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SUPER BRIGHT ROUND TYPE LED LAMPS

Ozdisan



Lead-Free Parts

LUY3333R/S299-LTS-PF-OD

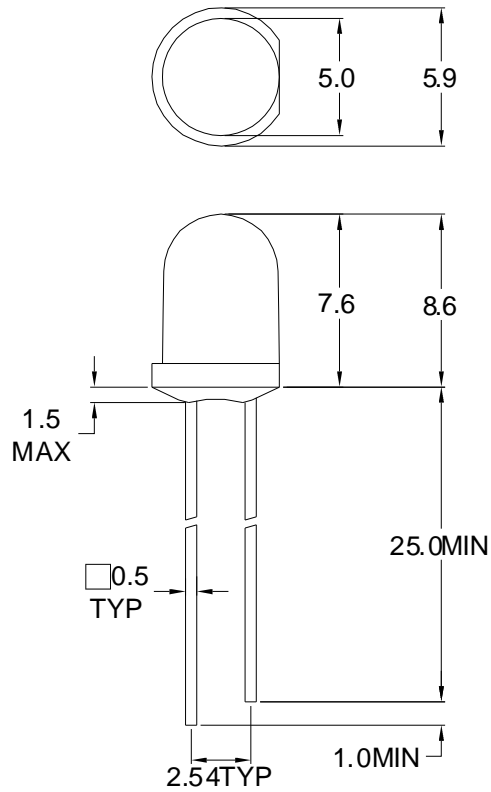
DATA SHEET

DOC. NO : QW0905-LUY3333R/S299-LTS-PF-OD

REV. : A

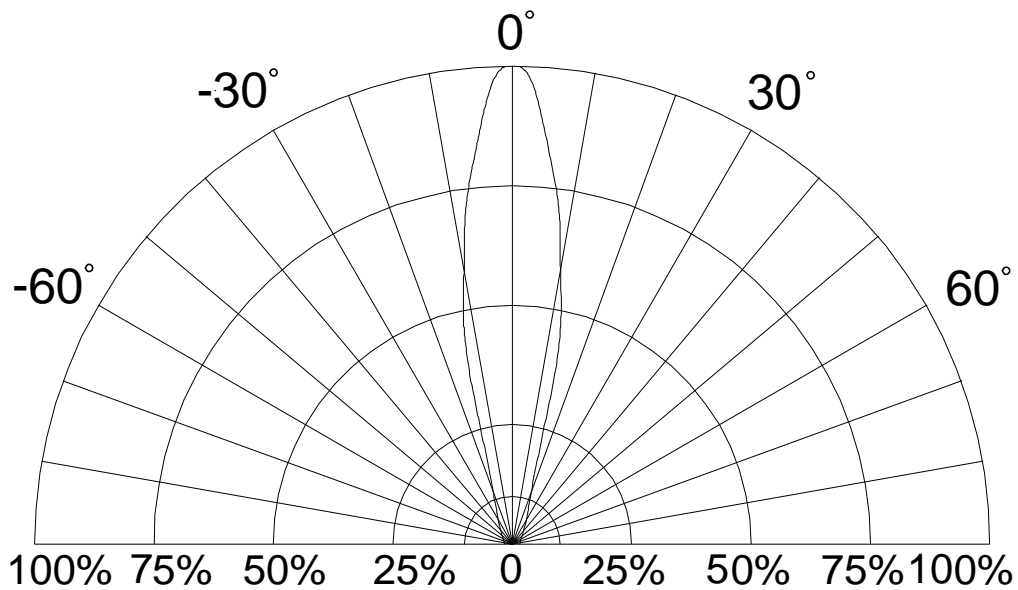
DATE : 7-Nov.-2022

Package Dimensions



Note : 1. All dimension are in millimeter tolerance is $\pm 0.25\text{mm}$ unless otherwise noted.
2. Specifications are subject to change without notice.

Directivity Radiation



Absolute Maximum Ratings at Ta=25 °C

Parameter	Symbol	Ratings	UNIT
		UY(R)	
Forward Current	IF	50	mA
Peak Forward Current Duty 1/10@10KHz	IFP	90	mA
Power Dissipation	PD	120	mW
Reverse Current @5V	Ir	10	μA
Electrostatic Discharge	ESD	2000	V
Operating Temperature	Topr	-40 ~ +85	°C
Storage Temperature	Tstg	-40 ~ +100	°C

* Static Electricity or power surge will damage the LED. Use of a conductive wrist band or anti-electrostatic glove is recommended when handling these LED. All devices, equipment and machinery must be properly grounded.

Typical Electrical & Optical Characteristics (Ta=25 °C)

PART NO	MATERIAL	COLOR		Dominant wave length λ _D nm	Spectral halfwidth Δλ nm	Forward voltage @20mA(V)		Luminous intensity @20mA(mcd)		Viewing angle 2θ 1/2 (deg)
		Emitted	Lens			Min.	Max.	Min.	Typ.	
LUY3333R/S299-LTS-PF-OD	AlGaInP	Yellow	Water Clear	590	20	1.8	2.6	9500	14000	22

Note: 1.The forward voltage data did not including ±0.1V testing tolerance.
 2.The luminous intensity data did not including ±15% testing tolerance.
 3.The products should be stored at 15°C ~ 25°C and 25% ~ 65%RH after being shipped from the factory and the storage life limits are 12 months.

