L850D-_ _-50 Infrared LED Lamp

This series of L850D-_ _-50 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 23mW with a peak wavelength at 850nm.
These devices are intended to be operated at pulsed current of 2A under 3.5V typ..

Specifications

1. Chip material AlGaAs
2. Peak wavelength 850nm
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}	2000	mA	Ta=25°C
Reverse Voltage	V_R	5	V	Ta=25°C
Operating Temperature	T_{OPR}	-30 ~ +85	°C	
Storage Temperature	T_{STG}	-40 ~ +100	°C	
Soldering Temperature	T_{SOL}	265	°C	

‡Pulse Forward Current condition: Duty=1% and Pulse Width=10us.

‡Soldering condition: Soldering condition must be completed within 3 seconds at 265°C

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Electro-Optical Characteristics (Ta=25°C)

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V_F/V_{FP}	I_F=50mA		1.5	1.7	V
		I_F=100mA,tp=20ms		1.6	1.8	
		I_{FP}=2A		3.6	4.2	
Reverse Current	I_R	VR=5V			10	uA
Total Radiated Power	P_O	I_F=50mA	18	23		mW
		I_F=100mA,tp=20ms	36	46		
Peak Wavelength	λ_P	I_F=50mA	835	850	865	nm
Half Width	Δλ	I_F=50mA		40		nm
Rise Time	tr	I_F=50mA		15		ns
Fall Time	tr	I_F=50mA		10		ns

‡Total Radiated Power is measured by Photodyne #500.

‡Radiant Intensity is measured by Tektronix J-6512.

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		
L850D-01	±10°		110		Φ5	1
L850D-02	±4°		290		Φ5	2
L850D-03	±15°		100		Φ5	3
L850D-04	±20°		40		Φ5	4
L850D-05	±40°		10		Φ5	5
L850D-06	±4°		260		Φ5	6
L850D-09	±25°(Long) ±15°(Short)		50		Φ5 Oval	7
L850D-46					Φ5	8
L850D-41					Φ4	9
L850D-42					Φ4	10
L850D-31					Φ3	11
L850D-33					Φ3	12
L850D-34					Φ3	13
L850D-36					Φ3	14

Brightness is measured by Tektronix J-16

Total Radiant Power is measured by Photodyne #500

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Outer Dimension of LED Lamp

Figure-1 Φ5Mold (Type01)

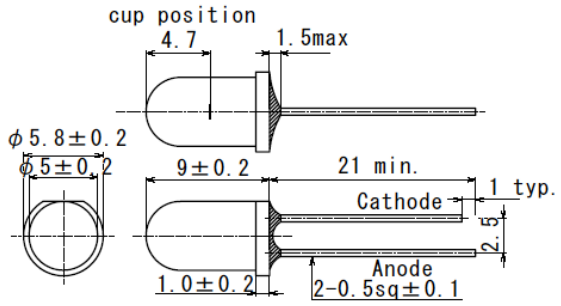


Figure-2 Φ5Mold (Type02)

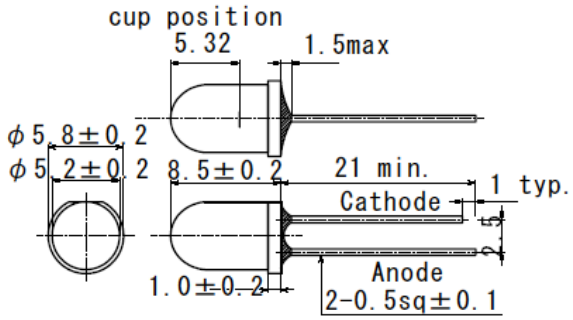


Figure-3 Φ5Mold (Type03)

