L890-_ _AU

Infrared LED Lamp

This series of L890-_ _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 15mW with a peak wavelength at 890nm.

Specifications

1. Chip material AlGaAs
2. Peak wavelength 890nm
3. Resin Material Epoxy resin
4. Solder Lead free

Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	P_D	150	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		1.4	1.7	V
Reverse Current	I_R	VR=5V			10	uA
Total Radiated Power	P_O	IF=50mA	10.0	15.0		mW
Peak Wavelength	λ_P	IF=50mA		890		nm
Half Width	$\Delta\lambda$	IF=50mA		50		nm
Rise Time	tr	IF=50mA		800		ns
Fall Time	tf	IF=50mA		400		ns

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Characteristics of Radiant Intensity (Ta=25°C)

Type	Viewing Half Angle	Radiant Intensity I_F=50mA Unit : mW/sr Minimum	Typical	Maximum	Outer Dimension	Dimension Figure
L890-01AU	±10°		70		Φ5	1
L890-02AU	±7°		80		Φ5	2
L890-03AU	±10°		70		Φ5	3
L890-04AU	±20°		20		Φ5	4
L890-05AU	±40°		7		Φ5	5
L890-06AU	±7°		100		Φ5	6
L890-09AU	±25°(Long) ±15°(Short)		50		Φ5 Oval	7
L890-46AU					Φ5	8
L890-41AU	±16°		45		Φ4	9
L890-42AU	±23°		25		Φ4	10
L890-31AU					Φ3	11
L890-33AU	±18°		20		Φ3	12
L890-34AU					Φ3	13
L890-36AU	±33°		15		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)

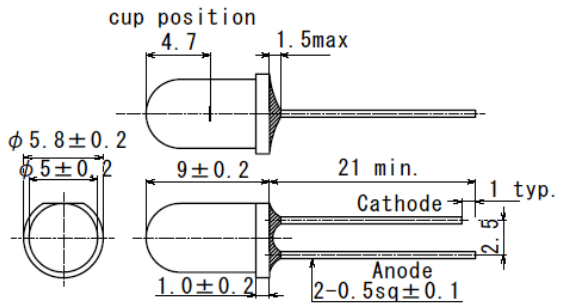


Figure-2 Φ5Mold (Type02)

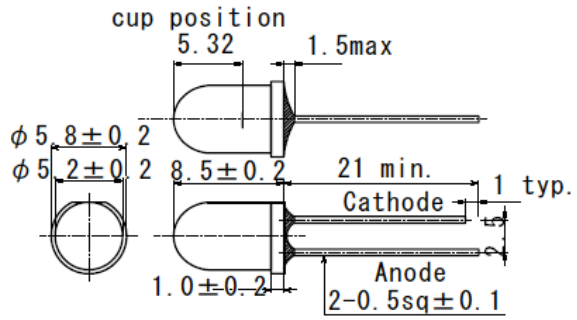


Figure-3 Φ5Mold (Type03)

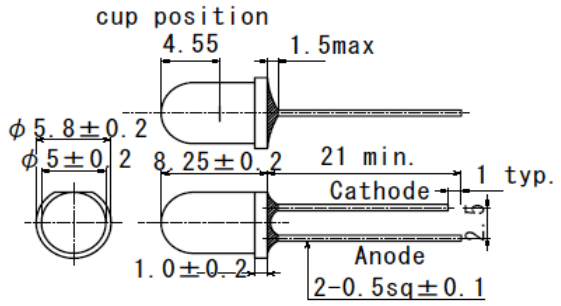


Figure-4 Φ5Mold (Type04)

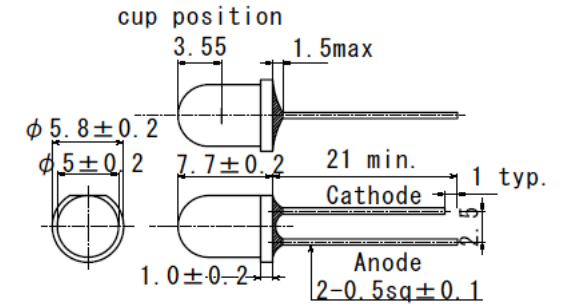


Figure-5 Φ5Mold (Type05)

