epitex Opto-Device & Custom LED

MOLD LED LAMP L820series Lead(Pb)Free Product-RoHS Compliant

L820-_ _AU Infrared LED Lamp

This series of L820-_ _AU is an AlGaAs LED mounted on a lead frame and encapsulated in various types of epoxy lens which offer different design settings.
On forward bias, it emits a high power radiation of typical 18mW with a peak wavelength at 820nm.

Specifications

1. Chip material AlGaAs
2. Peak wavelength 820nm
3. Resin Material Epoxy resin
4. Solder Lead free

Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	P_D	170	mW	Ta=25°C
Forward Current	I_F	100	mA	Ta=25°C
Pulse Forward Current	I_{FP}	500	mA	Ta=25°C
Reverse Voltage	V_R	5	V	Ta=25°C
Operating Temperature	T_{OPR}	-30 ~ +85	°C	Ta=25°C
Storage Temperature	T_{STG}	-40 ~ +100	°C	
Soldering Temperature	T_{SOL}	265	°C	

Electro-Optical Characteristics (Ta=25°C)

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V_F	IF=50mA		1.6	1.8	V
Reverse Current	I_R	VR=5V			10	uA
Total Radiated Power	P_O	IF=50mA	16.0	18.0		mW
Peak Wavelength	λ_P	IF=50mA	805	820	835	nm
Half Width	$\Delta\lambda$	IF=50mA		35		nm
Rise Time	tr	IF=50mA		50		ns
Fall Time	tf	IF=50mA		25		ns

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Characteristics of Radiant Intensity (Ta=25°C)

Type	Viewing Half Angle	Radiant Intensity I_F=50mA Unit : mW/sr			Outer Dimension	Dimension Figure
		Minimum	Typical	Maximum		
L820-01AU	±10°		100		Φ5	1
L820-02AU	±7°		100		Φ5	2
L820-03AU	±10°		110		Φ5	3
L820-04AU	±20°		45		Φ5	4
L820-05AU	±40°		12		Φ5	5
L820-06AU	±7°		130		Φ5	6
L820-09AU	±25°(Long) ±15°(Short)		60		Φ5 Oval	7
L820-46AU					Φ5	8
L820-41AU	±16°		75		Φ4	9
L820-42AU	±23°		40		Φ4	10
L820-31AU					Φ3	11
L820-33AU	±18°		45		Φ3	12
L820-34AU					Φ3	13
L820-36AU	±33°		20		Φ3	14

Total Radiant Power is measured by Photodyne #500
Brightness is measured by Tektronix J-16

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Outer Dimension of LED Lamp

Figure-1 Φ5Mold (Type01)

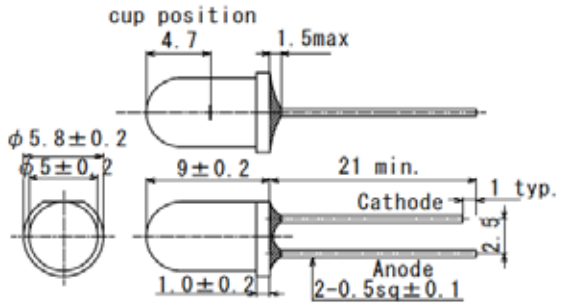


Figure-2 Φ5Mold (Type02)

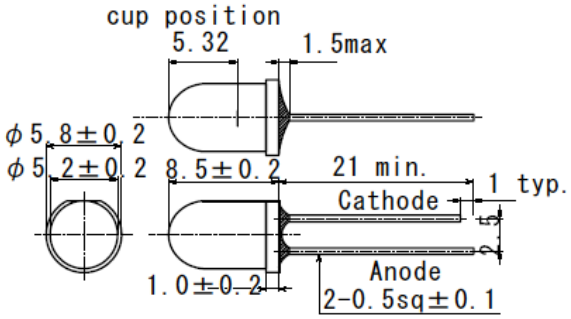


Figure-3 Φ5Mold (Type03)