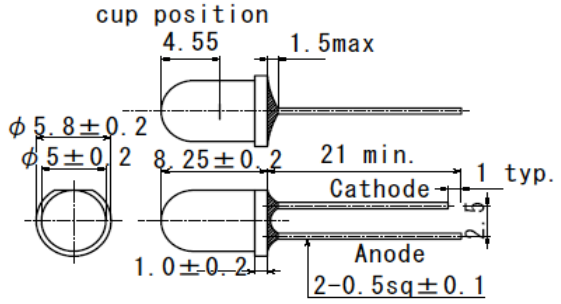


Figure-4 Φ5Mold (Type04)

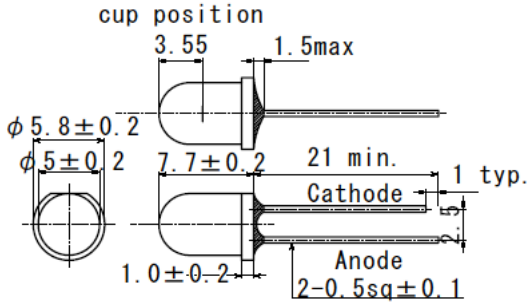


Figure-5 Φ5Mold (Type05)

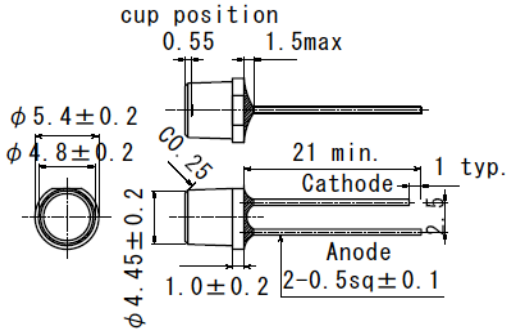


Figure-6 Φ5Mold (Type06)

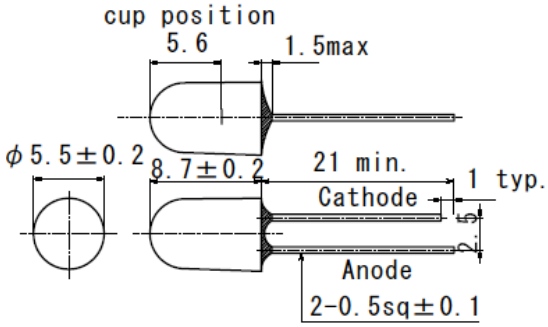


Figure-7 Φ5Mold (Type09)

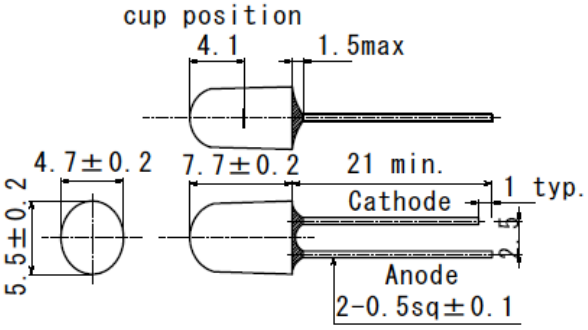


Figure-8 Φ5Mold (Type46)

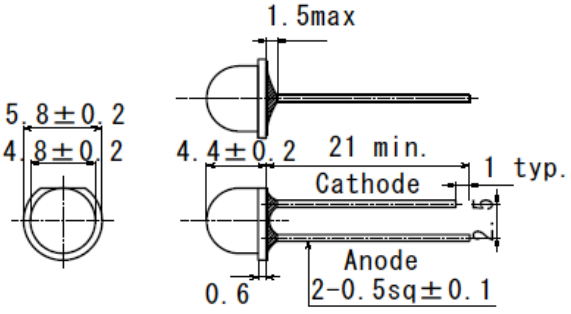


Figure-9 Φ4Mold (Type41)

