



LIGITEK

LIGITEK ELECTRONICS CO.,LTD.
Property of Ligitek Only

LED ARRAY



Lead-Free Parts

LA190B/UG-S6-PF

DATA SHEET

DOC. NO : QW0905-LA190B/UG-S6-PF-08A01

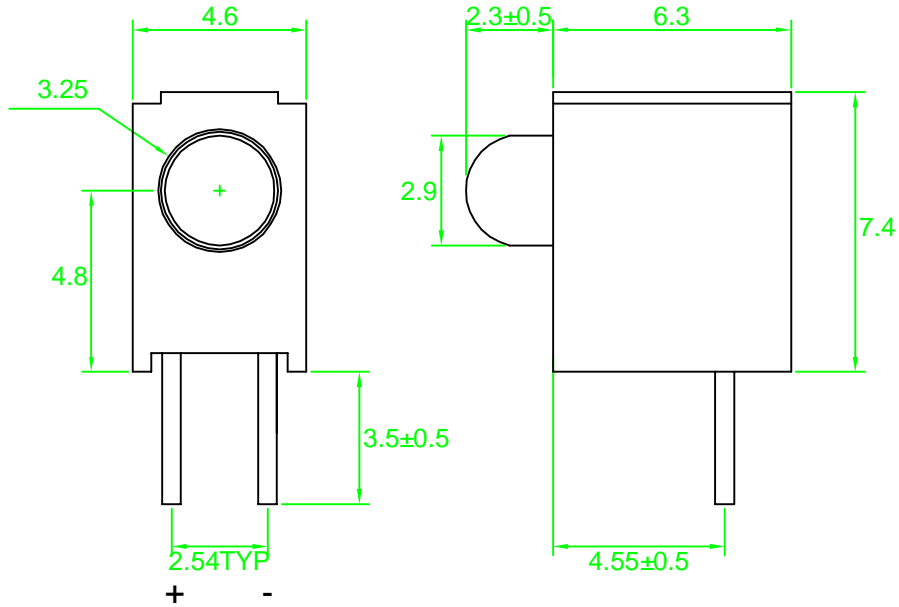
REV. : A

DATE : 31 - Aug. - 2009

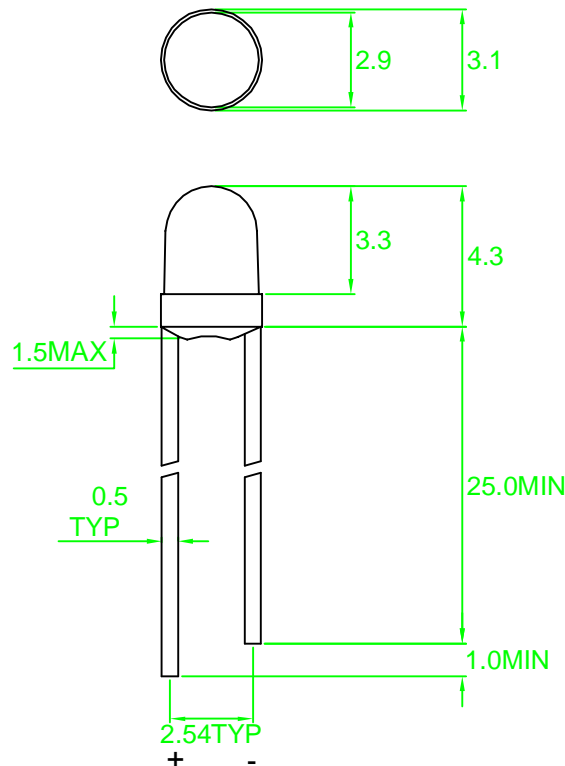




Package Dimensions



LUG2641/L45-PF



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

**Absolute Maximum Ratings at Ta=25**

Parameter	Symbol	Ratings	UNIT
		Green	
Forward Current	IF	25	mA
Peak Forward Current Duty 1/10@10KHz	IFP	75	mA
Power Dissipation	PD	65	mW
Reverse Current @5V	Ir	10	μ A
Electrostatic Discharge(*)	ESD	2000	V
Operating Temperature	Topr	-40 ~ +85	
Storage Temperature	Tstg	-40 ~ +100	