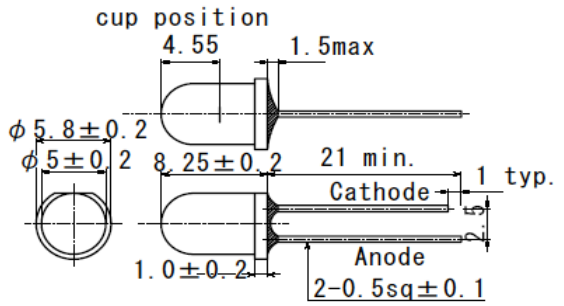


Figure-4 Φ5Mold (Type04)

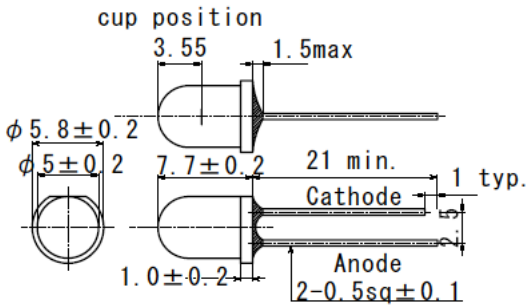


Figure-5 Φ5Mold (Type05)

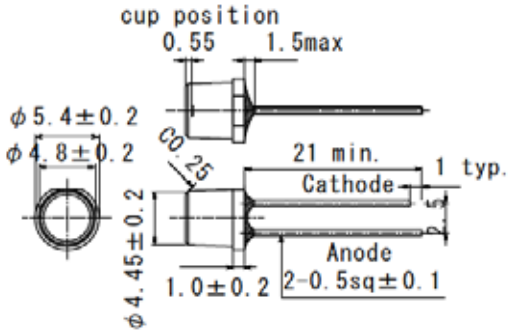


Figure-6 Φ5Mold (Type06)

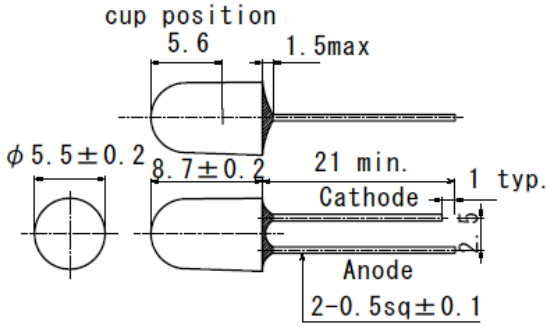


Figure-7 Φ5Mold (Type09)

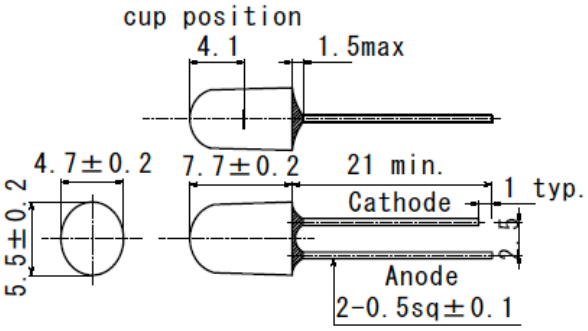


Figure-8 Φ5Mold (Type46)

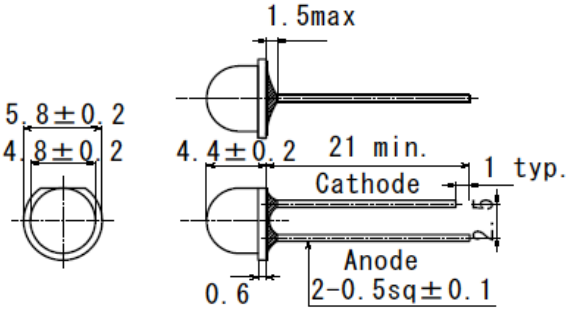


Figure-9 Φ4Mold (Type41)

