

# L1550-\_\_ \_\_

## Infrared LED Lamp

This series of L1300-\_\_ \_\_ is an InGaAsP 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 2.5mW with a peak wavelength at 1550nm.

### Specifications

- |                    |             |
|--------------------|-------------|
| 1. Chip material   | InGaAsP     |
| 2. Peak wavelength | 1550nm      |
| 3. Resin Material  | Epoxy resin |
| 4. Solder          | Lead free   |



### Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	$P_D$	120	mW	$T_a=25^{\circ}\text{C}$
Forward Current	$I_F$	100	mA	$T_a=25^{\circ}\text{C}$
Pulse Forward Current	$I_{FP}$	1000	mA	$T_a=25^{\circ}\text{C}$
Reverse Voltage	$V_R$	5	V	$T_a=25^{\circ}\text{C}$
Operating Temperature	$T_{OPR}$	-30 ~ +85	$^{\circ}\text{C}$	
Storage Temperature	$T_{STG}$	-40 ~ +100	$^{\circ}\text{C}$	
Soldering Temperature	$T_{SOL}$	265	$^{\circ}\text{C}$	

### Electro-Optical Characteristics ( $T_a=25^{\circ}\text{C}$ )

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	$V_F$	$I_F=50\text{mA}$		0.9	1.5	V
Reverse Current	$I_R$	$V_R=5\text{V}$			10	$\mu\text{A}$
Radiated Power	$P_O$	$I_F=50\text{mA}$	1.3	2.5		mW
Peak Wavelength	$\lambda_P$	$I_F=50\text{mA}$	1500	1550	1600	nm
Half Width	$\Delta\lambda$	$I_F=50\text{mA}$		100		nm
Rise Time	$t_r$	$I_F=50\text{mA}$		10		ns
Fall Time	$t_f$	$I_F=50\text{mA}$		10		ns

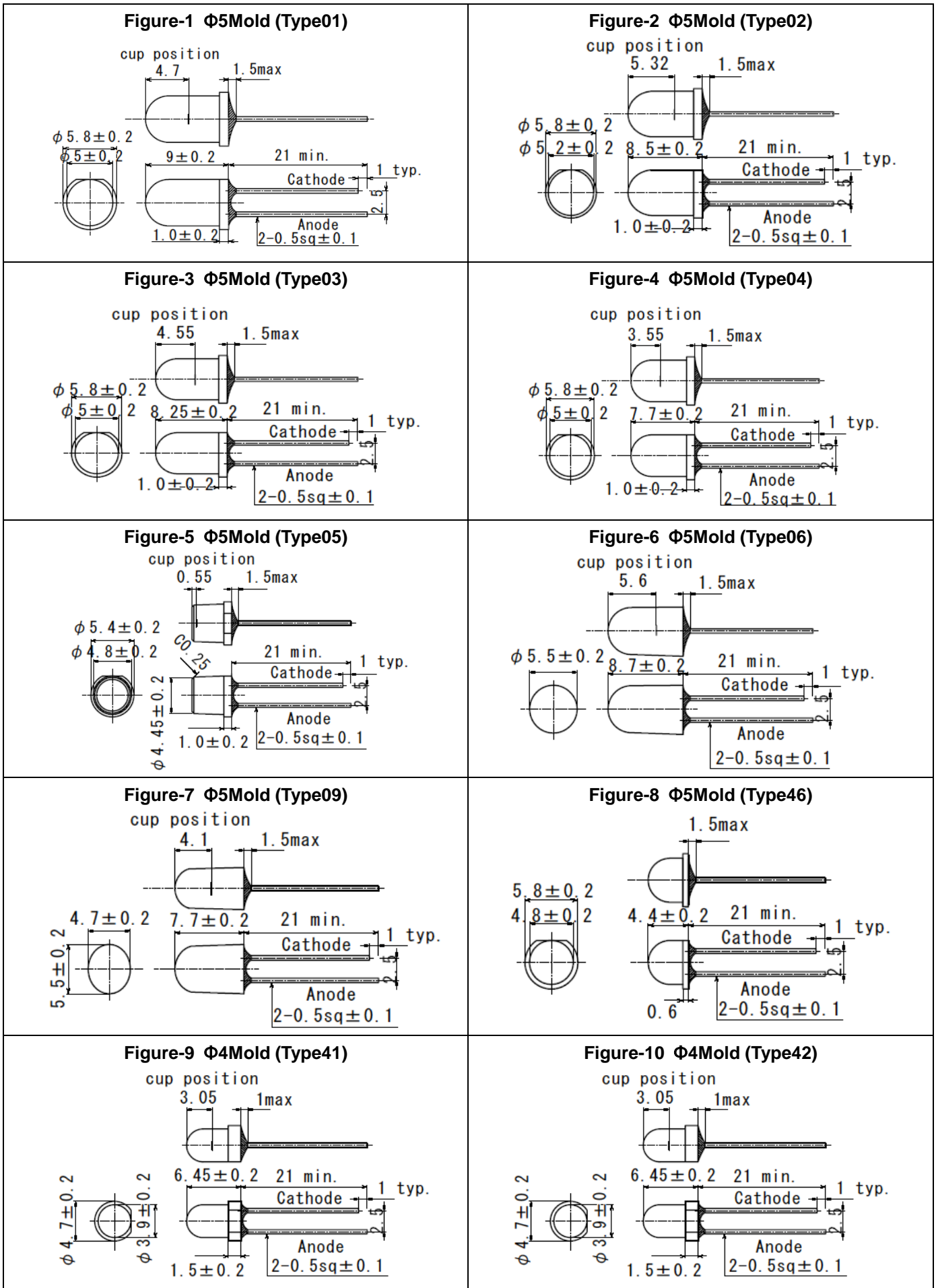
**Characteristics of Radiant Intensity (Ta=25°C)**

