Marktech Optoelectronics

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SPECIFICATION

PART NO. : MT1064S15-G-A

4.8mm ROUND LED LAMP WITH HOLDER

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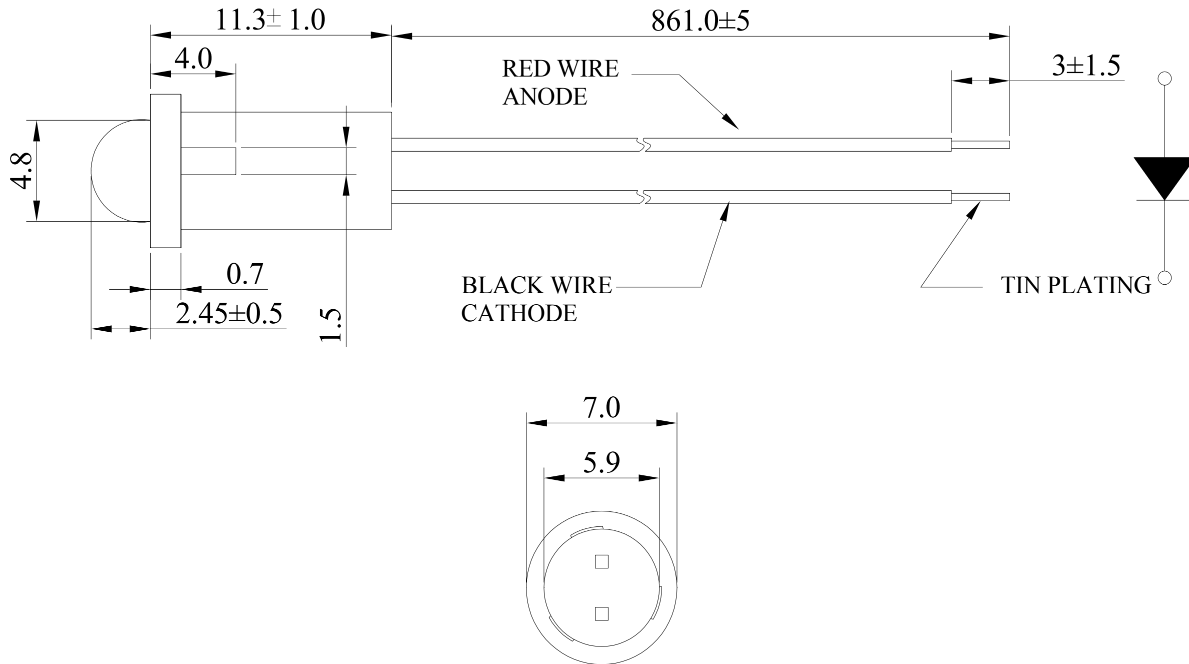
Package Dimensions



Notes:

1. All dimensions are in mm.
2. Tolerance is ±0.25mm unless otherwise noted.

Description

Part No.	LED Chip		Lens Color
	Material	Emitting Color	
MT1064S15-G-A	GaP/GaP	Green	Green Diffused

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Absolute Maximum Ratings at Ta=25℃

Parameter	Symbol	Rating	Unit
Power Dissipation per lamp	P_D	240	mW
Reverse Voltage per lamp	V_R	5	V
D.C. Forward Current per lamp	If	30	mA
Peak Current per lamp (1/10Duty duty,0.1ms Pulse Width.)	If(Peak)	100	mA
Operating Temperature Range	Topr.	-25 to +85	℃
Storage Temperature Range	Tstg.	-40 to +100	℃
Soldering Temperature(1.6mm from body)	Tsol	Dip Soldering: 260℃ for 5sec. Hand Soldering: 350℃ for 3 sec.	