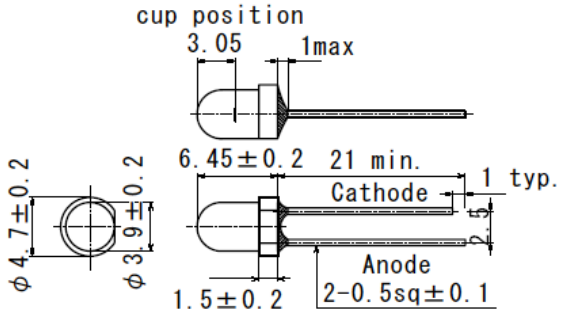
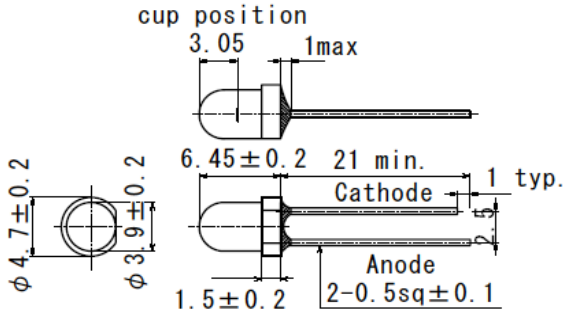


Figure-10 Φ4Mold (Type42)



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The Viewing half angle

Figure-1 Φ5Mold (Type01)

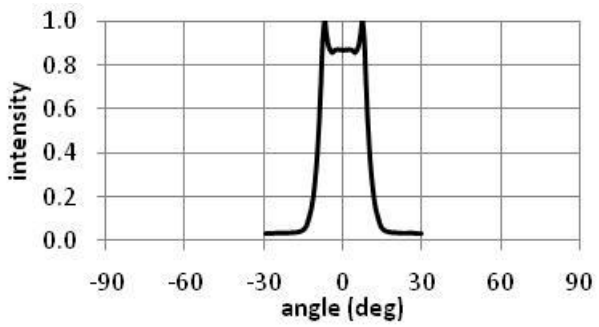

Figure-2 Φ5Mold (Type02)

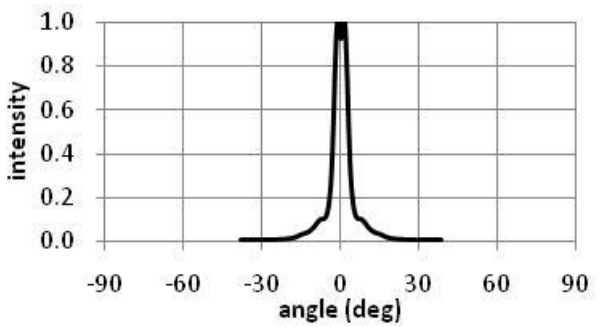

Figure-3 Φ5Mold (Type03)

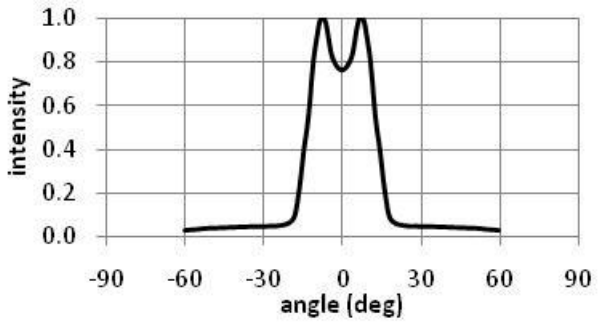

Figure-4 Φ5Mold (Type04)

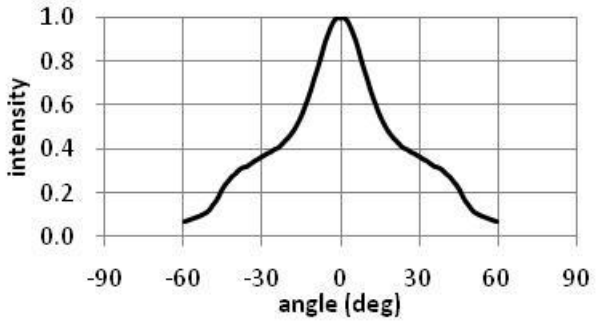

Figure-5 Φ5Mold (Type05)