Brightness Code For Standard LED Lamps

UY(R) CHIP

Group	Luminous Intensity(mcd) at 20 mA	
	Min.	Max.
A32	9500	11500
A33	11500	14000
A34	14000	17000
A35	17000	21000
A36	21000	26000

Group	Wave length(nm) at 20 mA	
	Min.	Max.
15	585	587
16	587	589
17	589	592
18	592	595

Group	Forwardvoltage(V) at 20mA	
	Min.	Max.
V1	1.8	2.0
V2	2.0	2.2
V3	2.2	2.4
V4	2.4	2.6

Typical Electro-Optical Characteristics Curve

UY(R) CHIP

Fig.1 Forward current vs. Forward Voltage

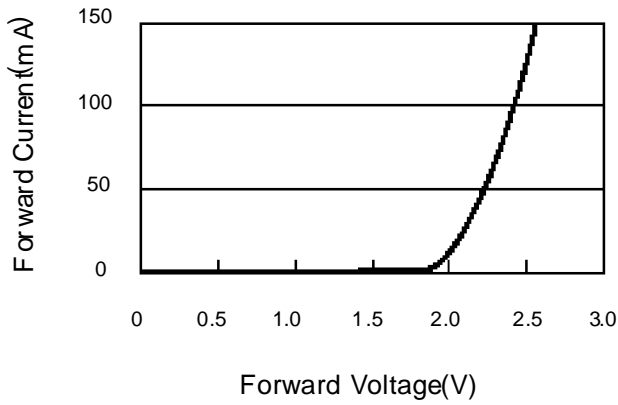


Fig.2 Luminous Intensity vs. Forward Current

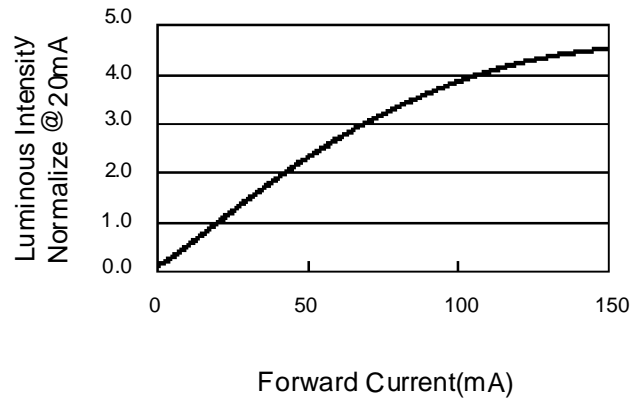


Fig.3 Forward Voltage vs. Temperature

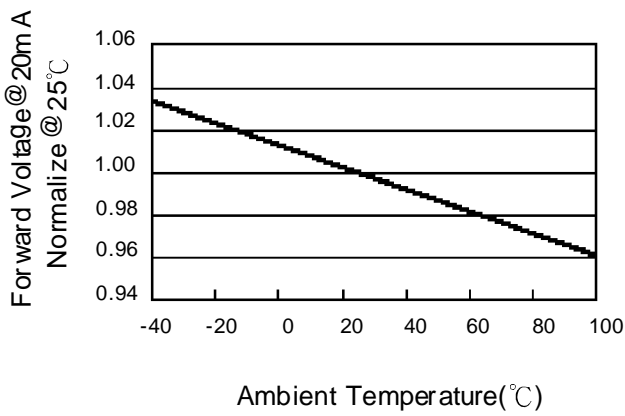


Fig.4 Luminous Intensity vs. Temperature

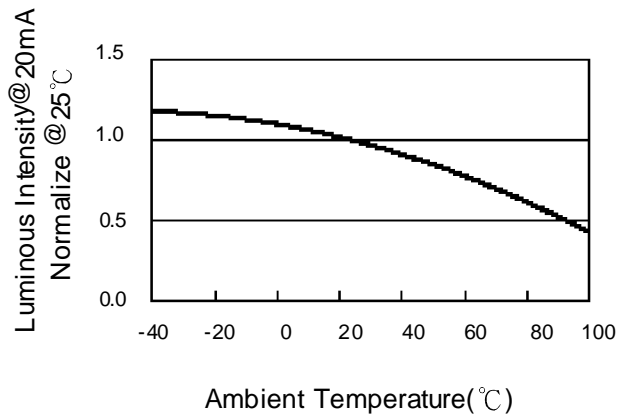
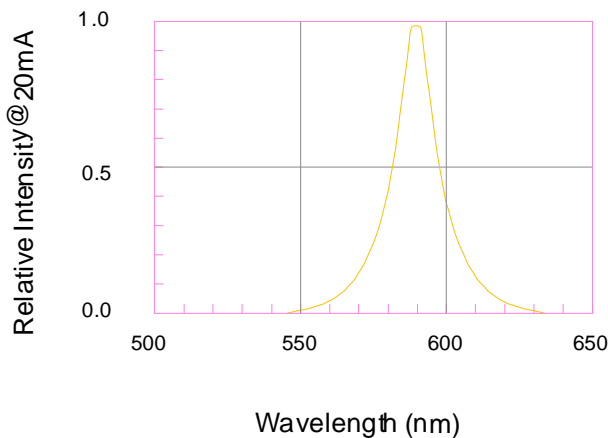


