LIGITEK

LIGITEK ELECTRONICS CO.,LTD.
Property of Ligitek Only

SUPER BRIGHT ROUND TYPE LED LAMPS

Pb
Lead-Free Parts

LURF3333S/S255/A-PF

DATA SHEET

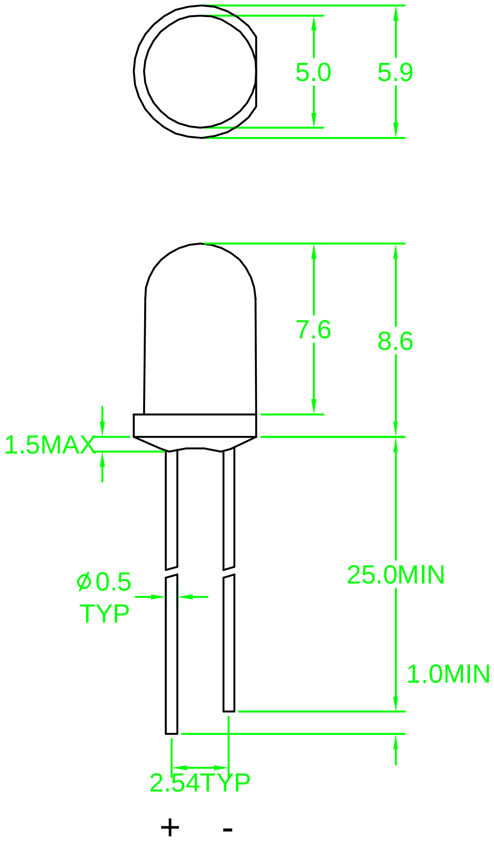
DOC. NO : QW0905- LURF3333S/S255/A-PF

REV. : A

DATE : 11 - Sep.- 2014

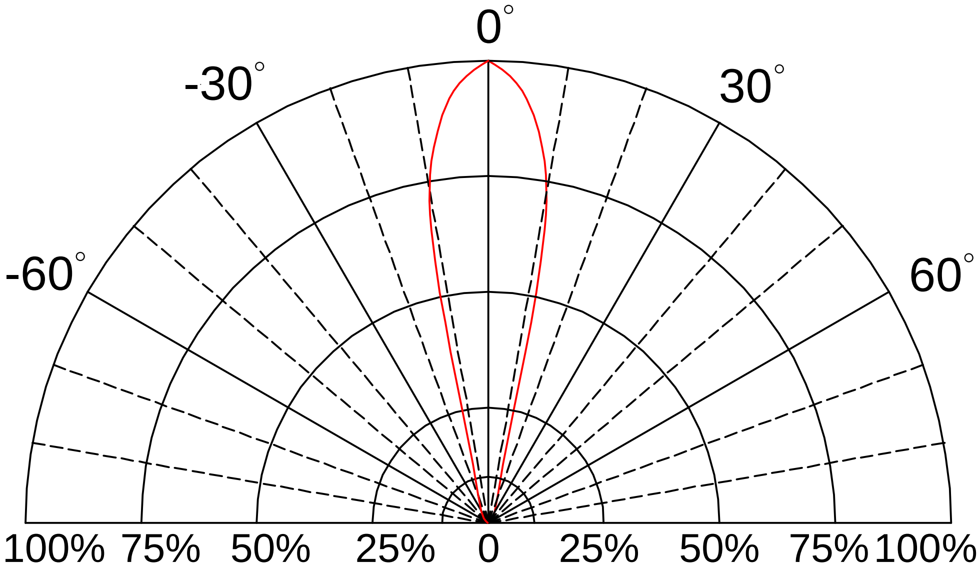
發行
立碁電子
DCC

Package Dimensions



Note : 1.All dimension are in millimeter tolerance is ±0.25mm unless otherwise noted.
2.Specifications are subject to change without notice.