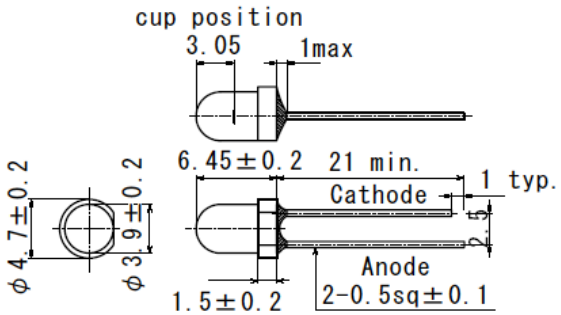
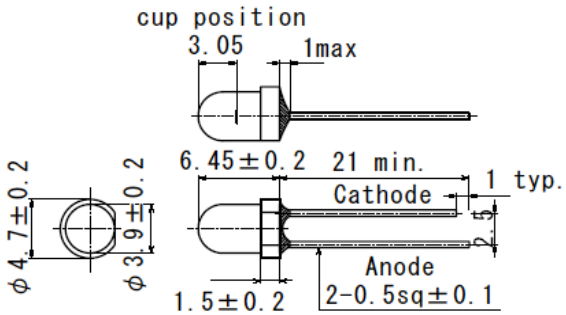


Figure-10 Φ4Mold (Type42)



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Outer Dimension of LED Lamp

Figure-11 Φ3Mold (Type31)

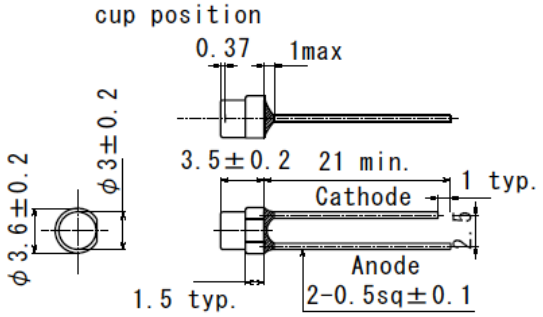

Figure-12 Φ3Mold (Type33)

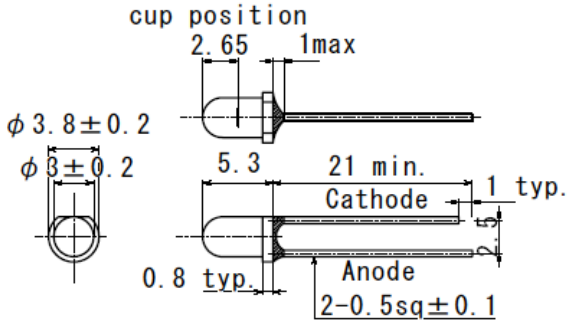

Figure-13 Φ3Mold (Type34)

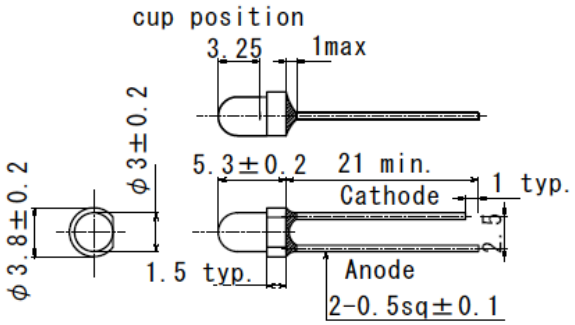

Figure-14 Φ3Mold (Type36)

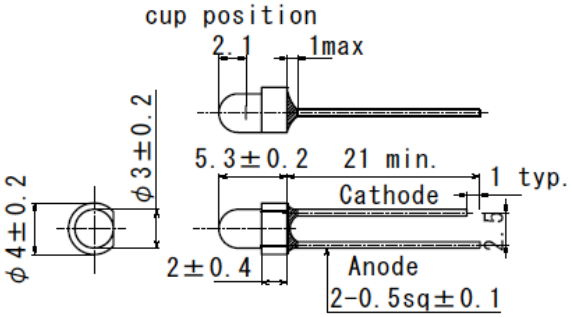

Figure-15

Figure-16

Figure-17

Figure-18

Figure-19

Figure-20

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The Viewing half angle

Figure-1 Φ5Mold (Type01)