Fig.5 Relative Intensity vs. Wavelength



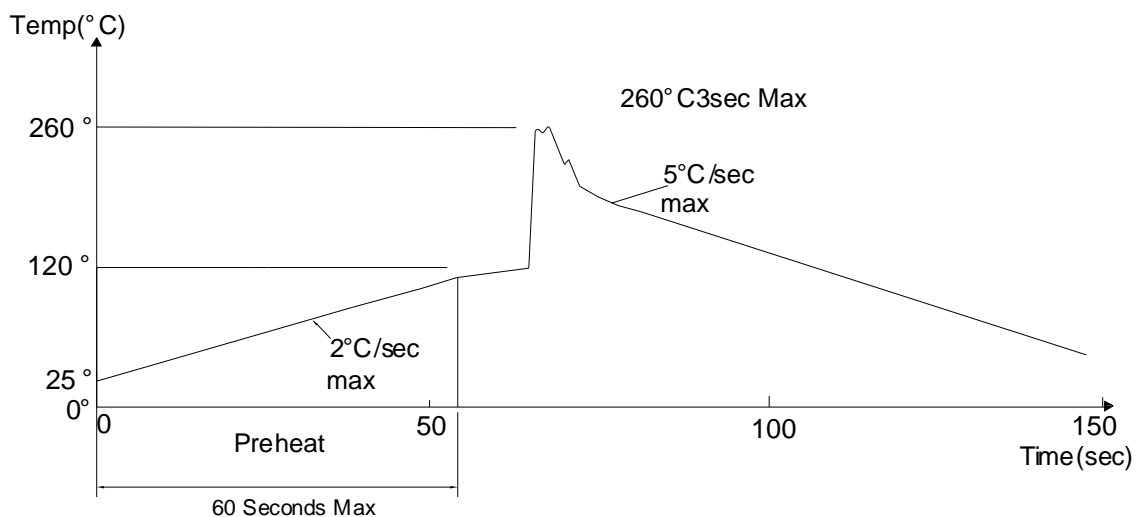
Soldering Condition(Pb-Free)

1.Iron:

Soldering Iron:30W Max
Temperature 350° C Max
Soldering Time:3 Seconds Max(One time only)
Distance:2mm Min(From solder joint to body)

2.Wave Soldering Profile

Dip Soldering
Preheat: 120° C Max
Preheat time: 60seconds Max
Ramp-up
2° C/sec(max)
Ramp-Down:-5° C/sec(max)
Solder Bath:260° C Max
Dipping Time:3 seconds Max
Distance:2mm Min(From solder joint to body)



- Note: 1.Wave solder should not be made more than one time.
2.You can just only select one of the soldering conditions as above.

Reliability Test

Test Item	Test condition	Description	Reference Standard
Operating Life Test	1.Under Room Temperature 2.If=20mA 3.t=1000 hrs (-24hrs, +72hrs)	This test is conducted for the purpose of determining the resistance of a part in electrical and thermal stressed.	MIL-STD-750:1026 MIL-STD-883:1005 JIS C 7021:B-1
High Temperature Storage Test	1.Ta=105°C±5°C 2.t=1000 hrs (-24hrs, +72hrs)	The purpose of this test is the resistance of the device which is laid under condition of high temperature for hours.	MIL-STD-883:1008 JIS C 7021:B-10
Low Temperature Storage Test	1.Ta=-40°C±5°C 2.t=1000 hrs (-24hrs, +72hrs)	The purpose of this test is the resistance of the device which is laid under condition of low temperature for hours.	JIS C 7021:B-12
High Temperature High Humidity Test	1.Ta=65°C±5°C 2.RH=90%~95% 3.t=240hrs±2hrs	The purpose of this test is the resistance of the device under tropical for hours	MIL-STD-202:103B JIS C 7021: B-11
Thermal Shock Test	1.Ta=105°C±5°C&-40°C±5°C (10min) (10min) 2.Total 10 cycles	The purpose of this test is resistance of the device to sudden extreme changes in high and low temperature.	MIL-STD-202:107D MIL-STD-750:1051 MIL-STD-883:1011
Solder Resistance Test	1.T.Sol=260°C±5°C 2.Dwell time=10±1sec.	This test intended to determine the thermal characteristic resistance of the device to sudden exposures at extreme changes in temperature when soldering the lead wire.	MIL-STD-202:210A MIL-STD-750:2031 JIS C 7021:A-1
Solderability Test	1.T.Sol=245°C±5°C 2.Dwell time=5±1sec.	This test intended to see soldering well performed or not	MIL-STD-202:208D MIL-STD-750:2026 MIL-STD-883:2003 JIS C 7021:A-2