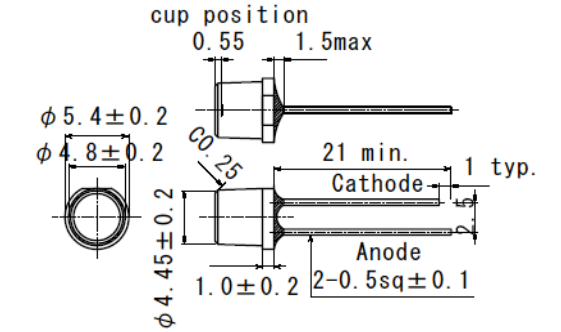


Figure-6 Φ5Mold (Type06)

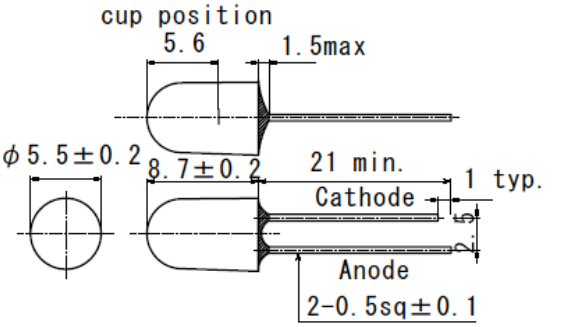


Figure-7 Φ5Mold (Type09)

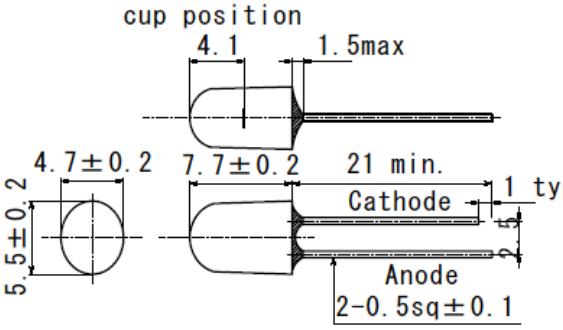


Figure-8 Φ5Mold (Type46)

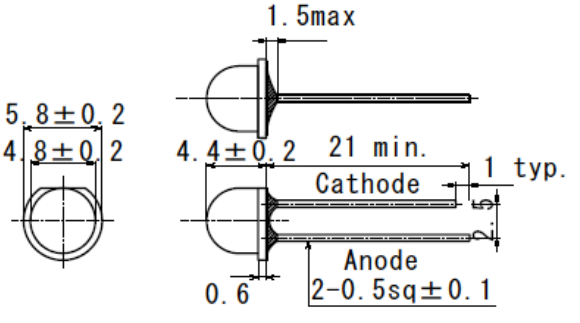


Figure-9 Φ4Mold (Type41)

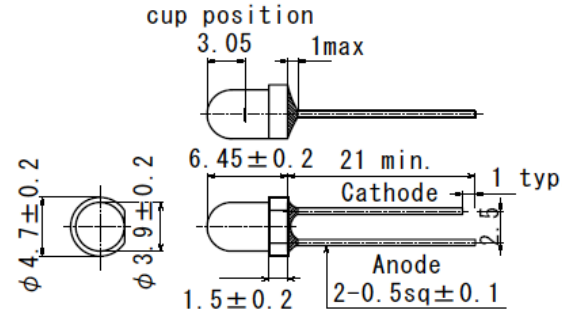
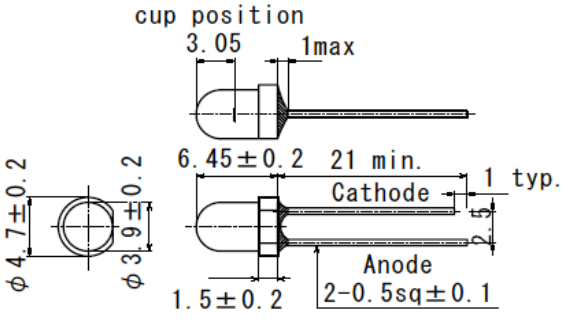