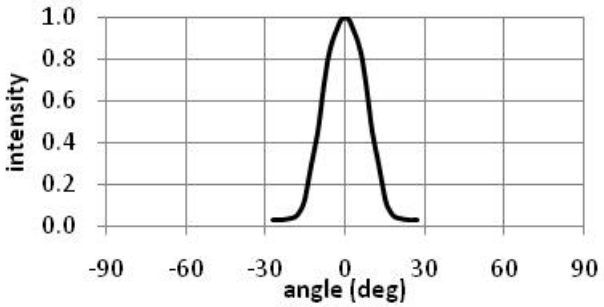


Figure-2 Φ5Mold (Type02)

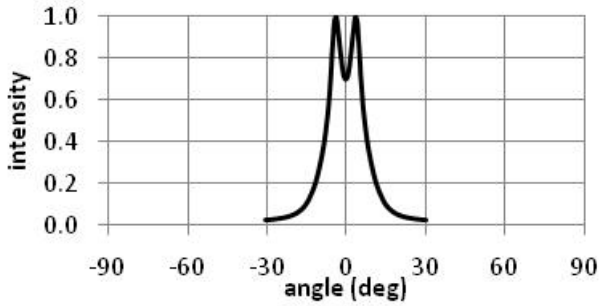


Figure-3 Φ5Mold (Type03)

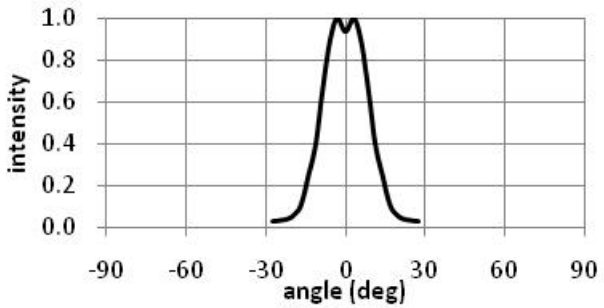


Figure-4 Φ5Mold (Type04)

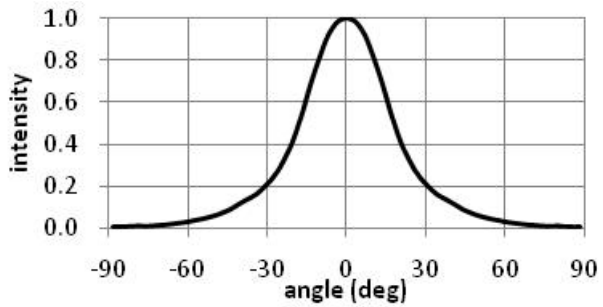


Figure-5 Φ5Mold (Type05)

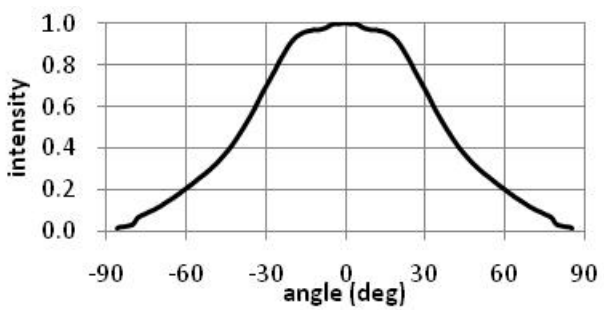


Figure-6 Φ5Mold (Type06)

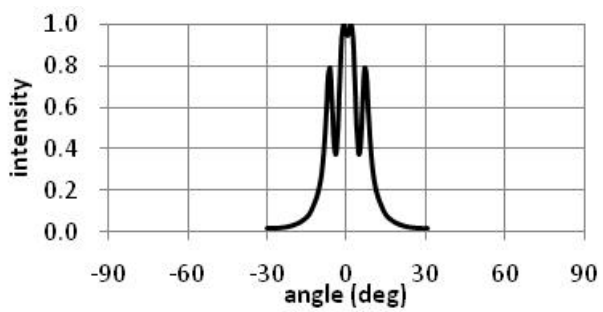


Figure-7 Φ5Mold (Type09)

