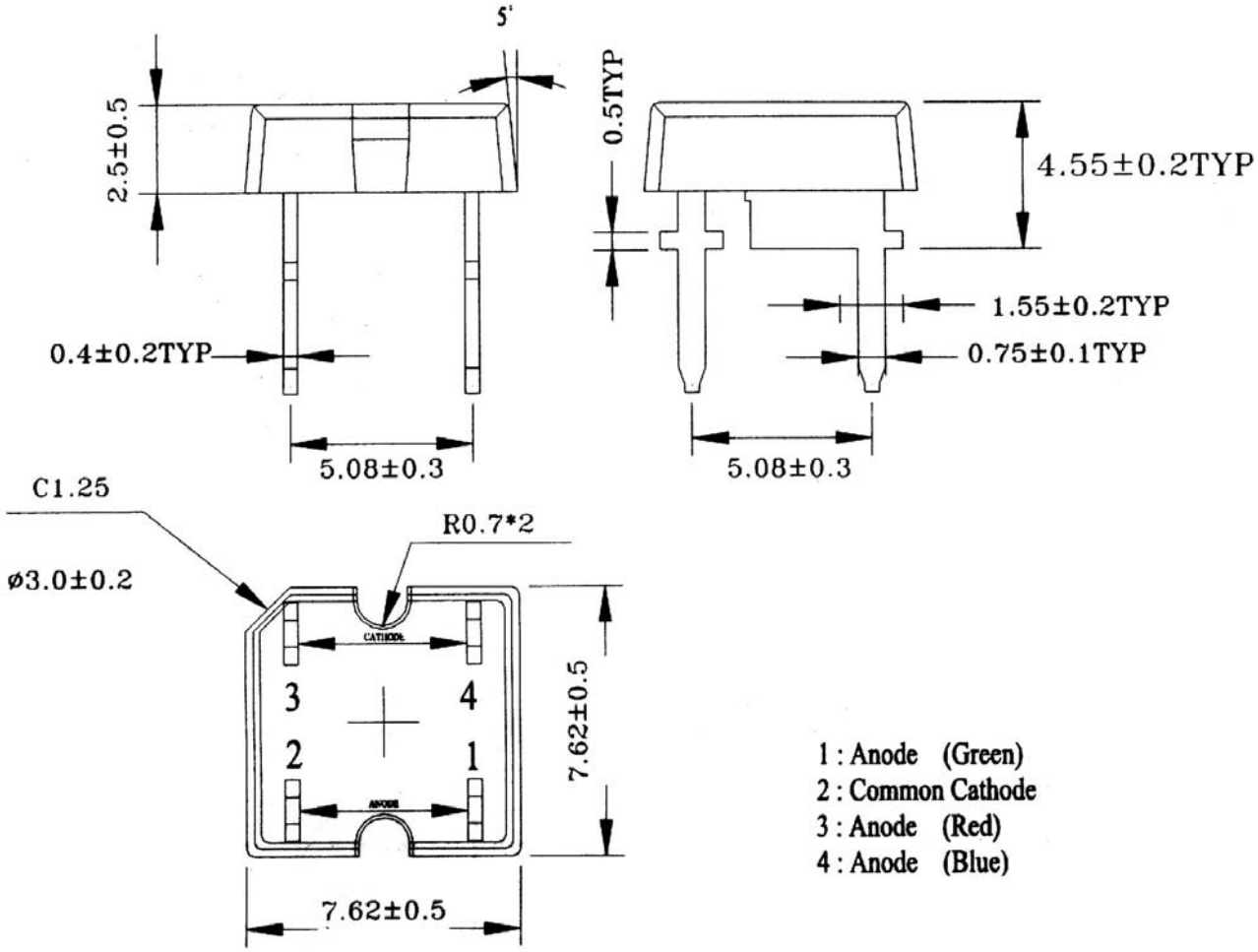
LUCKY LIGHT

LL-U49RGB1C

DATA SHEET

QC: ENG: Prepared By:

Package Dimension:



Part NO.	Chip Material			Lens Color	Source Color
LL-U49RGB1C	Red	Green	Blue	Water Clear	Red & True Green & Blue
	AlGaInP	GaInN	GaInN		

Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25(.010")mm unless otherwise noted.
3. Protruded resin under flange is 1.0mm(.04") max
4. Lead spacing is measured where the leads emerge from the package.
5. Specifications are subject to change without notice
6. Precautions for ESD:
   STATIC SHIELD Electricity and surge damages the LED. It is recommended to use a wrist band or anti-electrostatic glove when handling the LED. All devices, equipment and machinery must be properly grounded.

Electrical Optical Characteristics at Ta=25℃

Parameter	Symbol	Emitting Color	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	Φ v	Red	300	800	1400	mlm	I_F=20mA Note 1
		True Green	1200	2000	4500		
		Blue	480	650	1600		
Viewing Angle	2 $\theta_{1/2}$	Red	125	130	135	Deg	Note 2
		True Green	125	130	135		
		Blue	125	130	135		
Peak Emission Wavelength	λ p	Red	631	636	641	nm	Measurement @Peak
		True Green	520	525	530		
		Blue	467	472	477		
Dominant Wavelength	λ d	Red	621	626	631	nm	Note 3
		True Green	520	532	542		
		Blue	464	475	485		
Spectral Line Half-Width	△ λ	Red	15	20	25	nm	
		True Green	35	40	45		
		Blue	21	26	31		
Forward Voltage	V_F	Red	1.6	2.05	2.5	V	I_F=20mA
		True Green	3.6	4.0	4.5		
		Blue	3.6	4.0	4.5		
Reverse Current	I_R	Red	---	---	100	μA	V_R=5V
		True Green					
		Blue					

Note:

1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
3. The dominant wavelength (λ d) is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.

Absolute Maximum Ratings at Ta=25℃

Parameter	Absolute maximun Rating		Unit
	Red	Blue/Green	
Power Dissipation	120	150	mW
Forward Current	30		mA
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	200	100	mA
Electrostatic Discharge	1000		V
Derating Linear From 50℃	0.4		MA/℃
Reverse Voltage	5		V
Operating Temperature Range	-40℃ to +80℃		
Storage Temperature Range	-40℃ to +80℃		
Lead Soldering Temperature [4mm(.157") From Body]	260℃ for 5 Seconds		

Typical Electrical / Optical Characteristics Curves
(25℃ Ambient Temperature unless Otherwise Noted)