Figure-10 Φ4Mold (Type42)



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Outer Dimension of LED Lamp

Figure-11 Φ3Mold (Type31)

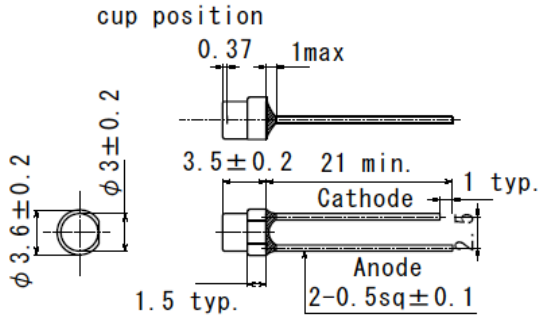


Figure-12 Φ3Mold (Type33)

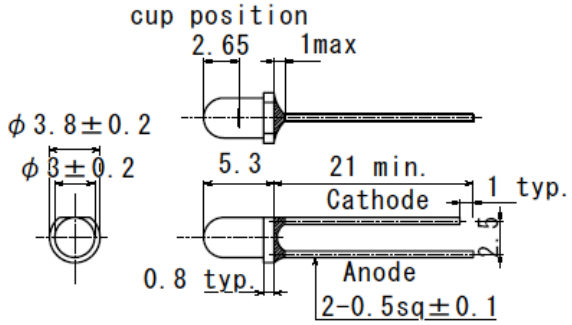


Figure-13 Φ3Mold (Type34)

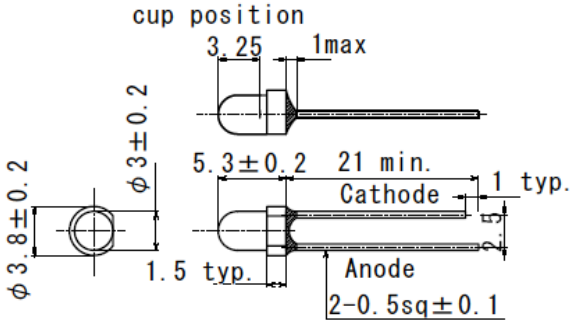


Figure-14 Φ3Mold (Type36)

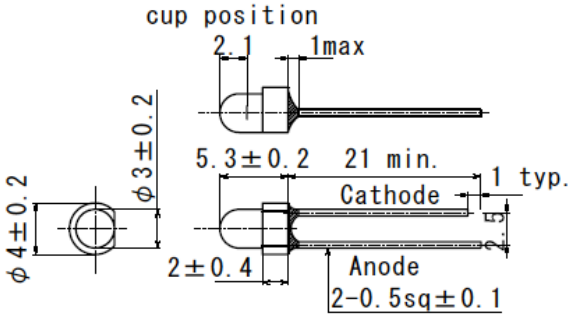


Figure-15

Figure-16

Figure-17

Figure-18

Figure-19

Figure-20

The Viewing half angle

Figure-1 Φ5Mold (Type01)

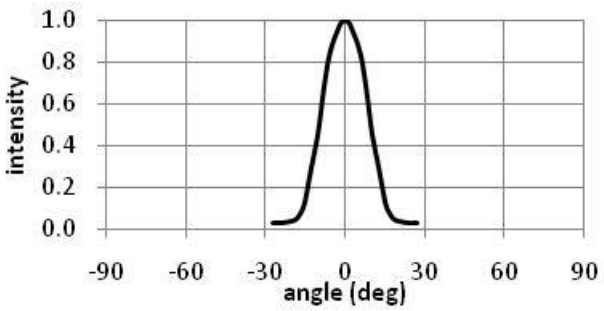


Figure-2 Φ5Mold (Type02)

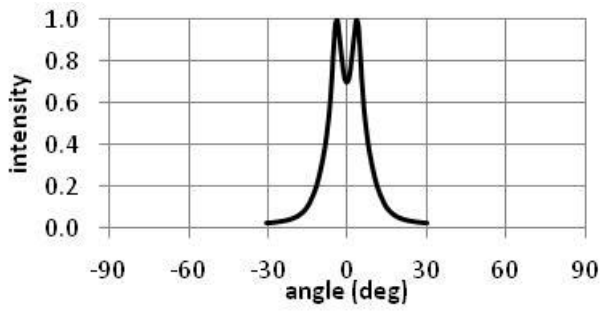


Figure-3 Φ5Mold (Type03)