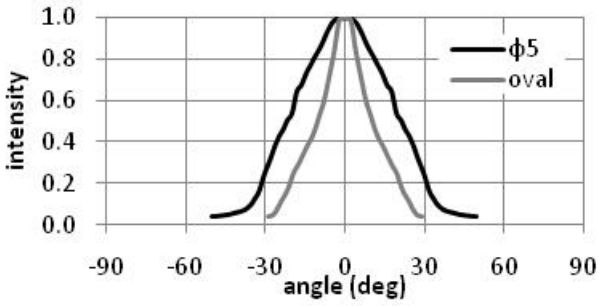


Figure-8 Φ5Mold (Type46)

Figure-9 Φ4Mold (Type41)

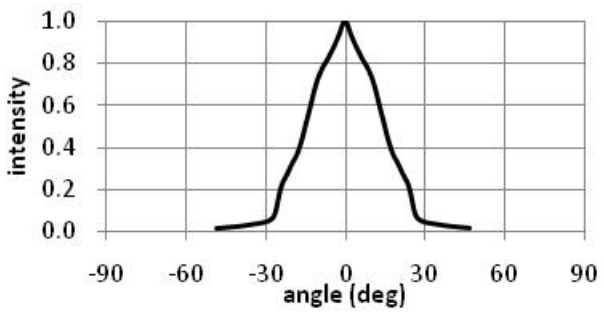
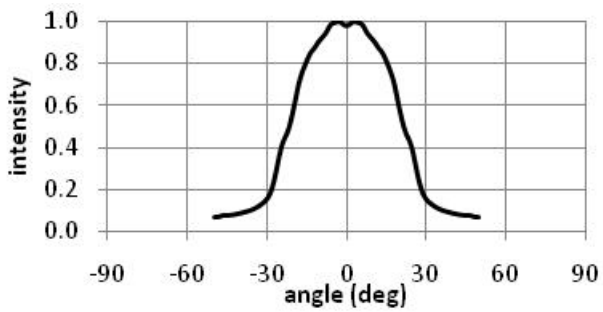


Figure-10 Φ4Mold (Type42)



