LEDTECH ELECTRONICS CORP.

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SPECIFICATION

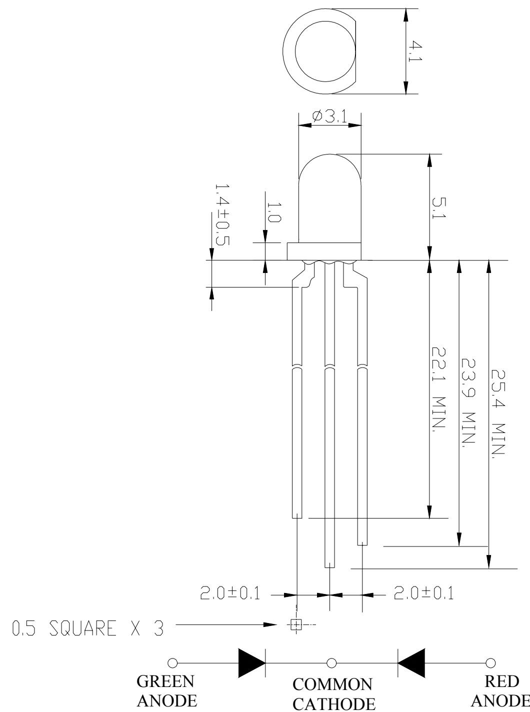
PART NO. : UT0362-21-D61

3.0mm ROUND BI-COLOR LAMP (3LEADS)

Approved by	Checked by	Prepared by
Sam	*Yang*	*Hua*

Description

This G/R bi-color lamp is made with GaP/GaP green chip and GaP/GaP red chip and white diffused epoxy resin.



Notes:

1. ALL DIMENSIONS ARE IN mm.
2. TOLERANCE IS ±0.25mm UNLESS OTHERWISE NOTED.

Description

Part No.	LED Chip		Description
	Material	Emitting Color	
UT0362-21-D61	GaP/GaP	Green	White diffused
	GaP/GaP	Red	

Absolute Maximum Ratings at Ta=25℃

Parameter	Symbol	Rating	Unit
Power Dissipation	P_D	78	mW
Reverse Voltage	V_R	5	V
D.C. Forward Current	If	30	mA
Reverse (Leakage) Current	Ir	100	μA
Peak Current(1/10Duty Cycle,0.1ms Pulse Width.)	If(Peak)	100	mA
Operating Temperature Range	Topr.	-25 to +85	℃
Storage Temperature Range	Tstg.	-40 to +100	℃
Lead Soldering Temp.(1.6mm from body) for 5 seconds		260	℃

Electrical and Optical Characteristics: GREEN

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Luminous Intensity	Iv	If=20mA	24.0	40.0		mcd
Forward Voltage	Vf	If=20mA		2.1	2.6	V
Peak Wavelength	λP	If=20mA		567		nm
Dominant Wavelength	λD	If=20mA		572		nm
Reverse (Leakage) Current	Ir	Vr=5V			100	μA
Viewing Angle	2θ1/2	If=20mA		69		deg
Spectrum Line Halfwidth	Δλ	If=20mA		30		nm

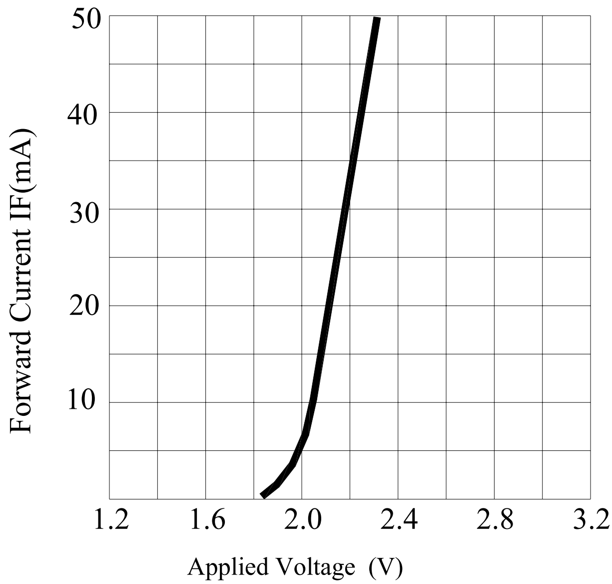
Absolute Maximum Ratings at Ta=25℃

Parameter	Symbol	Rating	Unit
Power Dissipation	P_D	78	mW
Reverse Voltage	V_R	5	V
D.C. Forward Current	If	30	mA
Reverse (Leakage) Current	Ir	100	μA
Peak Current(1/10Duty Cycle,0.1ms Pulse Width.)	If(Peak)	100	mA
Operating Temperature Range	Topr.	-25 to +85	℃
Storage Temperature Range	Tstg.	-40 to +100	℃
Lead Soldering Temp.(1.6mm from body) for 5 seconds		260	℃