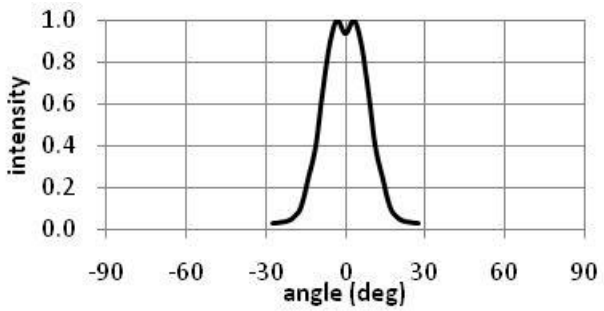


Figure-4 Φ5Mold (Type04)

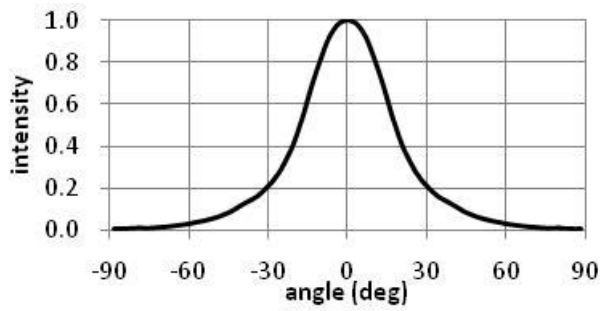


Figure-5 Φ5Mold (Type05)

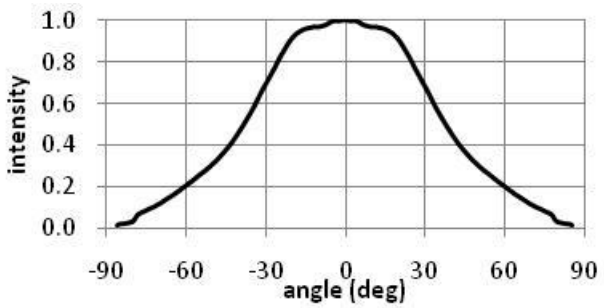
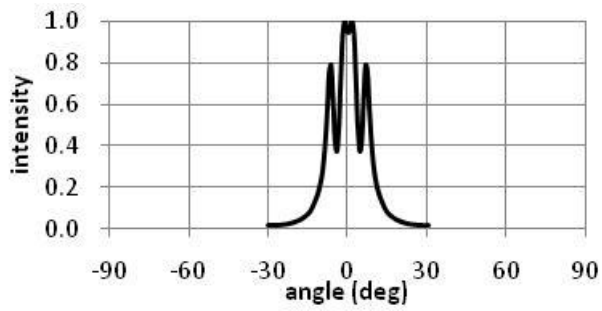


Figure-6 Φ5Mold (Type06)



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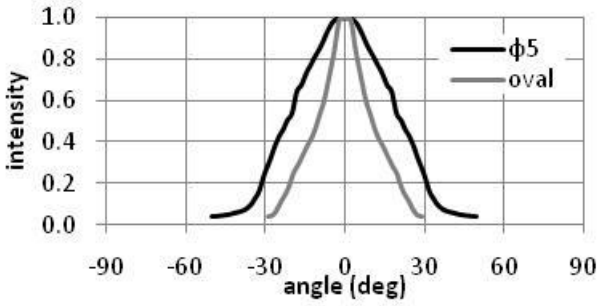


Figure-8 Φ5Mold (Type46)

Figure-9 Φ4Mold (Type41)