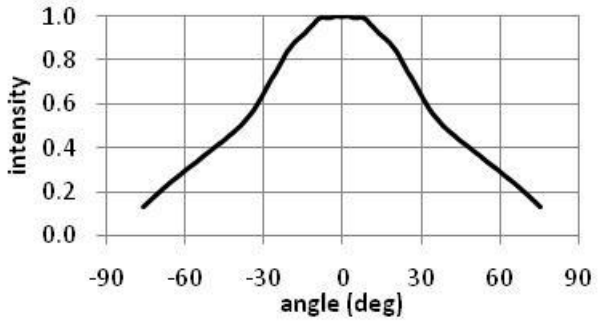

Figure-6 Φ5Mold (Type06)

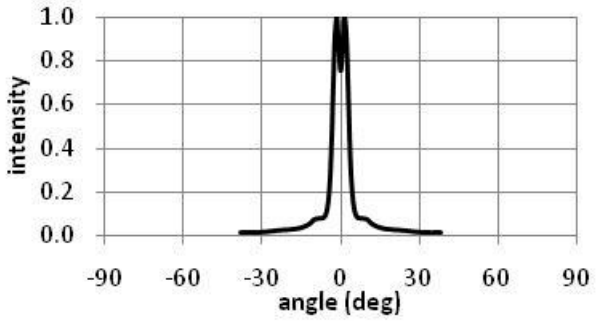

Figure-7 Φ5Mold (Type09)

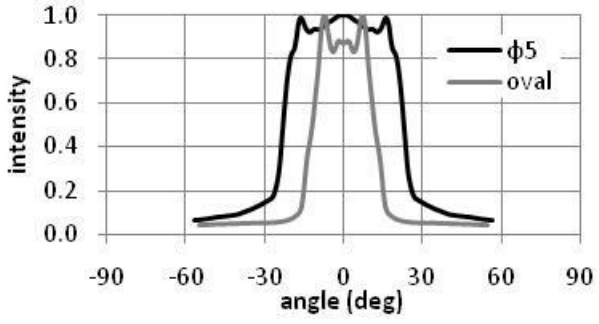

Figure-8 Φ5Mold (Type46)

Figure-9 Φ4Mold (Type41)

Figure-10 Φ4Mold (Type42)