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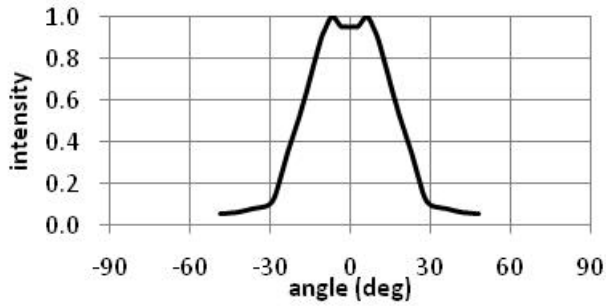
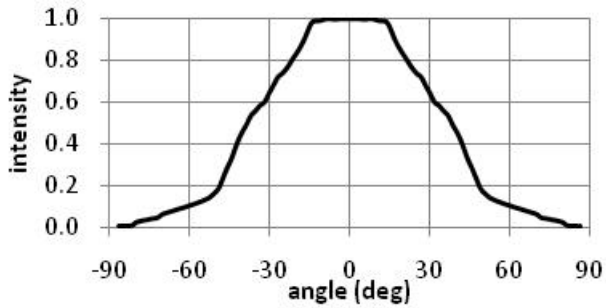
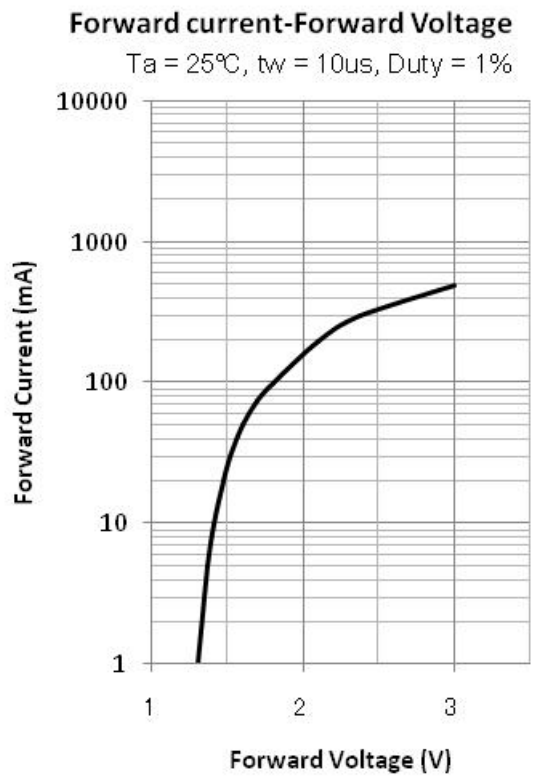
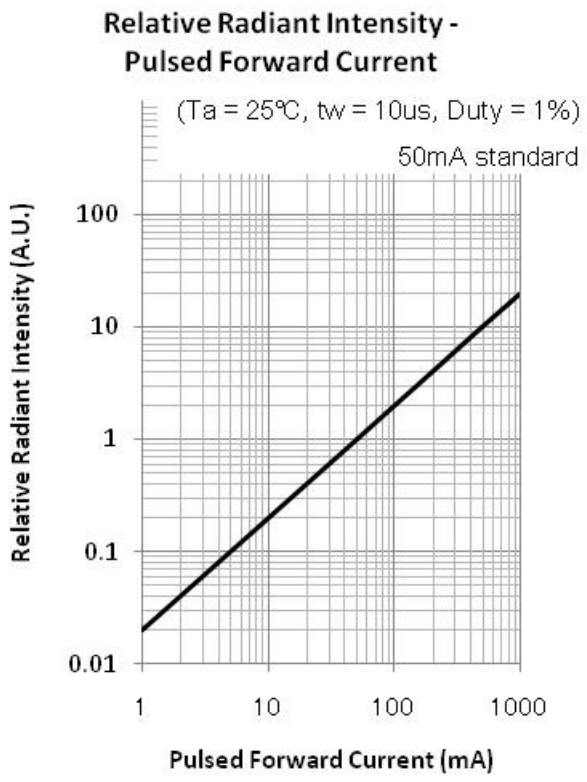
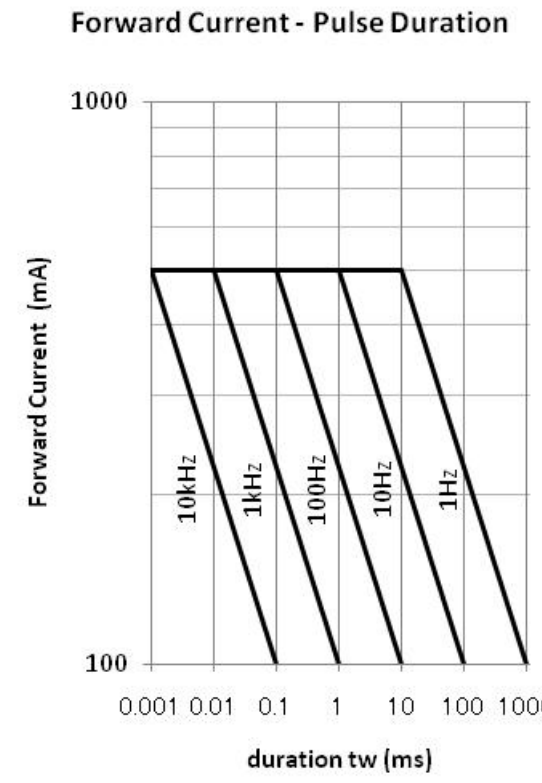
The Viewing half angle

