



LIGITEK ELECTRONICS CO.,LTD.
Property of Ligitek Only

TRIPLE COLOR LED LAMPS



Lead-Free Parts

LRGB31492

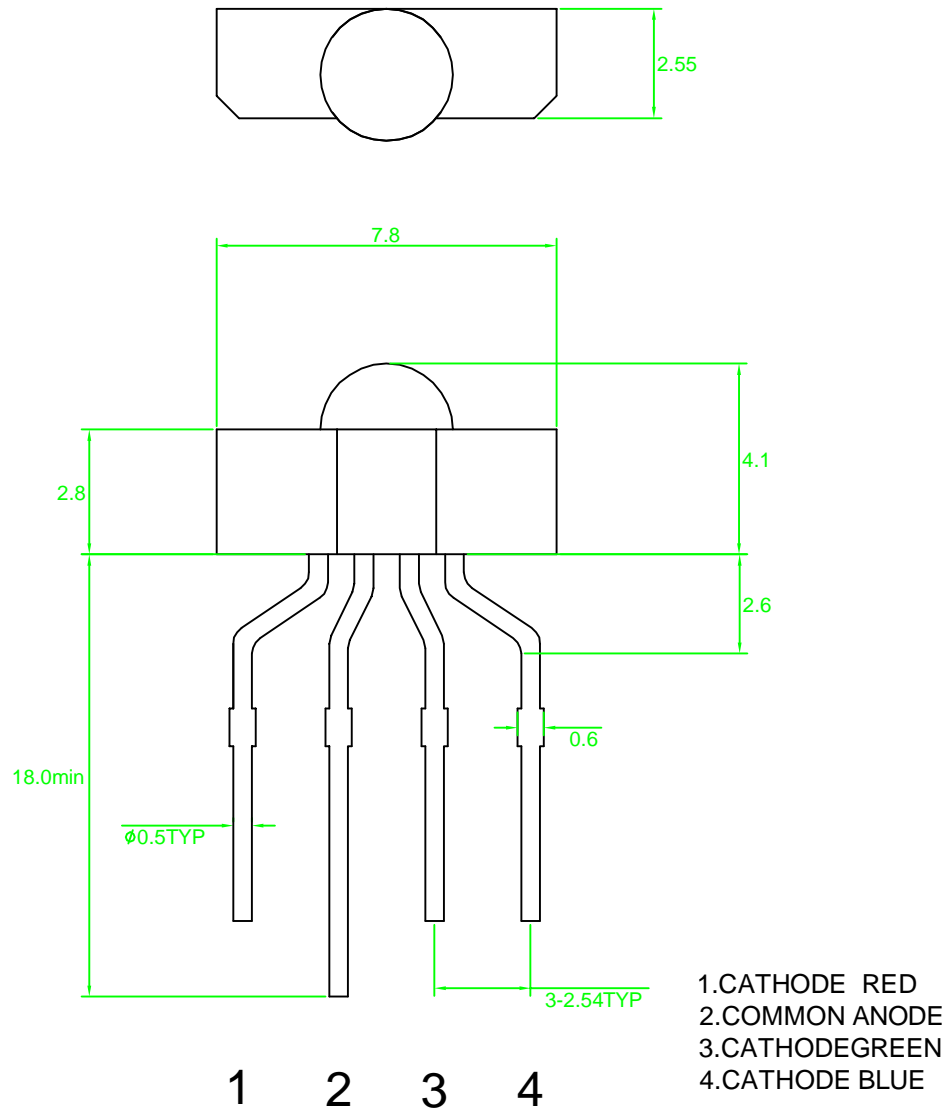
DATA SHEET

DOC. NO : QW0905-LRGB31492

REV. : A

DATE : 28-Aug.- 2015



Package Dimensions

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

Absolute Maximum Ratings at Ta=25 °C

Parameter	Symbol	Ratings			UNIT
		Red	Green	Blue	
Forward Current	IF	30	30	30	mA
Peak Forward Current Duty 1/10@10KHz	IFP	100	100	100	mA
Power Dissipation	PD	120	120	120	mW
Electrostatic Discharge(*)	ESD	2000	500		V
Reverse Current @5V	Ir	10	50		μA
Operating Temperature	Topr	-20 ~ +80			°C
Storage Temperature	Tstg	-30 ~ +100			°C

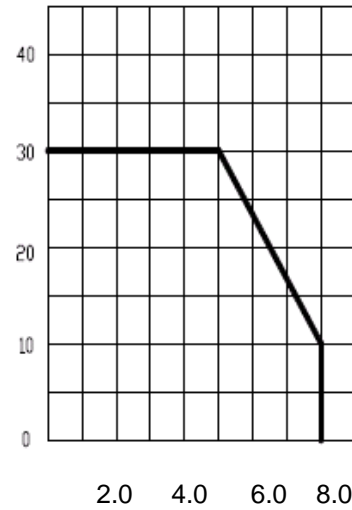
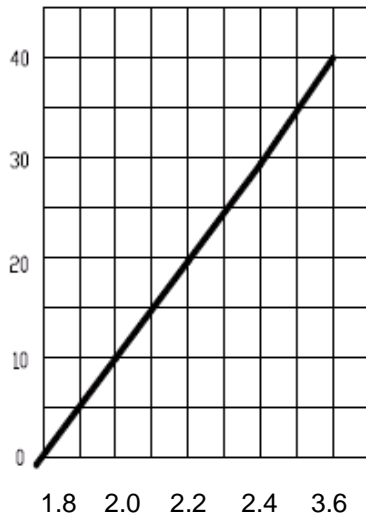
Typical Electrical & Optical Characteristics (Ta=25 °C)