Directivity Radiation



Absolute Maximum Ratings at Ta=25 ℃

Parameter	Symbol	Ratings	**UNIT**
		URF(S)	
Forward Current	I_F	50	mA
Peak Forward Current Duty 1/10@10KHz	I_{FP}	90	mA
Power Dissipation	PD	120	mW
Reverse Current @5V	Ir	10	μA
Electrostatic Discharge(*)	ESD	2000	V
Operating Temperature	T_{opr}	-40 ~ +85	℃
Storage Temperature	Tstg	-40 ~ +100	℃

Typical Electrical & Optical Characteristics (Ta=25 ℃)

PART NO	MATERIAL	COLOR		Dominant wave length λDnm	Spectral halfwidth △λ nm	Forward voltage @20mA(V)		Luminous intensity @20mA(mcd)		Viewing angle 2θ 1/2 (deg)
		Emitted	Lens			Min.	Max.	Min.	Typ.	
LURF3333S/S255/A-PF	AlGaInP/GaP	Red	Water Clear	625	20	1.7	2.6	11500	17000	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.

Brightness Code For Standard LED Lamps

URF(S) CHIP

Group	Luminous Intensity(mcd) at 20 mA	
	Min.	Max.
A33	11500	14000
A34	14000	17000
A35	17000	21000
A36	21000	26000
A37	26000	32000

Group	Forwardvoltage(V) at 20mA	
	Min.	Max.
V1	1.7	1.8
V2	1.8	1.9
V3	1.9	2.0
V4	2.0	2.1
V5	2.1	2.2
V6	2.2	2.3
V7	2.3	2.4
V8	2.4	2.5
V9	2.5	2.6