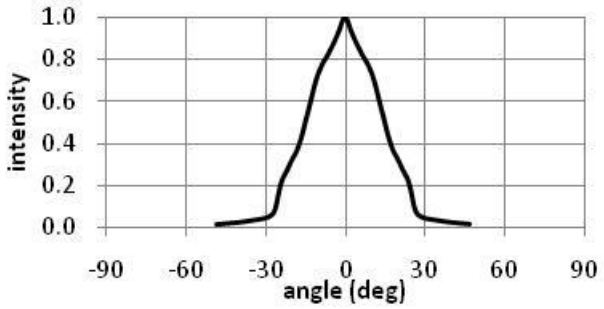
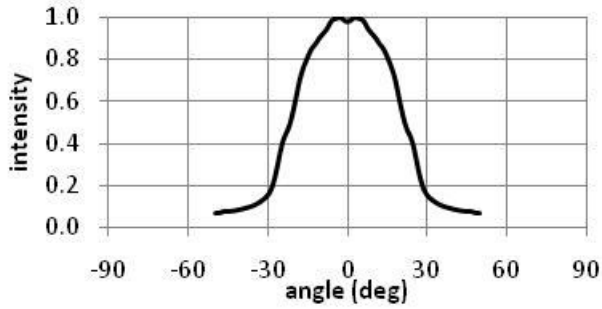
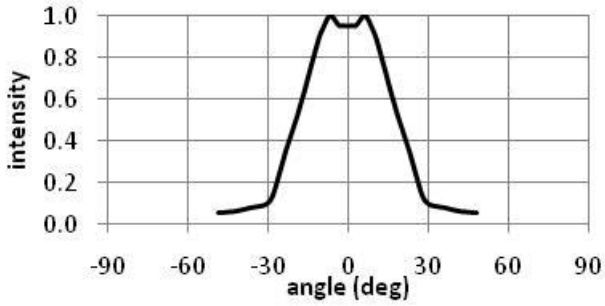
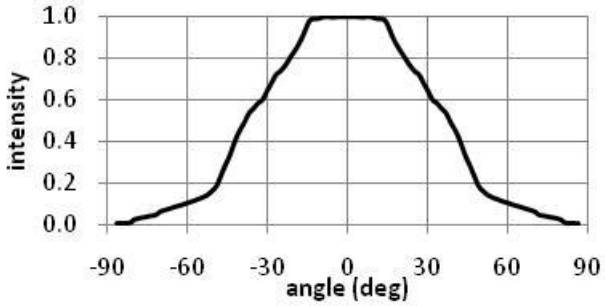


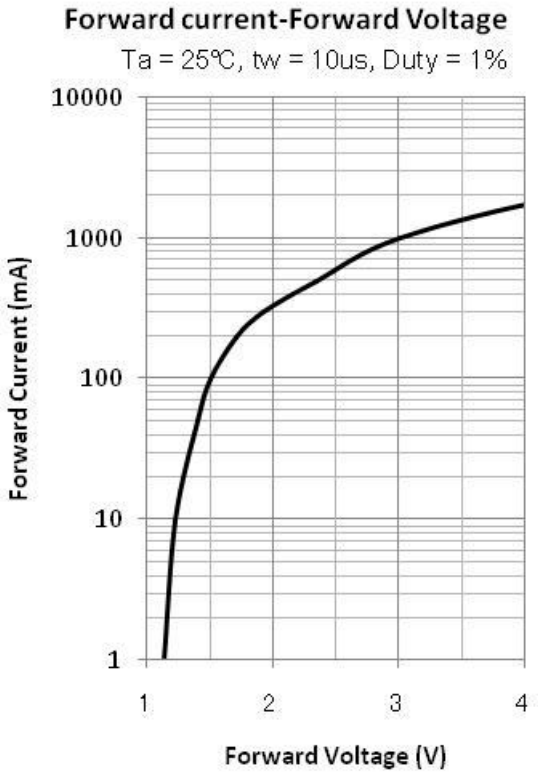
Figure-10 Φ4Mold (Type42)