PART NO	MATERIAL	COLOR		Dominant wave length λ Dnm		Spectral halfwidth Δ λ nm	Forward voltage @5mA(V)			Luminous intensity @5mA(mcd)		Viewing angle 2θ 1/2 (deg)
		Emitted	Lens	Min.	Max.		Min.	Typ.	Max.	Min.	Max.	
LRGB31492	AlGaInP	Red	White Diffused	620	625	20	1.8	----	2.4	500	1200	90
	In/GaN	Green		525	530	36	2.6	----	3.4	1000	2300	90
	In/GaN	Blue		460	465	30	2.8	----	3.6	200	600	90

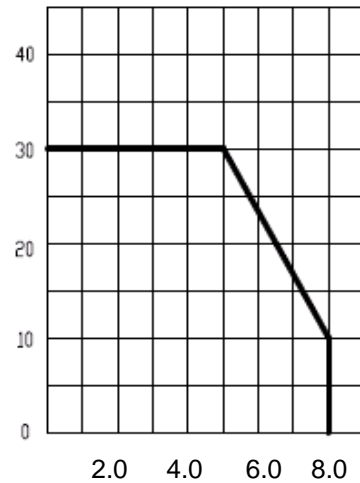
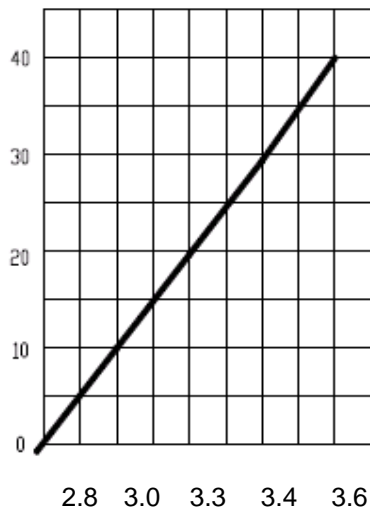
- Note : 1. The forward voltage data did not including ±0.05V testing tolerance.
 2. The luminous intensity data did not including ±10% testing tolerance.
 3. The doninant wavelength data did not including ±2nm testing tolerance.

Typical Electro-Optical Characteristics

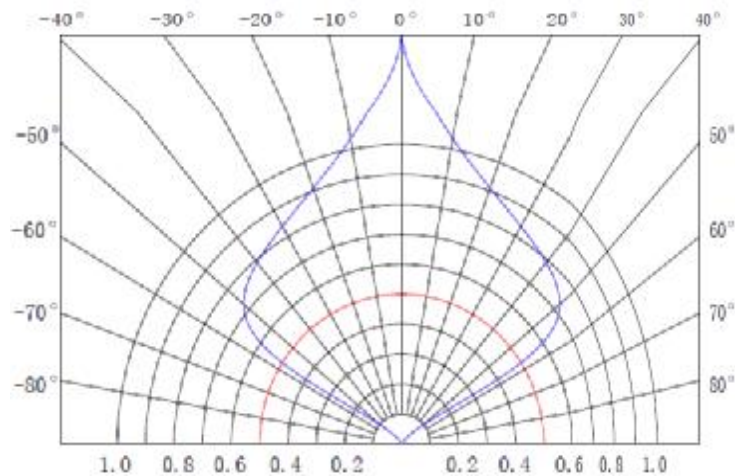
Forward Current vs. Forward Voltage



Maximum Forward Current vs. Ambient Temperature



Lighting Angle



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

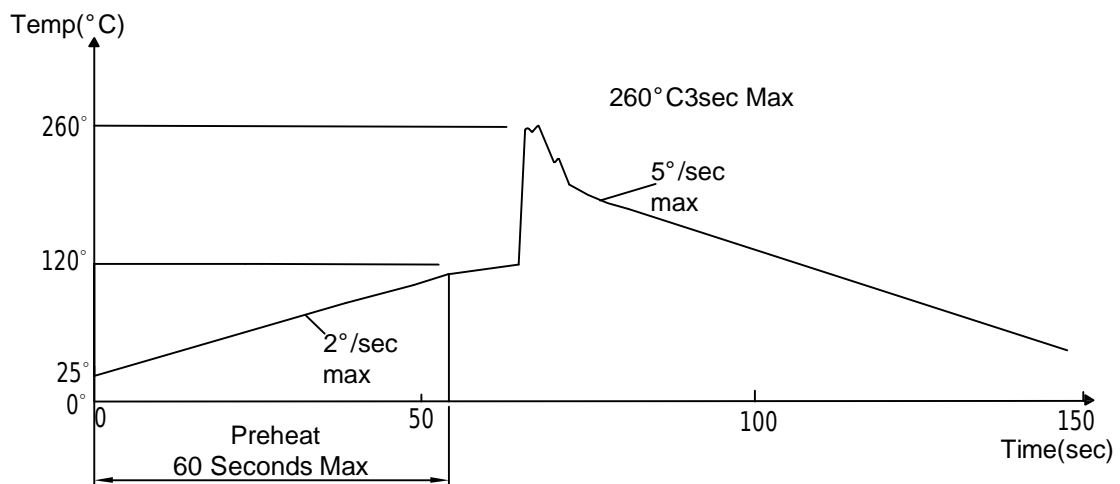
2° C/sec(max)

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 °C ±5°C 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 °C ±5°C 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 °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 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 °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