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

Typical Electrical & Optical Characteristics (Ta=25)

PART NO	MATERIAL	COLOR		Dominant wave length Dnm		Spectral halfwidth nm	Forward voltage @20mA(V)		Luminous intensity @20mA(mcd)		Viewing angle 2 1/2 (deg)
		Emitted	Lens	Min.	Max.		Min.	Max.	Min.	Max.	
LA190B/UG-S6-PF	AlGaInP	Green	Green Transparent	568	574	20	1.7	2.6	220	550	40

Note : 1.The forward voltage data did not including $\pm 0.1V$ testing tolerance.
2. The luminous intensity data did not including $\pm 15\%$ testing tolerance.



Brightness Code For Standard LED Lamps

G CHIP

Group	Luminous Intensity(mcd) at 20 mA	
	Min.	Max.
A15	220	300
A16	300	350
A17	350	450
A18	450	550

Color Code

Group	Dominant Wave length(nm) at20 mA	
	Min.	Max.
7	568	570
8	570	572
9	572	574



Typical Electro-Optical Characteristics Curve

UG CHIP

Fig.1 Forward current vs. Forward Voltage

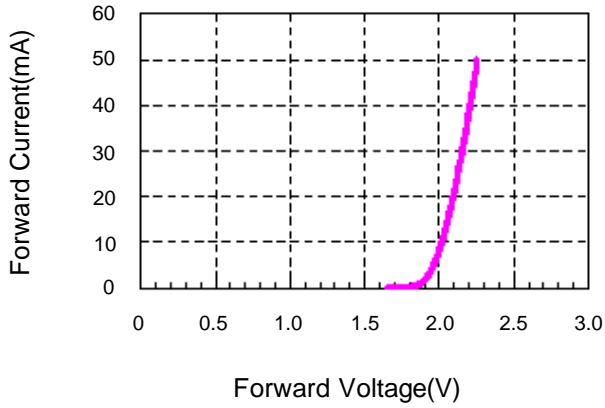


Fig.2 Relative Intensity vs. Forward Current

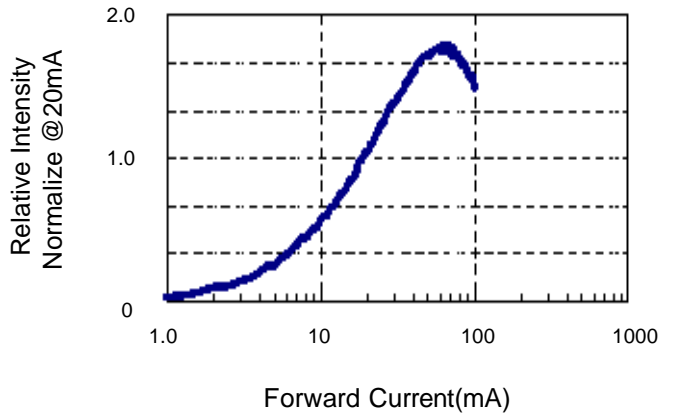


Fig.3 Forward Voltage vs. Temperature

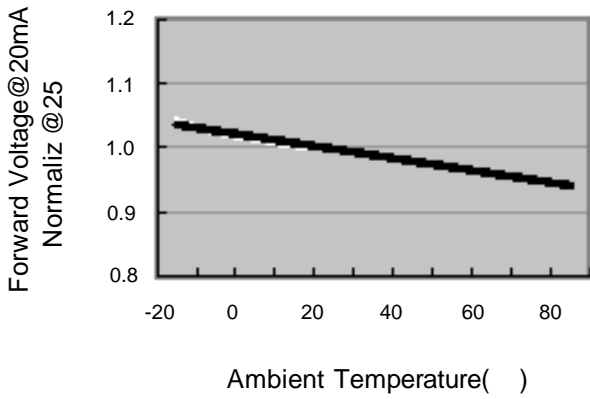


Fig.4 Relative Intensity vs. Temperature

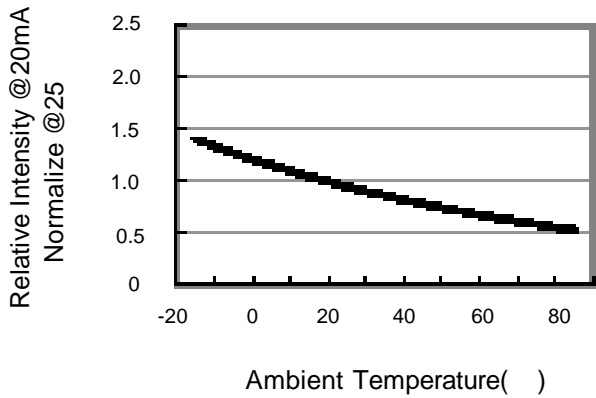
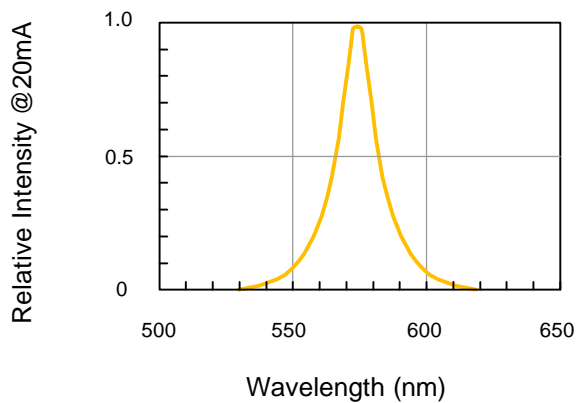


Fig.5 Relative Intensity vs. Wavelength





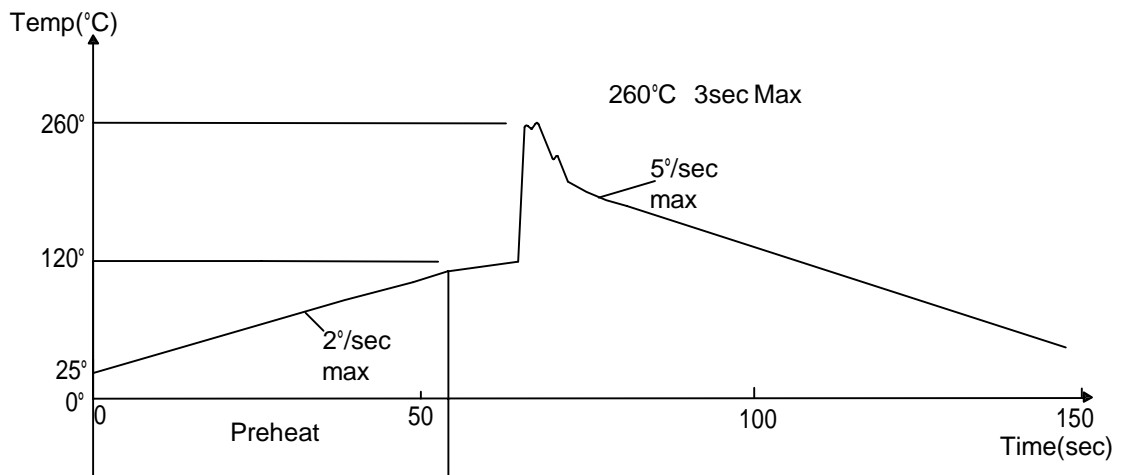
Soldering Condition(Pb-Free)

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 case)

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 case)



- 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 ±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=230 ±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