Type	Viewing Half Angle	Radiant Intensity I <sub>F</sub> =50mA Unit : mW/sr			Outer Dimension	Dimension Figure
		Minimum	Typical	Maximum		
L1550-01					Φ5	1
L1550-02					Φ5	2
L1550-03	±10°		18		Φ5	3
L1550-04					Φ5	4
L1550-05					Φ5	5
L1550-06	±7°		32		Φ5	6
L1550-09					Φ5 Oval	7
L1550-46					Φ5	8
L1550-41					Φ4	9
L1550-42					Φ4	10
L1550-31					Φ3	11
L1550-33	±18°		9		Φ3	12
L1550-34					Φ3	13
L1550-36	±33°		3		Φ3	14

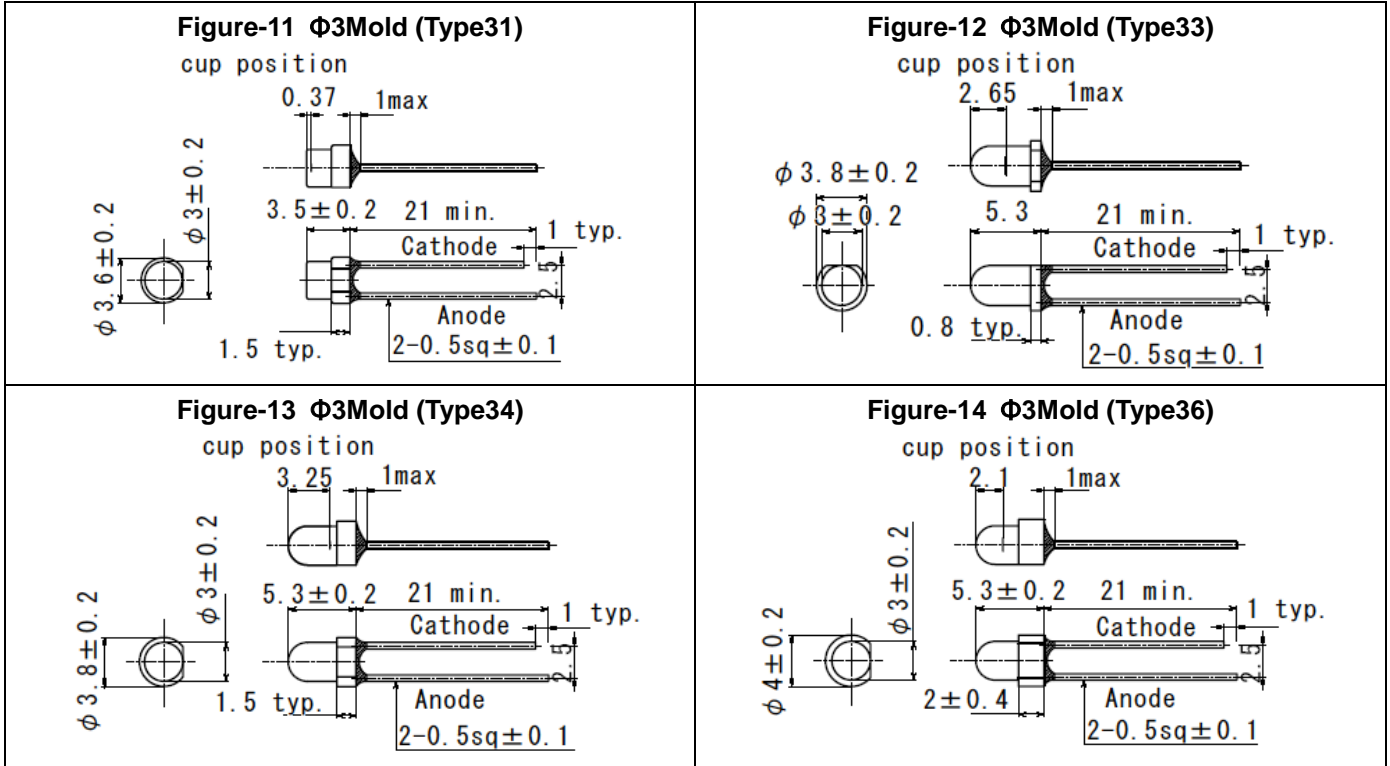
Radiant Power is measured by G8370-85

Brightness is measured by Tektronix J-16

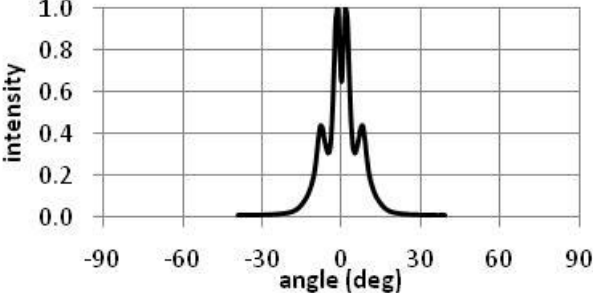
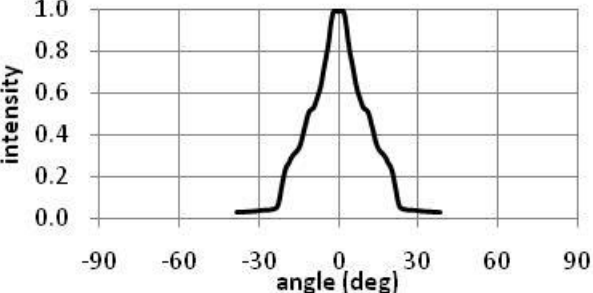
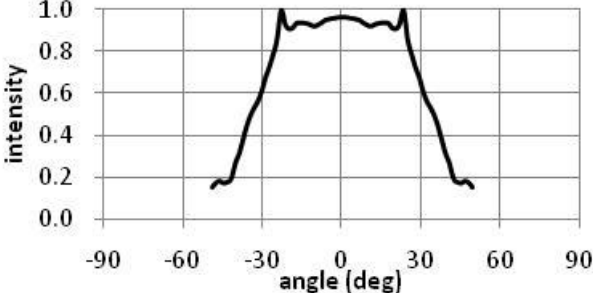
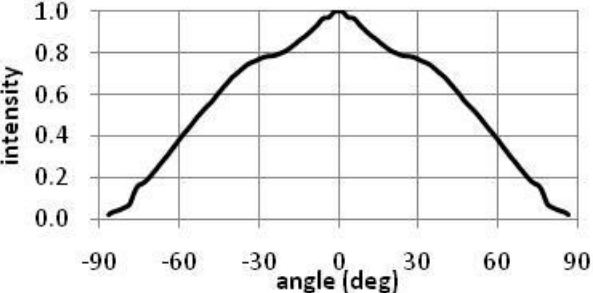
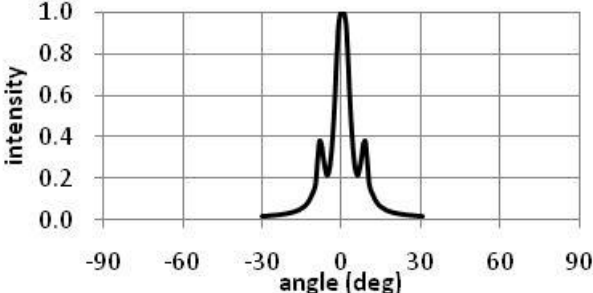
**Outer Dimension of LED Lamp**