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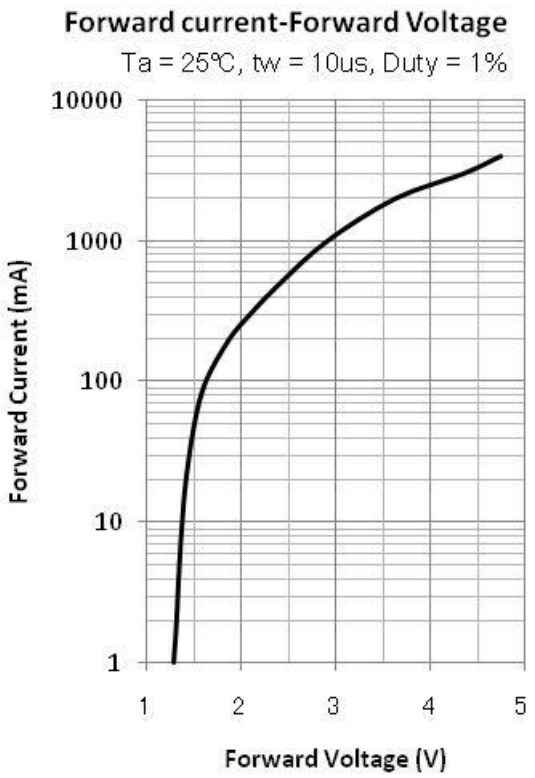
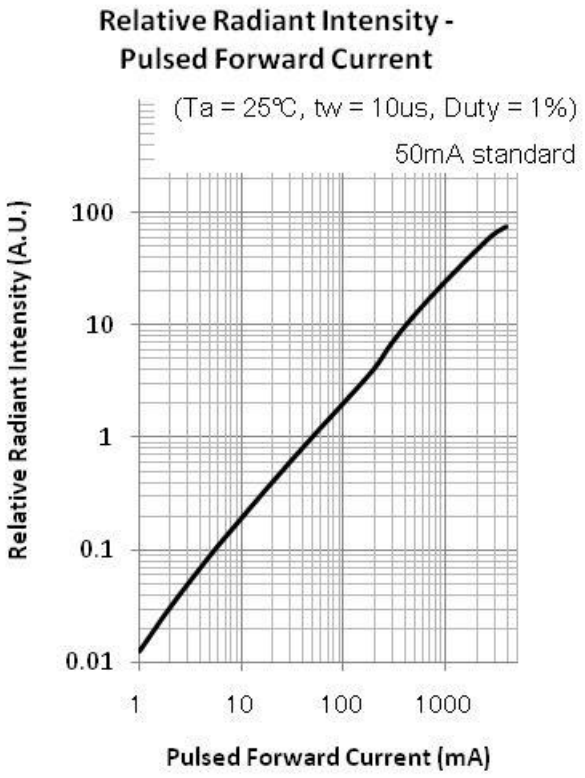
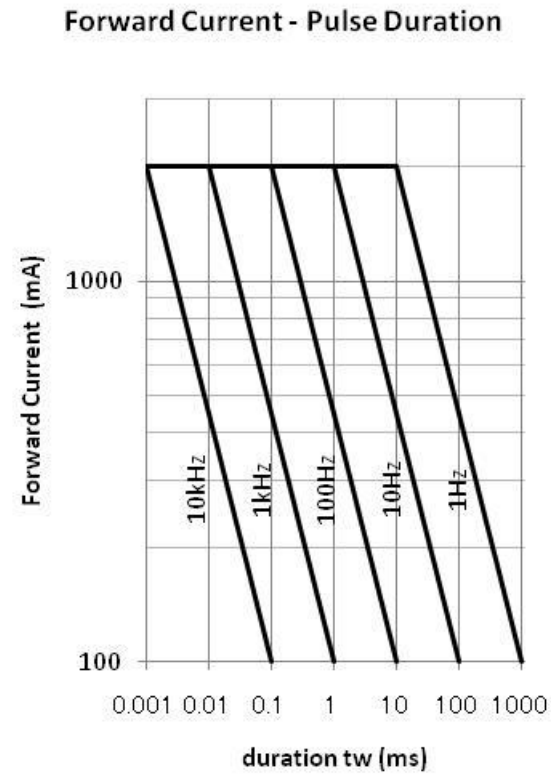
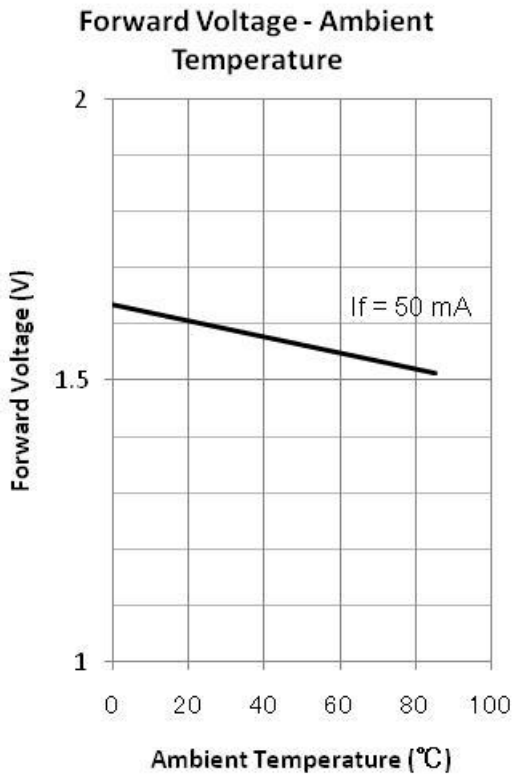
L850D-__-50 series