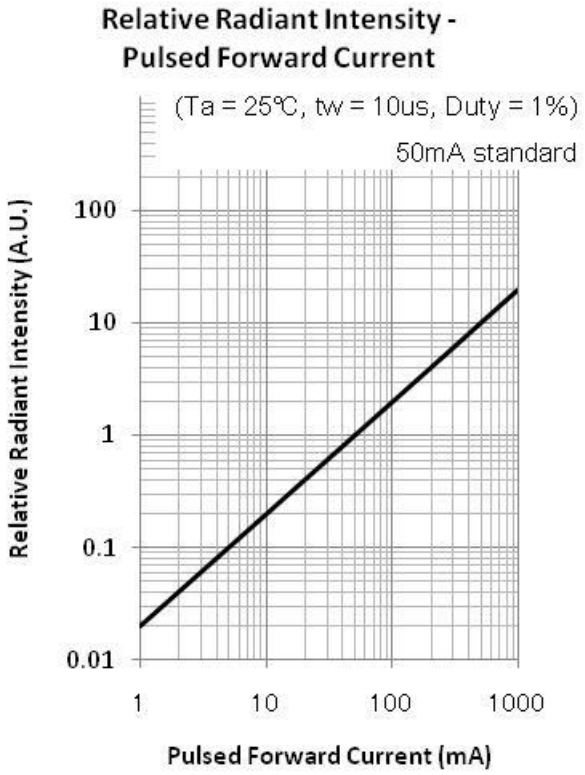


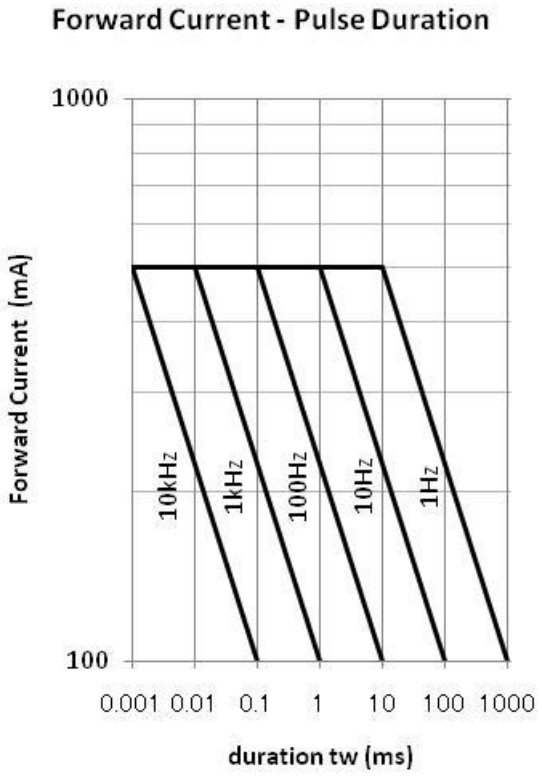
The Viewing half angle

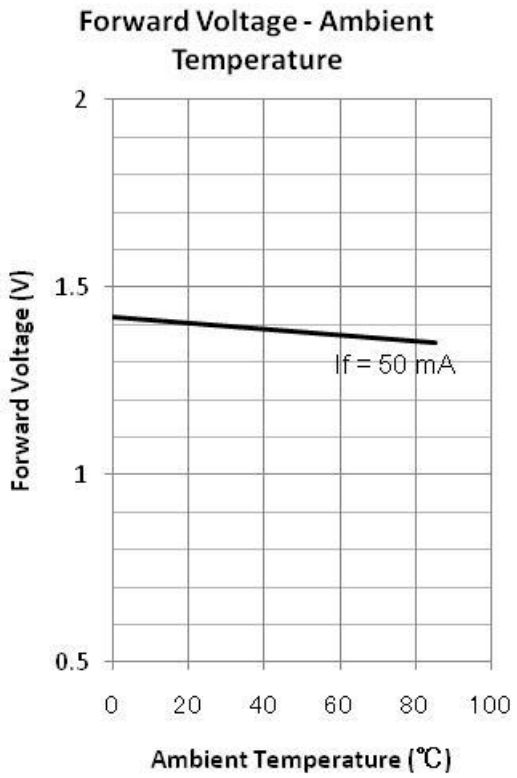
Figure-11 Φ3Mold (Type31)	**Figure-12 Φ3Mold (Type33)** 
Figure-13 Φ3Mold (Type34)	**Figure-14 Φ3Mold (Type36)** 
Figure-15	**Figure-16**
Figure-17	**Figure-18**
Figure-19	**Figure-20**

