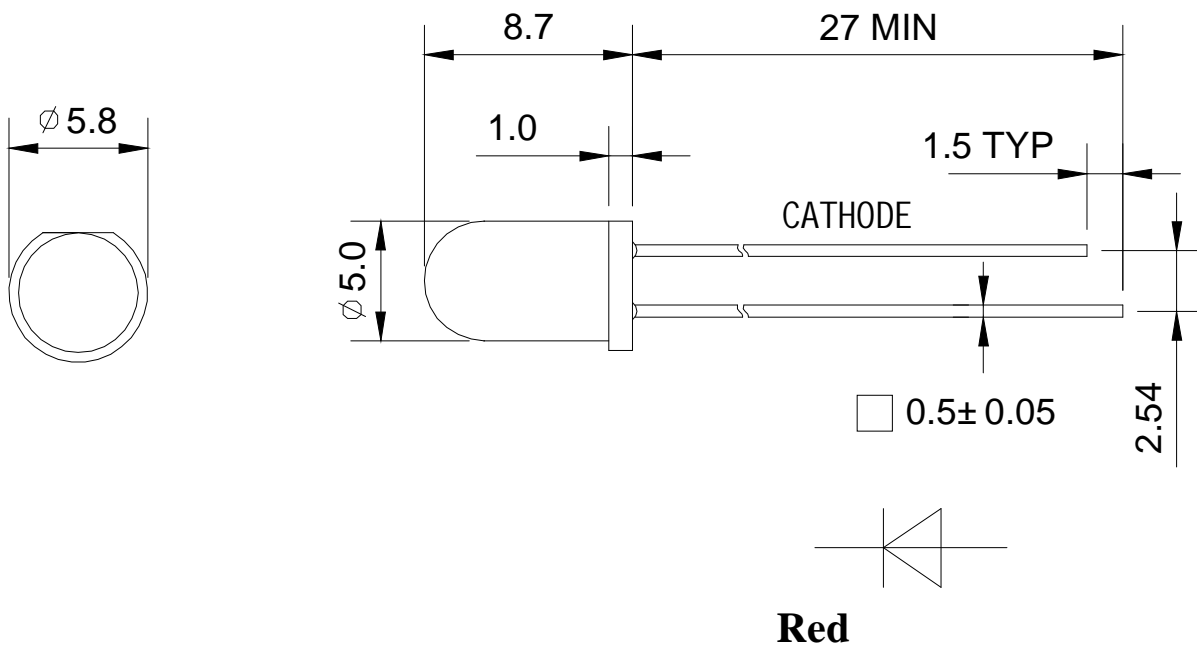


GL-500URCC RED

1. Features

- 1) 5mm DIAMETER LAMP
- 2) LOW CURRENT REQUIREMENT
- 3) LOW POWER CONSUMPTION
- 4) VERSATILE MOUNTING ON P.C. BOARD PANEL
- 5) LONG LIFE-SOLID STATE RELIABILITY

2. Package Dimensions



Notes:

- 1. All dimensions are in millimeters.
- 2. Tolerance is ± 0.25 unless otherwise noted.
- 3. Specifications are subject to change without notice.



3.

Part No.	Chip Material	Emitting Color	Lens Type	Iv(mcd)@20mA			Viewing Angle
				Min.	Typ.	Max	2 θ 1/2
GL-500URCC	AlGaInP	Red(红色)	Water Clear	2308	3000	3900	11°

Note:

θ 1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

4. Electrical / Optical Characteristics at T_A=25° C

Parameter	Symbol	Min.	Typ.	Max.	Units	TestConditions
Forward Voltage	V _F	1.7	1.9	2.5	V	I _F =20mA
Peak Wavelength	λ _p	626	631	637	nm	I _F =20mA
Dominate Wavelength	λ _D	615	620	625	nm	I _F =20mA
Spectral Line Half-width	Δ λ	-	17	-	nm	I _F =20mA
Reverse Current	I _R	-	-	10	uA	V _R =5V

5. Absolute Maximum Ratings at T_A=25° C

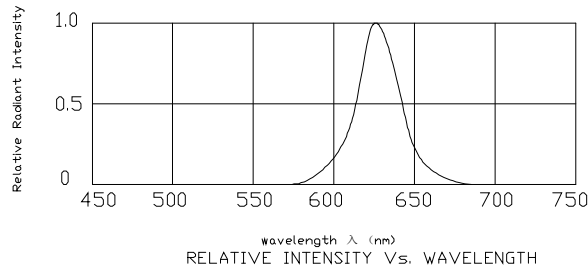
Parameter	Symbo	Maximum Rating	Units
Power dissipation	P _d	75	mW
Forward Current	I _F	30	mA
Peak Forward Current (1)	I _F (Peak)	130	mA
Reverse Voltage	V _R	5	V
Operating Temperature	T _{opr}	-40° C To +80° C	
Storage Temperature	T _{stg}	-40° C To +80° C	
Lead Solder Temperature(2)	T _{sol}	260° C for 3 seconds	

Note:

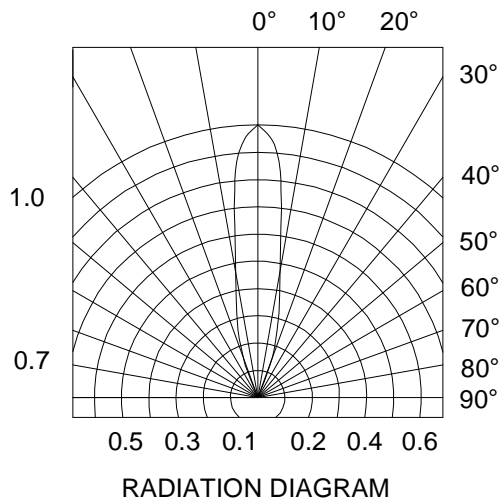
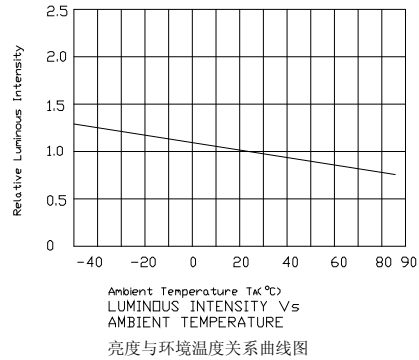
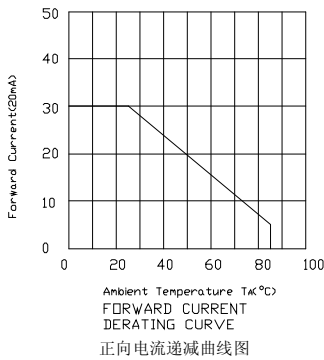
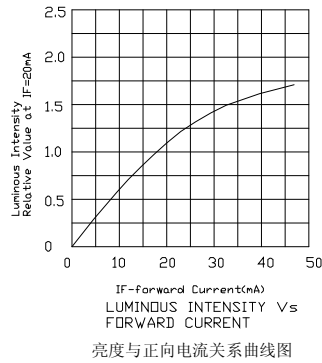
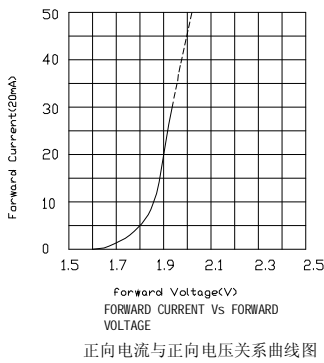
- 1) 1/10 Duty Cycle, 0.1ms Pulse Width.
- 2) 3mm below package base.
- 3) The production accord with the demand of ROHS.



Relative Intensity Vs Wavelength Chart



(GL-500URCC)





RELIABILITY

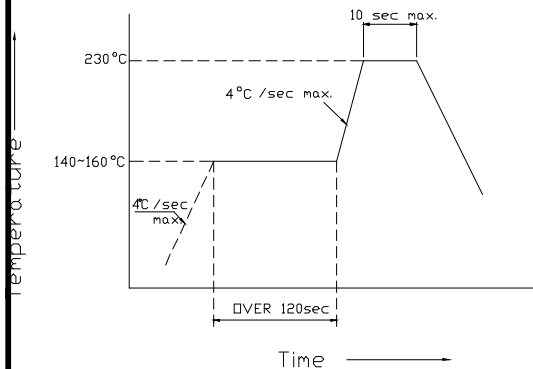
(1) TEST ITEMS AND RESULTS

Type	Test Item	Test condition		Note	Sample size	Accept
		Test condition	Test condition			
(Environments Sequence)	Thermal shock	-20°C~80°C 15min, 10s, 15min	-40°C~100°C 15min, 10s, 15min	100 cycles	20~560	0
		190°C~240°C 5min		1 cycles	20~560	0
		240°C~260°C 5sec		1 cycles	20~560	0
(Operation Sequence)	Life test	Ta=25°C If=20mA	Ta=25°C If=20mA	1000Hrs	20~560	0
(Destructive Sequence)		Ta=100°C		60 minutes	10-20	0

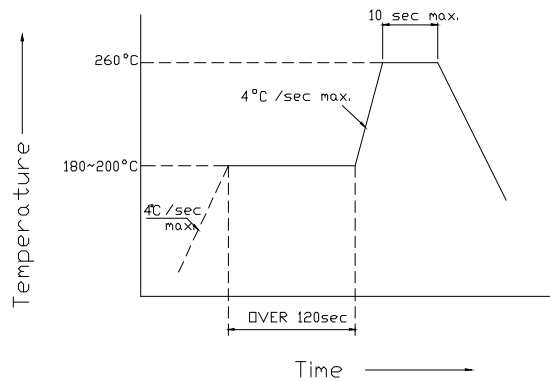
Reflow Soldering Instructions

Number of reflow process shall be less than 2 times and cooling process to normal temperature is required between first and Second soldering process.

1>Lead Solder



2>Lead-Free Solder





Intensity And Color Bin Limits

(1) Intensity Bin Limits (If=20mA)

SELECTION CODE FOR SUPER BRIGHT LEDS		
Group	Light intensity in mcd(20mA) Super Bright Red	
	Min.	Max.
O0	2605	3385
P0	3385	4400
Q0	4400	5720

Tolerance for each Bin limit is ±10%

(2) Color Bin Limits (If=20mA)

COLOR CODE FOR RED LEDS + DISPLAYS		
Group	Dom. WaveLength (nm)	
	min.	max.
Q2	610	615
R2	615	620
S2	625	630

Tolerance for each Bin limit is ±1 nm.

Forward Voltage Bin limits(If=20mA)

Grade (等级)	A3	B3	C3	D3	E3
Range (范围)	1.6-1.8	1.8-2.0	2.0-2.2	2.2-2.4	2.4-2.6

Tolerance for each Bin limit is ±0.05v.