Typical Electro-Optical Characteristics Curve

URFS CHIP

Fig.1 Forward current vs. Forward Voltage

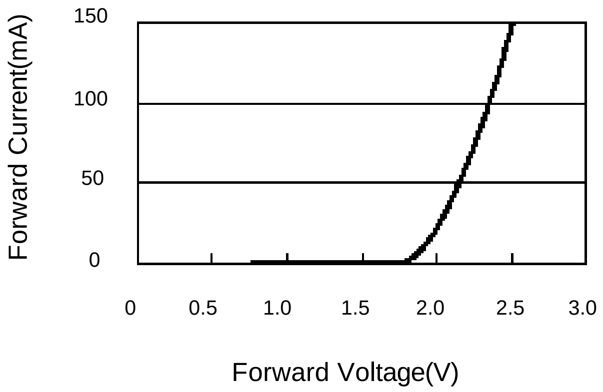


Fig.2 Luminous Intensity vs. Forward Current

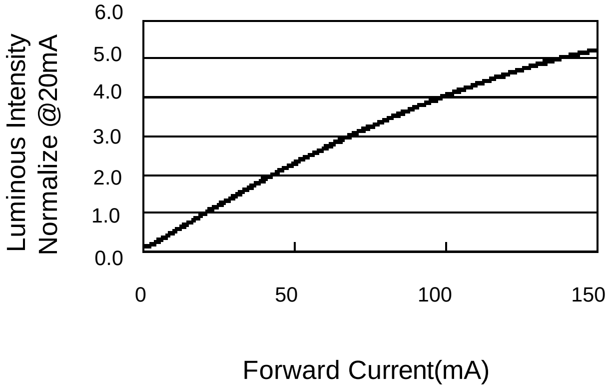


Fig.3 Forward Voltage vs. Temperature

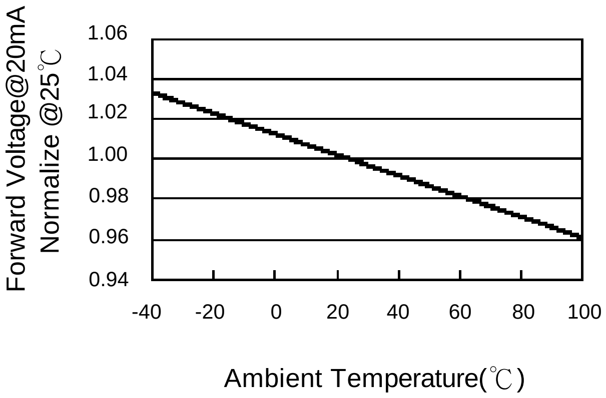


Fig.4 Luminous Intensity vs. Temperature

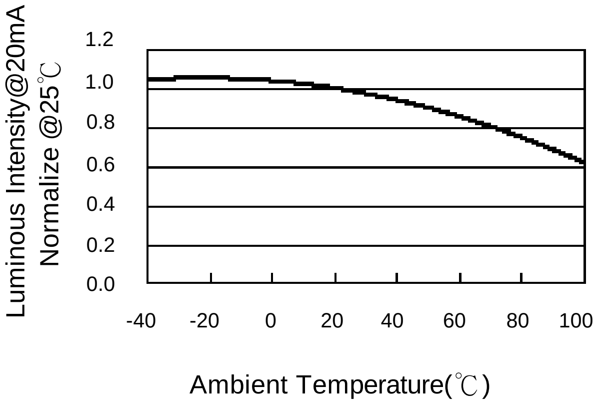
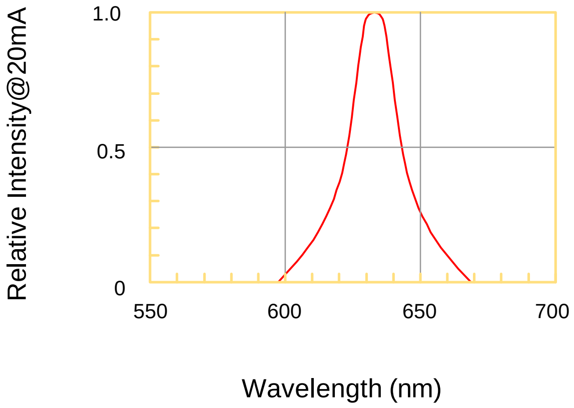


Fig.5 Relative Intensity vs. Wavelength



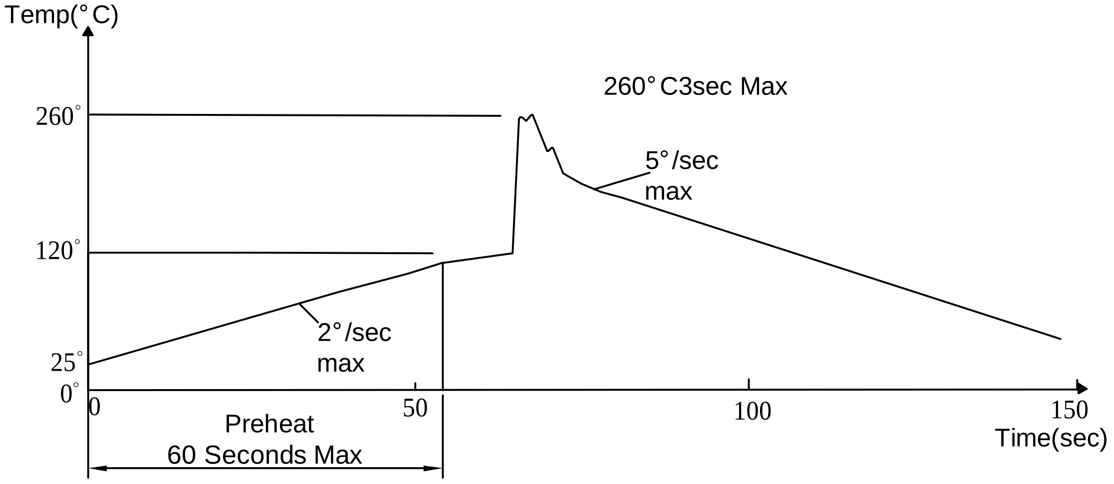
Soldering Condition(Pb-Free)

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 detemining the resistance of a part in electrical and themal stressed.	MIL-STD-750: 1026 MIL-STD-883: 1005 JIS C 7021: B-1
High Temperature Storage Test	1.Ta=105℃±5℃ 2.t=1000 hrs (-24hrs, +72hrs)	The purpose of this 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℃±5℃ 2.t=1000 hrs (-24hrs, +72hrs)	The purpose of this 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℃±5℃ 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℃±5℃&-40℃±5℃ (10min) (10min) 2.total 10 cycles	The purpose of this is the 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℃±5℃ 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℃±5℃ 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