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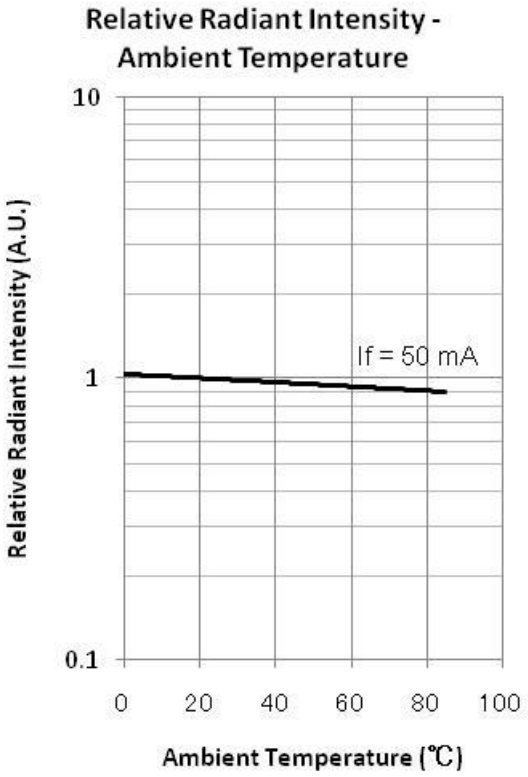