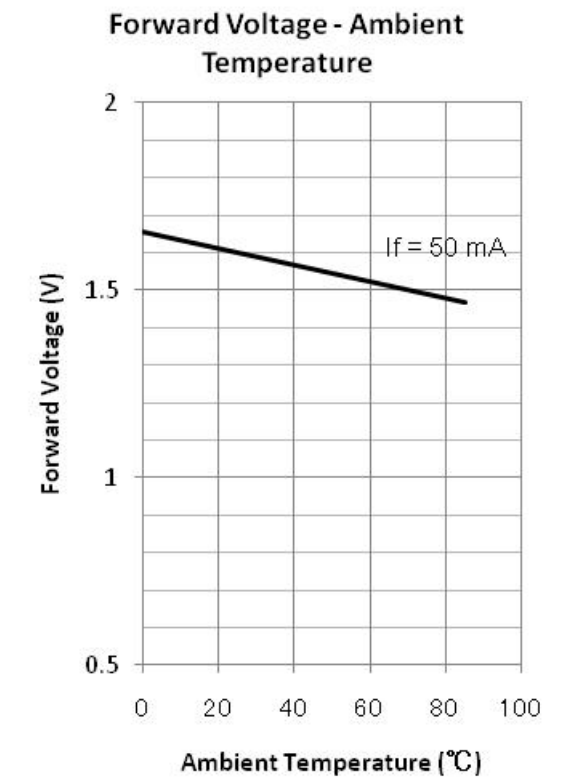
Figure-11 Φ3Mold (Type31)	**Figure-12 Φ3Mold (Type33)** 
Figure-13 Φ3Mold (Type34)	**Figure-14 Φ3Mold (Type36)** 
Figure-15	**Figure-16**
Figure-17	**Figure-18**
Figure-19	**Figure-20**

L820 –series









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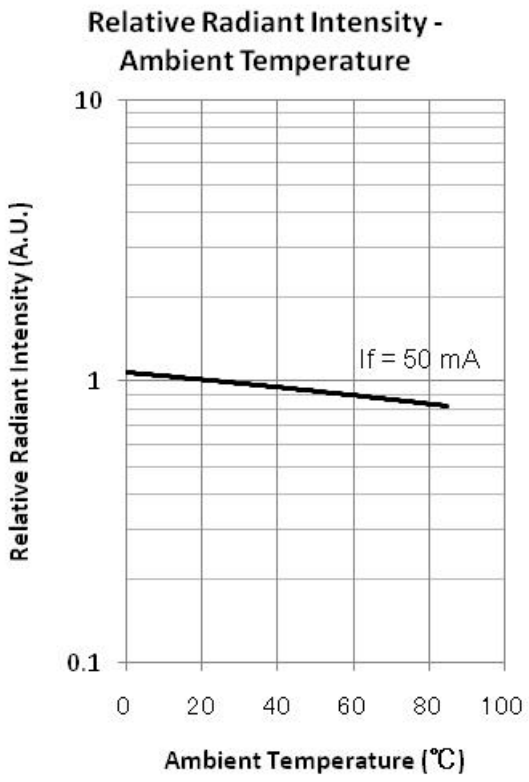

