W73I3311-H

LED Lamp

1. Features

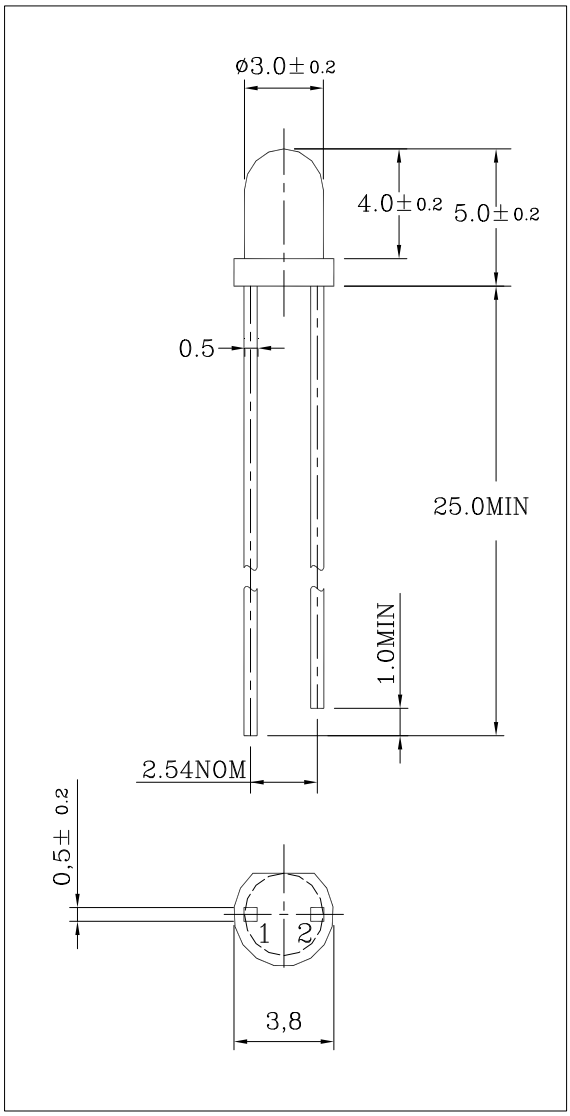
- Very highly efficient AlGaAs Chip.
- High reliability.
- High pulse handily capability.
- Good spectral match to silicon photo detectors.

2. Applications

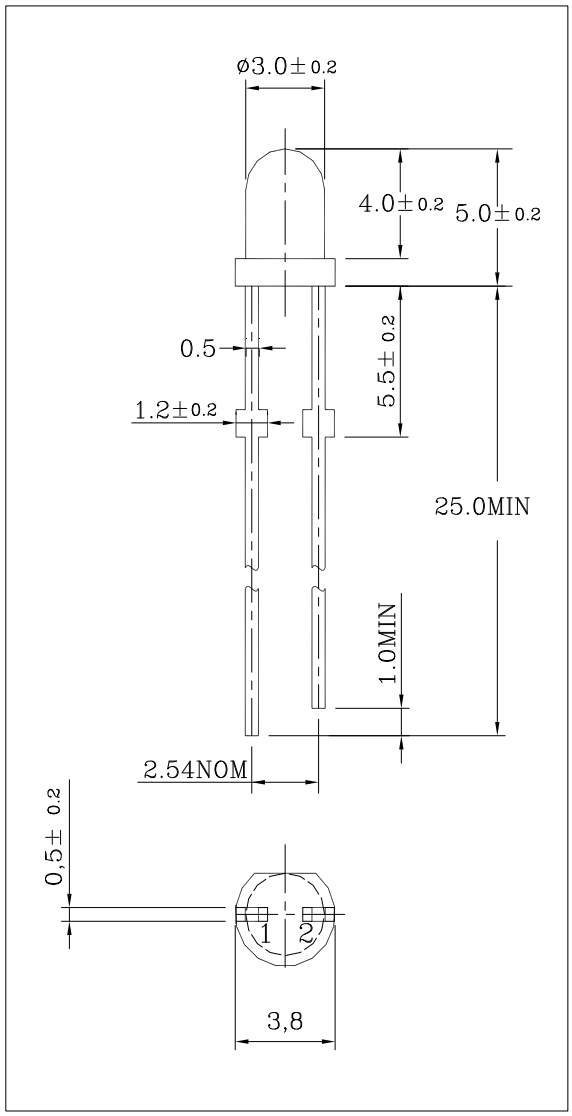
- IR remote control for HIFI and TV sets, video tape recorders, dimmers.
- Light-reflection switches(max.500kHz).
- Coin counters. Sensor technology.