**Outer Dimension of LED Lamp**



The Viewing half angle

<p>Figure-1 <math>\Phi 5</math>Mold (Type01)</p>	<p>Figure-2 <math>\Phi 5</math>Mold (Type02)</p> 
<p>Figure-3 <math>\Phi 5</math>Mold (Type03)</p> 	<p>Figure-4 <math>\Phi 5</math>Mold (Type04)</p> 
<p>Figure-5 <math>\Phi 5</math>Mold (Type05)</p> 	<p>Figure-6 <math>\Phi 5</math>Mold (Type06)</p> 
<p>Figure-7 <math>\Phi 5</math>Mold (Type09)</p>	<p>Figure-8 <math>\Phi 5</math>Mold (Type46)</p>
<p>Figure-9 <math>\Phi 4</math>Mold (Type41)</p>	<p>Figure-10 <math>\Phi 4</math>Mold (Type42)</p>

The Viewing half angle

Figure-11  $\Phi$ 3Mold (Type31)

Figure-12  $\Phi$ 3Mold (Type33)

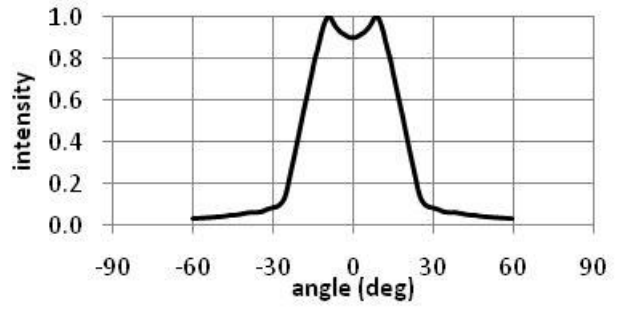