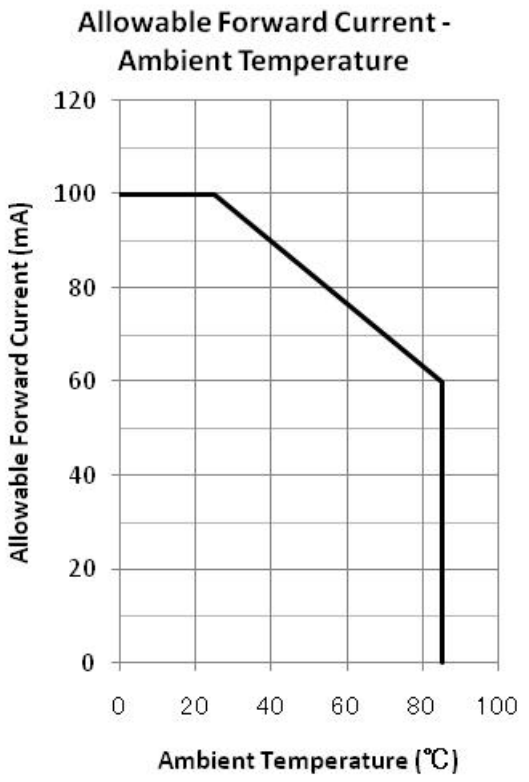

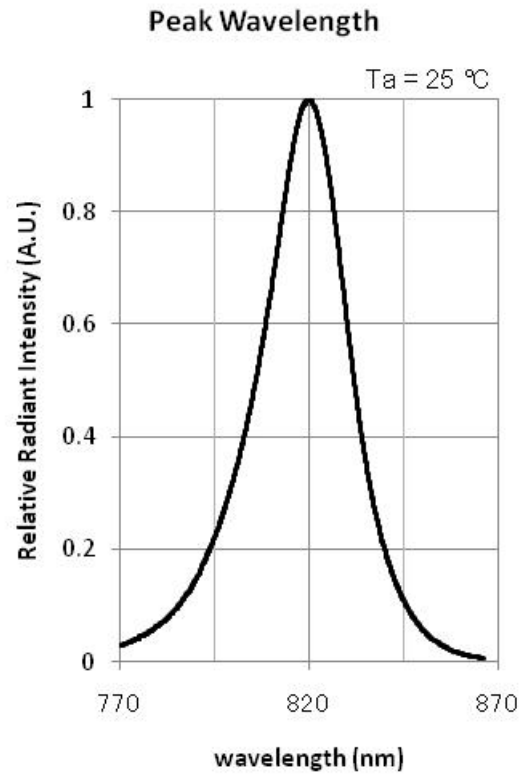

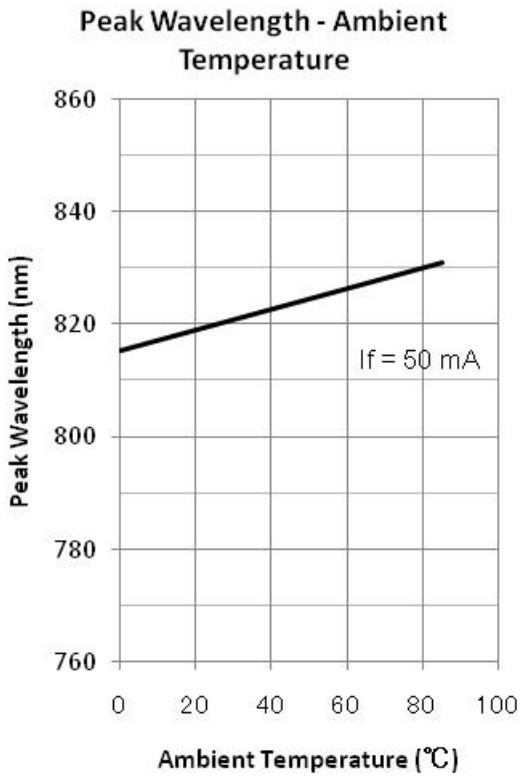

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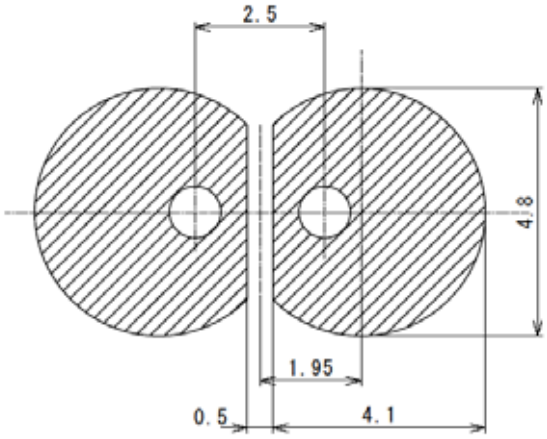
Recommended Land Layout (unit: mm)



Soldering Conditions