3. Package Dimensions

Unit : mm



W87I3311-C



W87I3311-C(B)

PIN Connections
1. Anode
2. Cathode

4. Absolute maximum ratings

Ta=25℃

Item	Symbol	Ratings	Unit
Forward Current	I_F	30	mA
Pulse Forward Current *1	I_{FP}	50	mA
Power Dissipation	P_D	80	mW
Reverse Voltage	V_R	5	V
Operating Temperature	T_{opr}	-30~85	℃
Storage Temperature	T_{stg}	-30~100	℃
Soldering Temperature *2	T_{sol}	260±5℃	℃

*1. Pulse Width=0.1msec, Duty ratio = 1/16

*2. 5 sec at location 2.0mm away from the base of the epoxy bulb.

5. Electrical Characteristics

Ta=25℃

Item	Symbol	Test Condition	Min	Typ	Max	Unit
Forward Voltage	V_F	I_F= 20mA	-	1.9	2.3	V
Reverse Current	I_R	V_R=5[V]	-	-	10	μA
Luminous Intensity *3	I_V	I_F= 20mA	14	-	20	mW/sr
			-	-	-	
			20	-	28	
Dominant Wavelength	λ_D	I_F= 20mA	-	-	-	nm
Peak Wavelength	λ_P	I_F= 20mA	-	734	-	nm
Spectrum Radiation Band width	△λ	I_F= 20mA	-	27	-	nm
Viewing Angle	θ1/2	I_F= 20mA	-	±15	-	deg

*3. This Value includes ±20% tolerance caused by Luminous Intensity measurement method of Ciel Light.