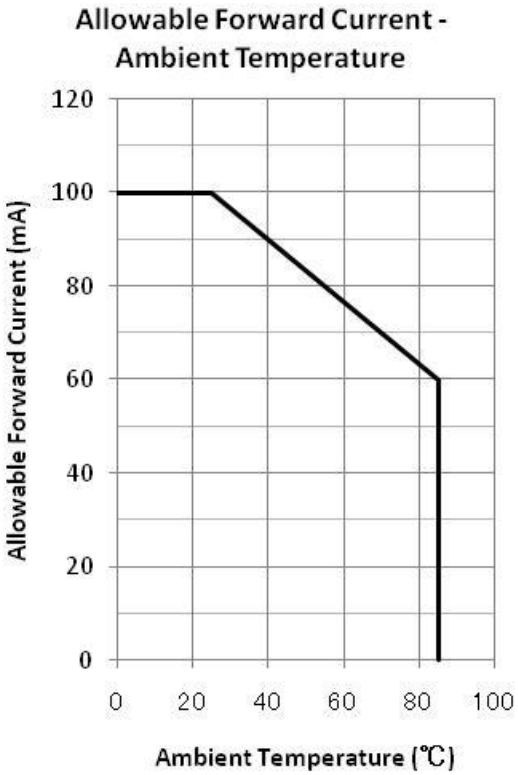

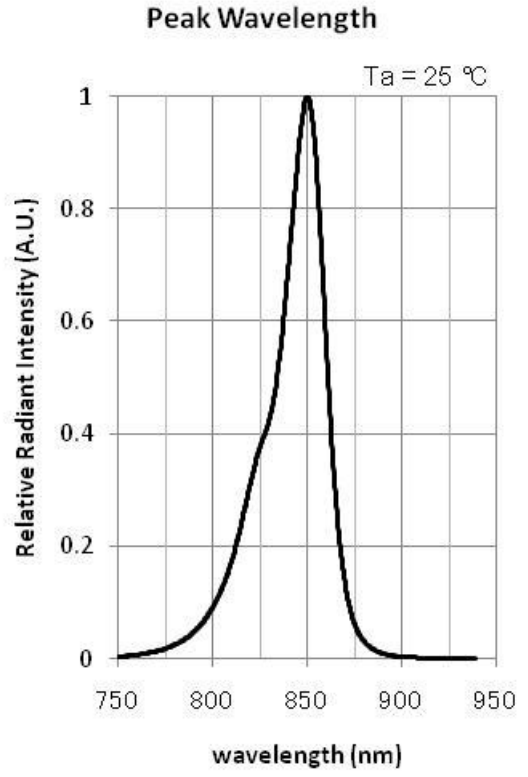

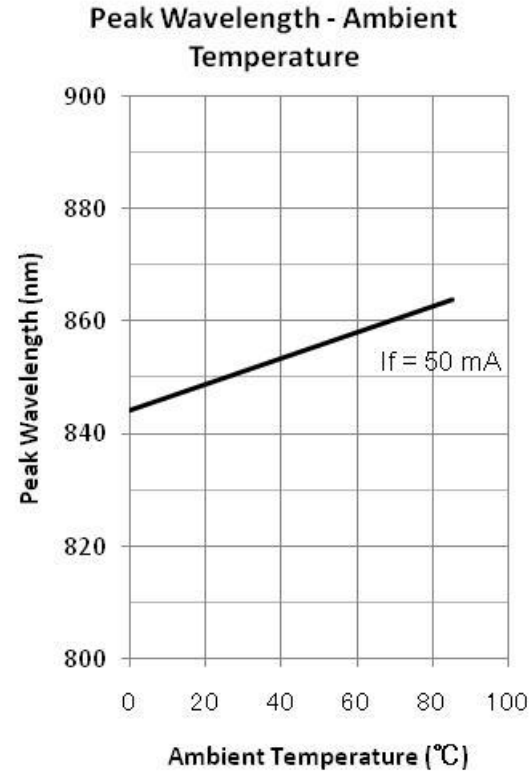

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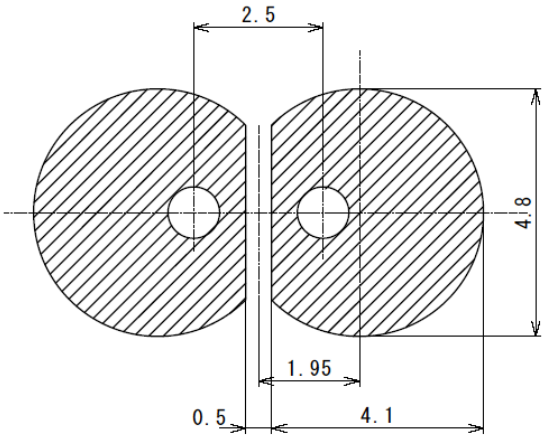
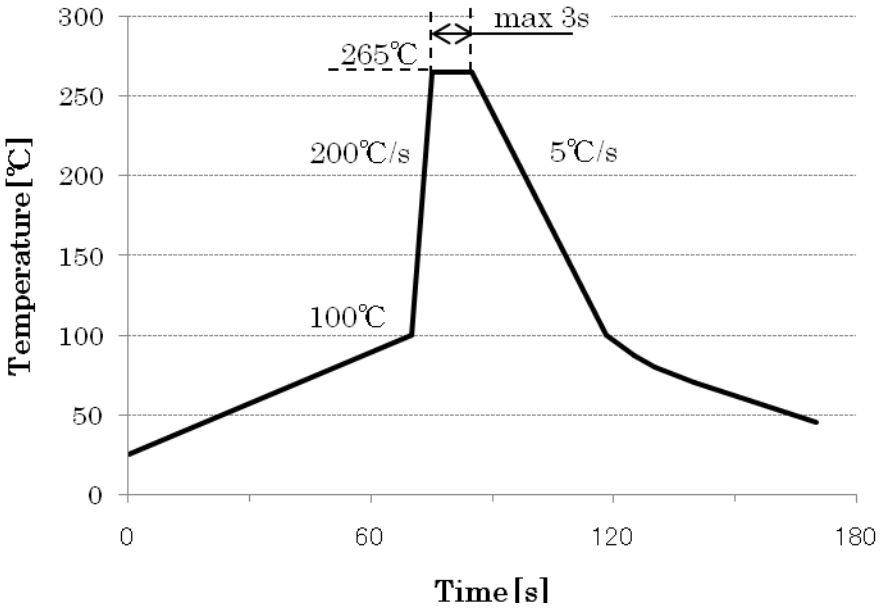
Recommended Land Layout (unit: mm)



Soldering Conditions



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