Electrical and Optical Characteristics:

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Luminous Intensity per lamp	Iv	If=20mA	20	35		mcd
Forward Voltage per lamp	Vf	If=20mA		18.1		V
Peak Wavelength per lamp	λp	If=20mA		567		nm
Dominant Wavelength per lamp	λd	If=20mA		572		nm
Reverse Current per lamp	Ir	Vr=5V			100	μA
Viewing Angle per lamp	$2\theta 1/2$	If=20mA		38		deg
Spectrum Line Halfwidth per lamp	Δλ	If=20mA		30		nm

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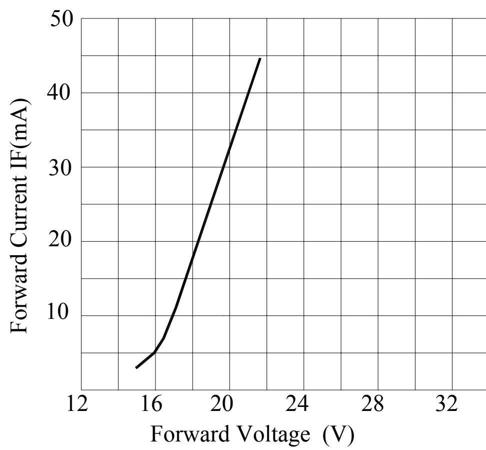
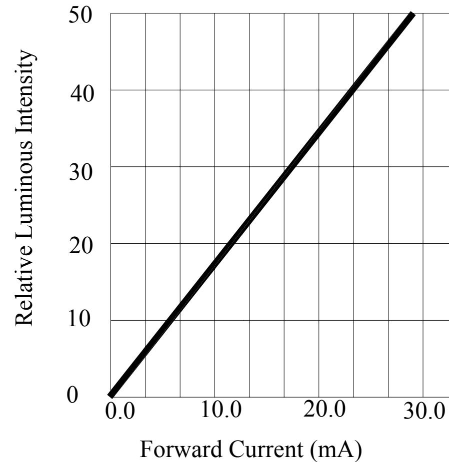
Typical Electrical/Optical Characteristic Curves

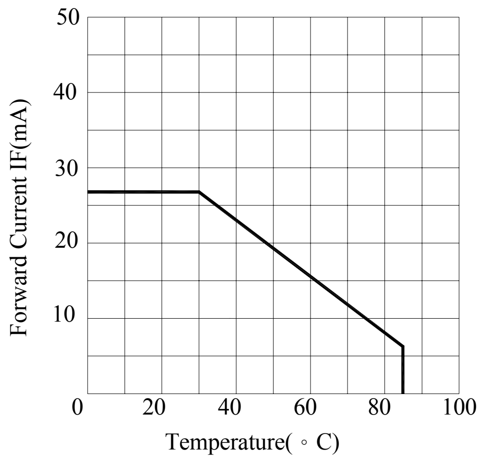
(25℃ Ambient Temperature Unless Otherwise Noted)



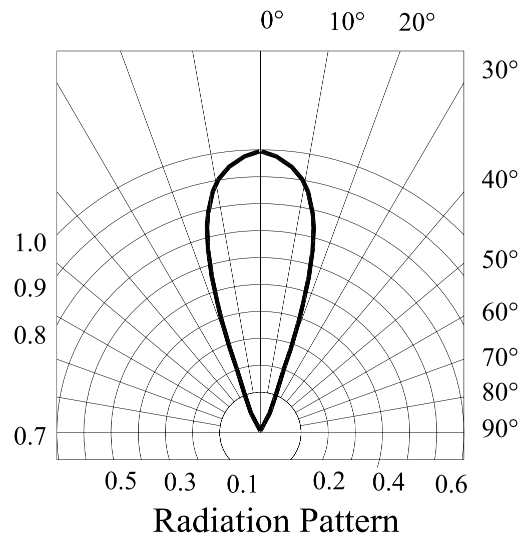
FORWARD CURRENT VS.APPLIED VOLTAGE



FORWARD CURRENT VS. LUMINOUS INTENSITY



FORWARD CURRENT VS. AMBIENT TEMPERATURE



Radiation Pattern

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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) Dip Soldering:

Pre-heat: 90℃ max. (Backside of PCB), Within 60 seconds.

Solder bath: 260±5℃ (Solder temperature), Within 5 seconds.

(3) Hand Soldering : 350℃ 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.

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