L890 –series









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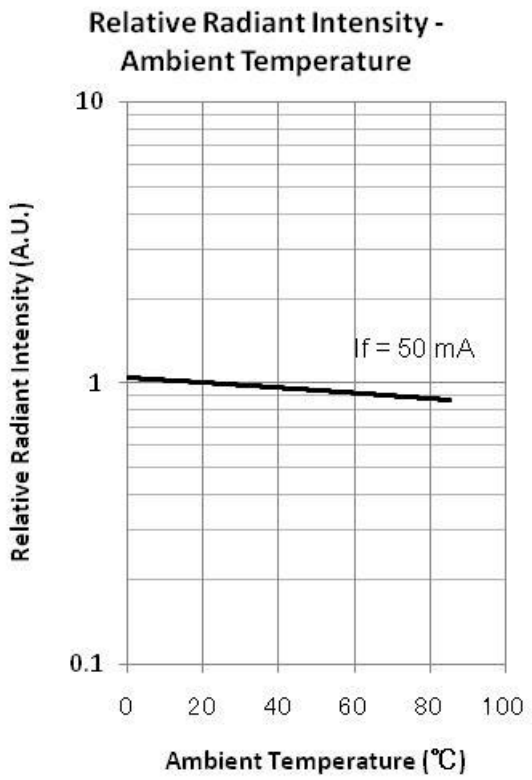