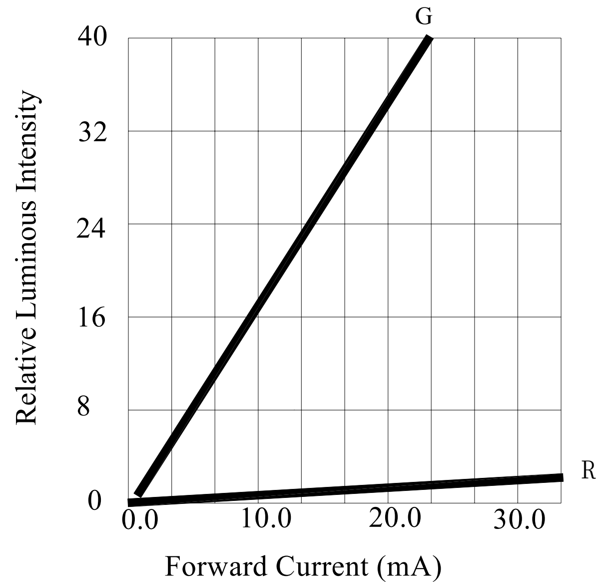
Electrical and Optical Characteristics: RED

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Luminous Intensity	Iv	If=20mA	1.5	2.5		mcd
Forward Voltage	Vf	If=20mA		2.1	2.6	V
Peak Wavelength	λP	If=20mA		700		nm
Dominant Wavelength	λD	If=20mA		650		nm
Reverse (Leakage) Current	Ir	Vr=5V			100	μA
Viewing Angle	2θ1/2	If=20mA		69		deg
Spectrum Line Halfwidth	Δλ	If=20mA		100		nm

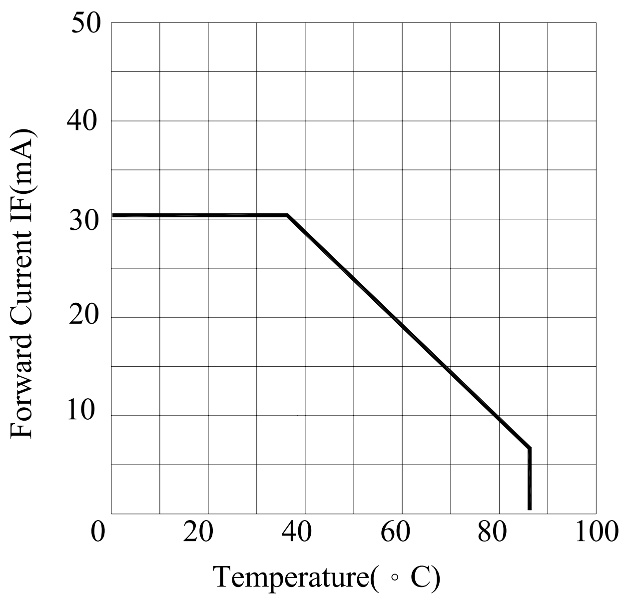
Typical Electrical / Optical Characteristics Curves :

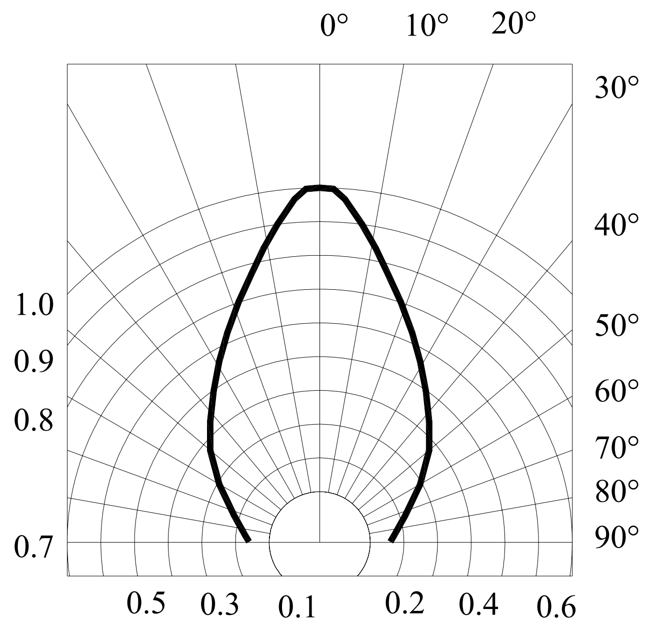


FORWARD CURRENT VS.APPLIED VOLTAGE



FORWARD CURRENT VS. LUMINOUS INTENSITY





RADIATION DIAGRAM

Precautions:

TAKE NOTE OF THE FOLLOWING IN USE OF LED

1. Temperature in use

   Since the light generated inside the LED needs to be emitted to outside efficiently, a resin with high light transparency is used; therefore, additives to improve the heat resistance or moisture resistance (silica gel , etc) which are used for semiconductor products such as transistors cannot be added to the resin.

   Consequently, the heat resistant ability of the resin used for LED is usually low; therefore, please be careful on the following during use.

   Avoid applying external force, stress, and excessive vibration to the resins and terminals at high temperature. The glass transition temperature of epoxy resin used for the LED is approximately 120-130℃.

   At a temperature exceeding this limit, the coefficient of liner expansion of the resin doubles or more compared to that at normal temperature and the resin is softened.

   If external force or stress is applied at that time, it may cause a wire rupture.

2. Soldering

   Please be careful on the following at soldering.

   After soldering, avoided applying external force, stress, and excessive vibration until the products go to cooling process (normal temperature), <Same for products with terminal leads>

   (1) Soldering measurements:

   Distance between melted solder side to bottom of resin shall be 1.6mm or longer.

   (2) Solder dip: Preheat: 90℃ max. (Backside of PCB), Within 120 seconds

   Solder bath: 250℃ max. (Solder temperature), Within 5 seconds

   (3) Soldering iron : 250℃ max. (Temperature of soldering iron tip), Within 3 seconds

3. Insertion Pitch of the LED leads and pitch of mounting holes need to be same

4. Others

   Since the heat resistant ability of the LED resin is low, SMD components are used on the same PCB, please mount the LED after adhesive baking process for SMD components. In case adhesive baking is done after LED lamp insertion due to a production process reason, make sure not to apply external force, stress, and excessive vibration to the LED and follow the conditions below.

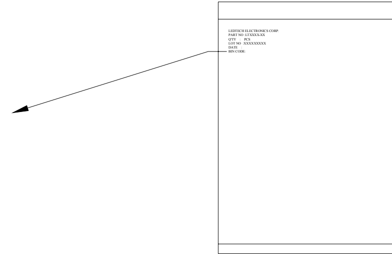
   Baking temperature: 120℃ max. Baking time: Within 60 seconds

   If soldering is done sequentially after the adhesive baking, please perform the soldering after cooling down the LED to normal temperature.

ENCASED TYPE

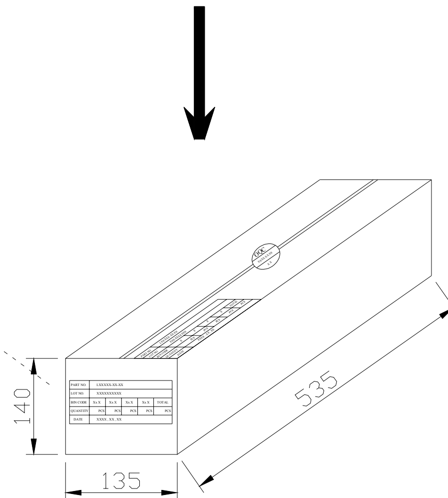
PLASTIC PACKAGE
QUANTITY: 1000 PCS

LEDTECH ELECTRONICS CORP.
PART NO :LTXXXX-XX
Q'TY : PCS
LOT NO :XXXXXXXXXX
DATE :
BIN CODE:



INNER BOX
QUANTITY: 15 PACKETS
TOTAL: 15,000 PCS

PART NO.	LXXXXX-XX-XX				
LOT NO.	XXXXXXXXXXX				
BIN CODE	Xx X	Xx X	Xx X	Xx X	TOTAL
QUANTITY	PCS	PCS	PCS	PCS	PCS
DATE	XXXX , XX , XX				



OUTER CARTON
QUANTITY: 4 BOX
TOTAL: 60,000 PCS

C/T NO. 箱 號	XX
PART NO. 料 號	LXXXXX-XX-XX
QUANTITY 數 量	PCS
N.W. 淨 重	KGS
G.W. 毛 重	KGS
REMARK 備 註