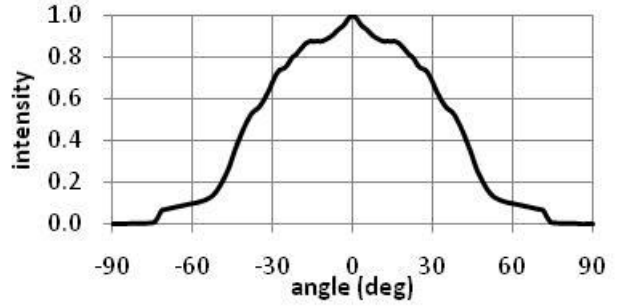
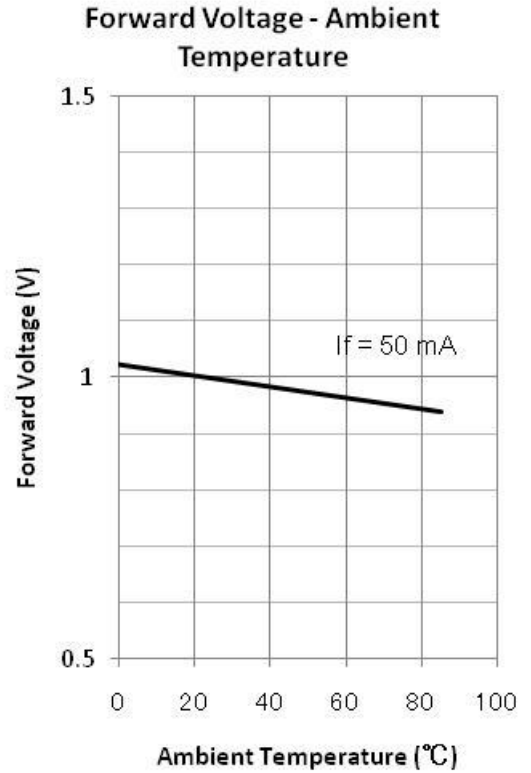
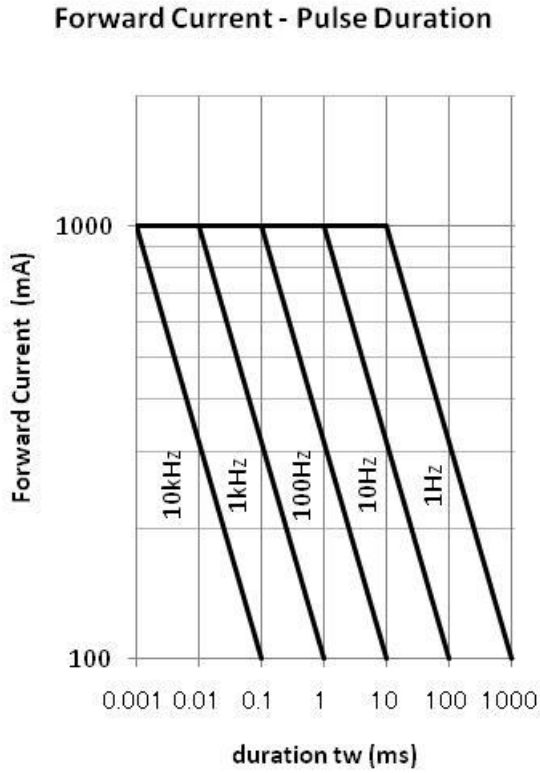
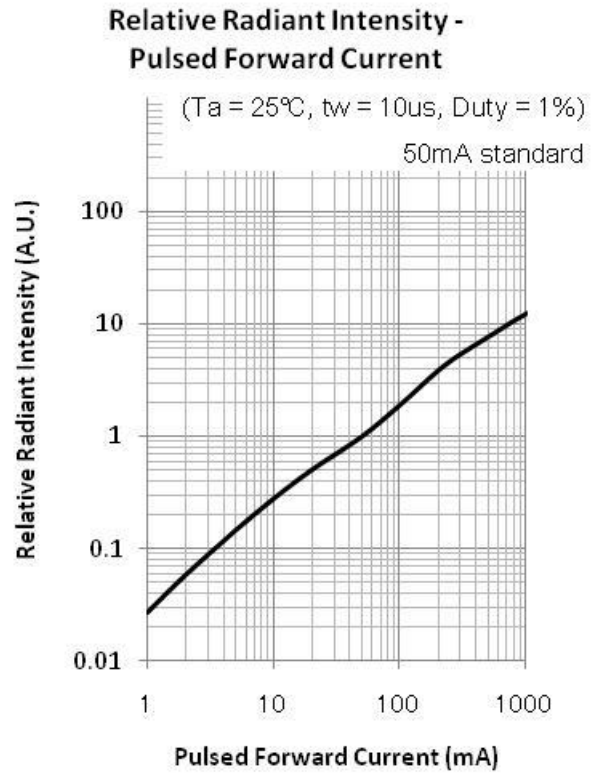
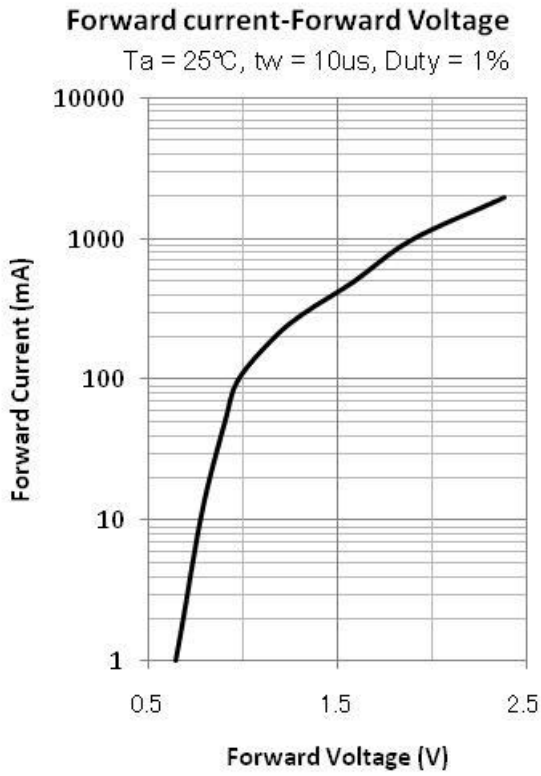
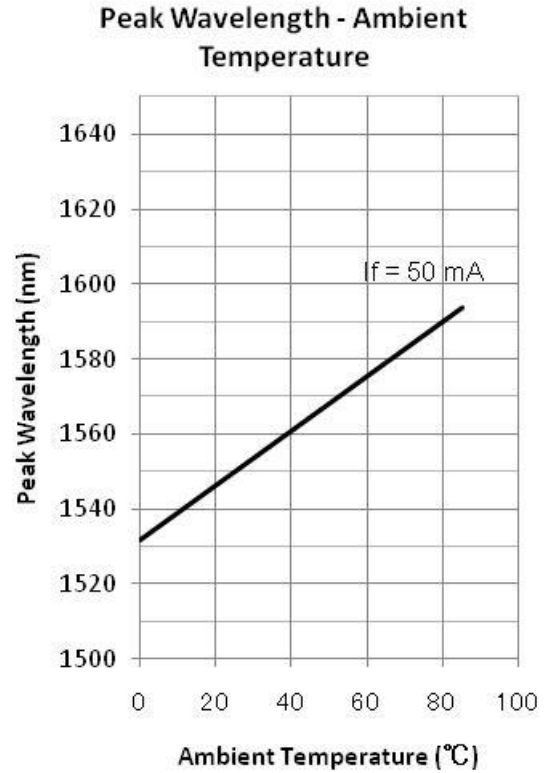
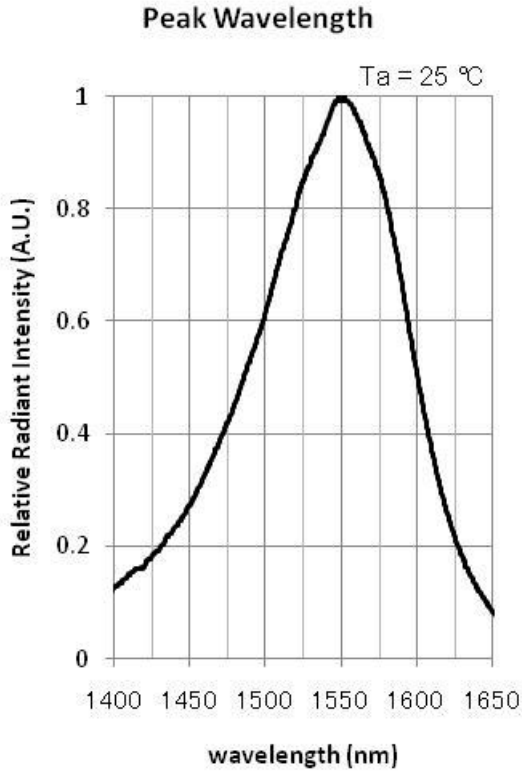
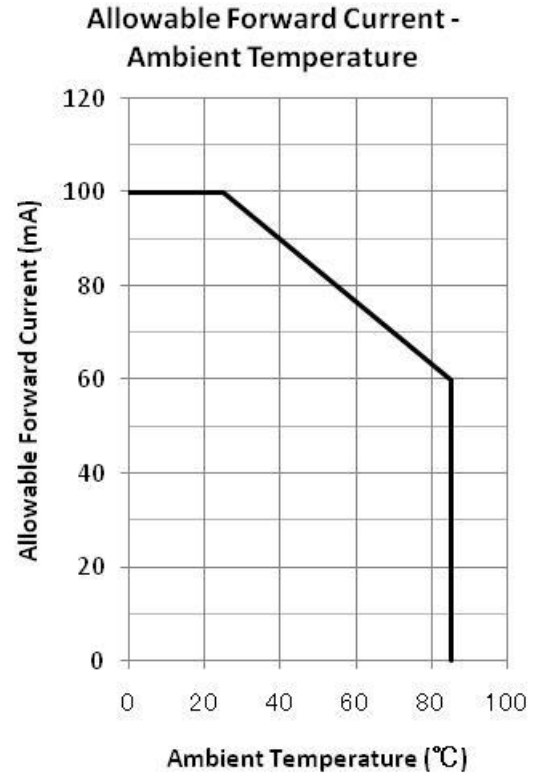
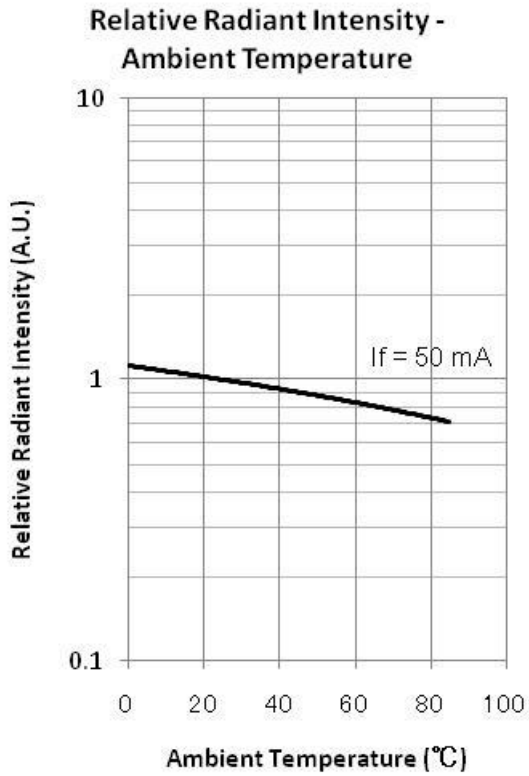