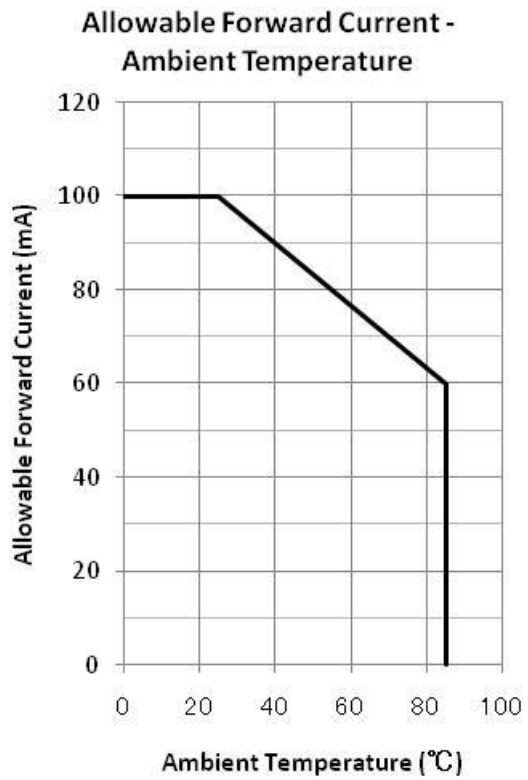

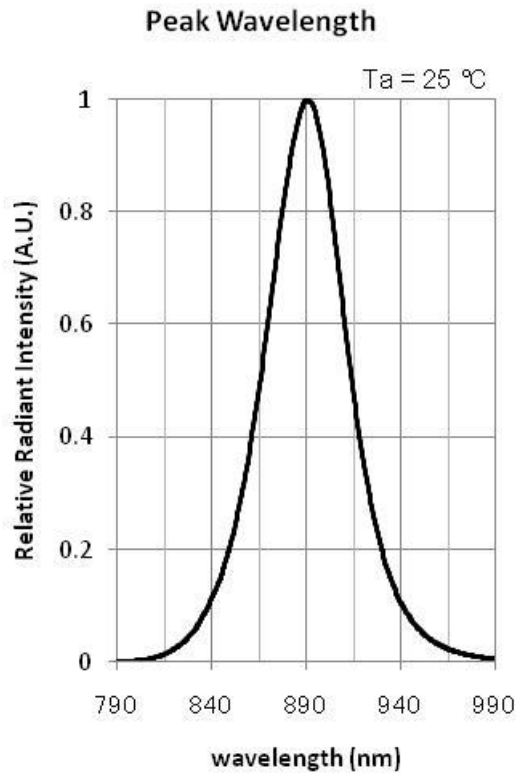

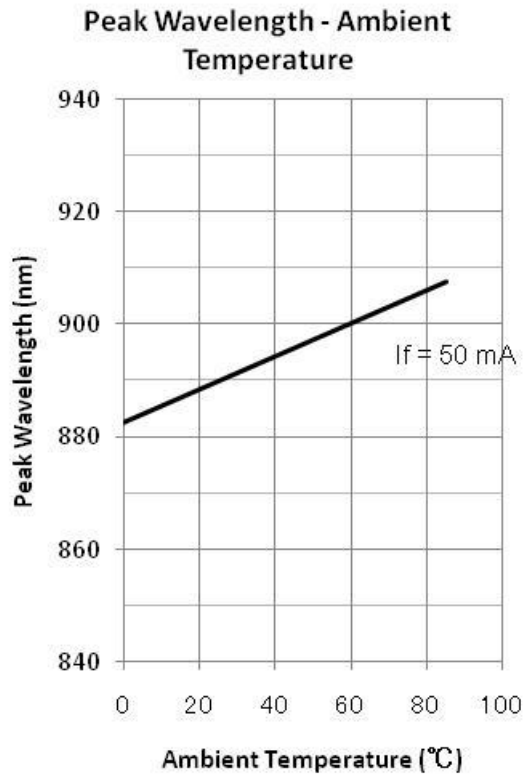

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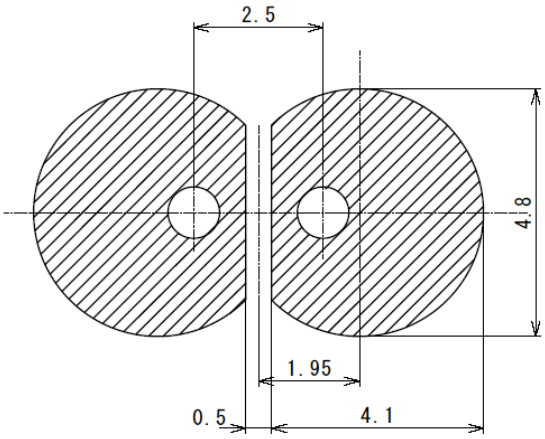
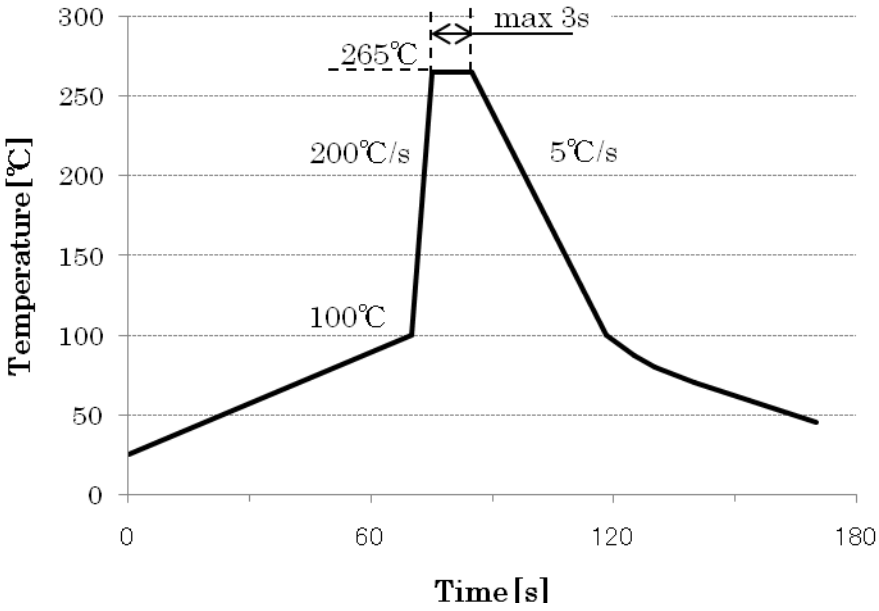
Recommended Land Layout (unit: mm)



Soldering Conditions



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