Figure-13  $\Phi$ 3Mold (Type34)

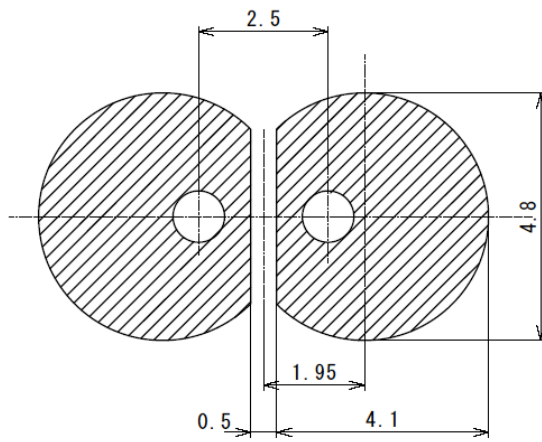
Figure-14  $\Phi$ 3Mold (Type36)



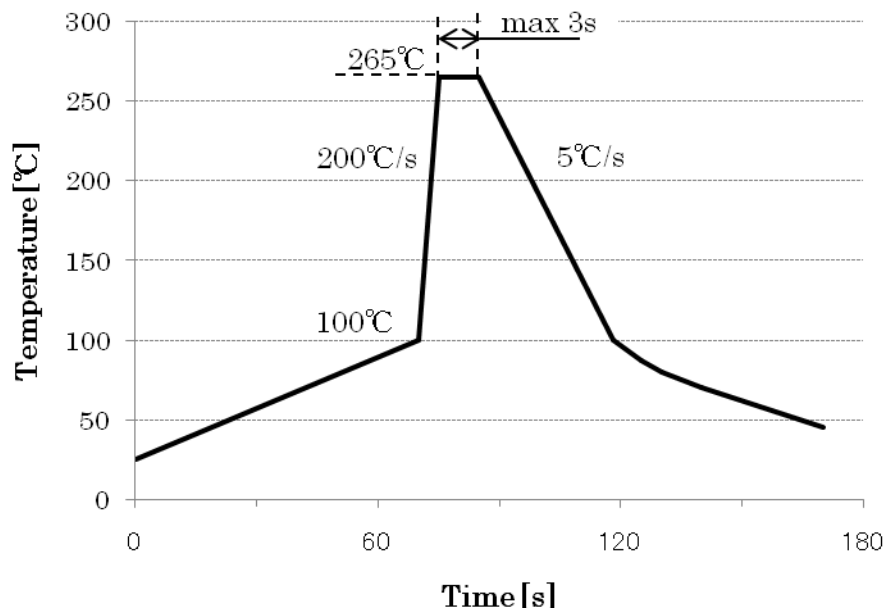




### Recommended Land Layout (unit: mm)



### Soldering Conditions



**Marubeni America Corporation**