6.Characteristic Diagrams

Fig.1 I_F - V_F

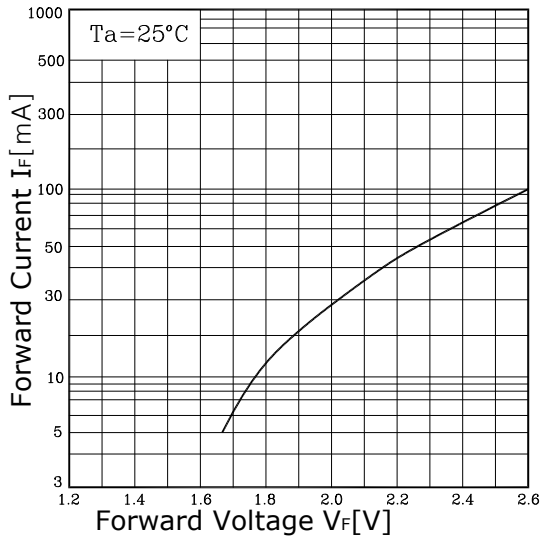


Fig.2 I_F - T_a

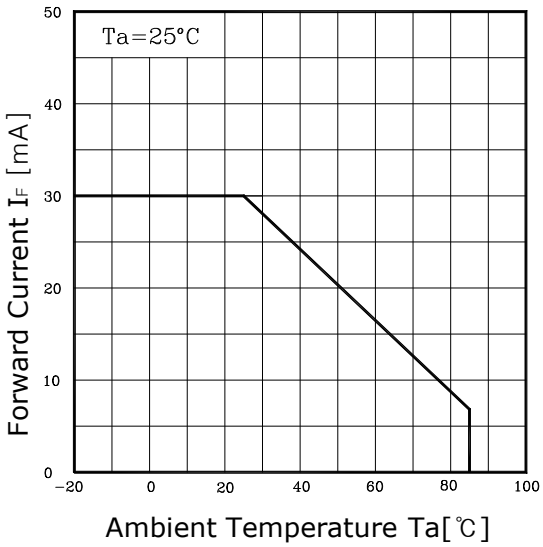


Fig.3 Spectrum Distribution

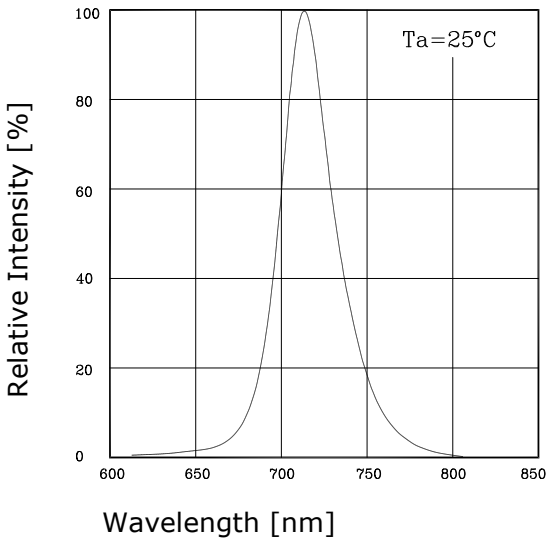


Fig.4 I_V - I_F

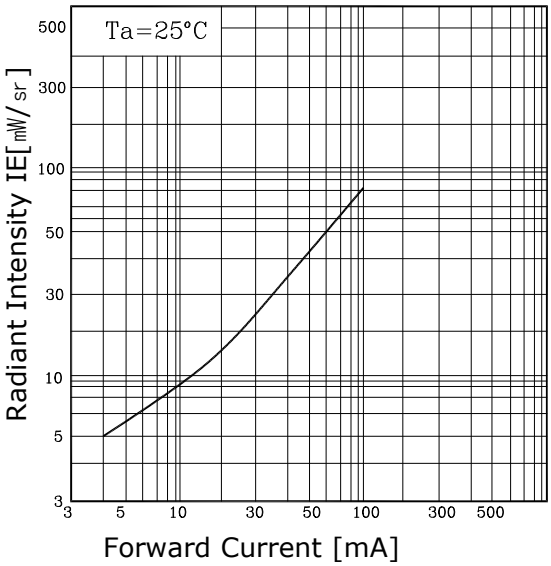
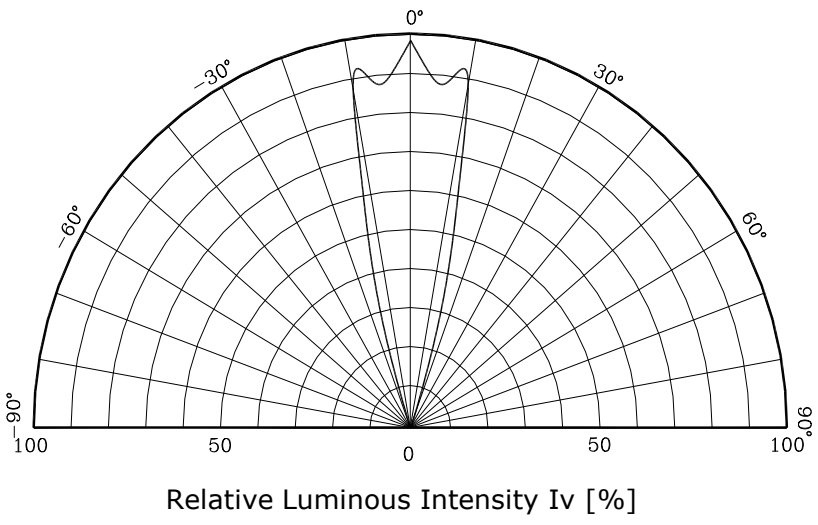
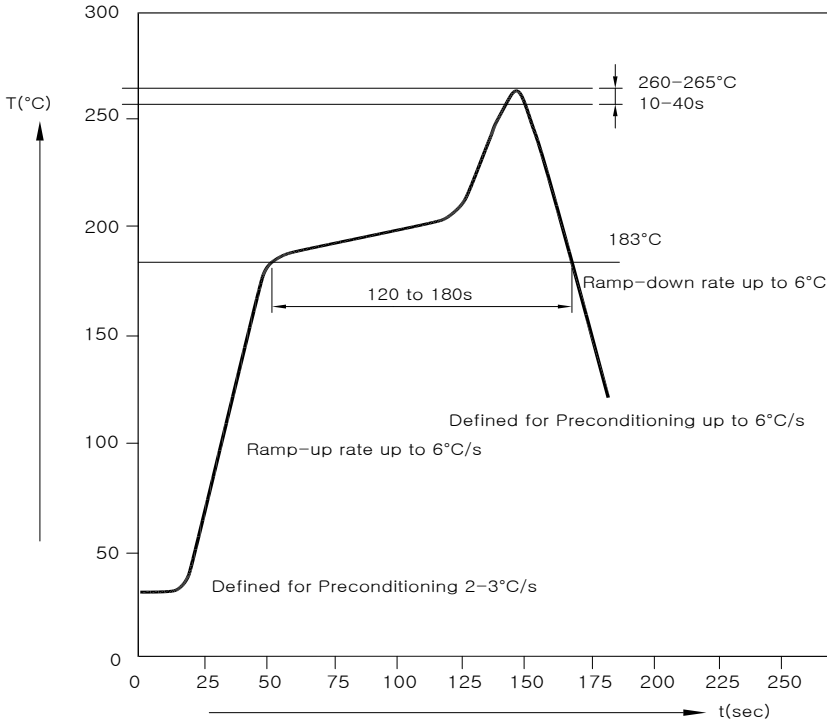


Fig.5 Radiation Characteristics

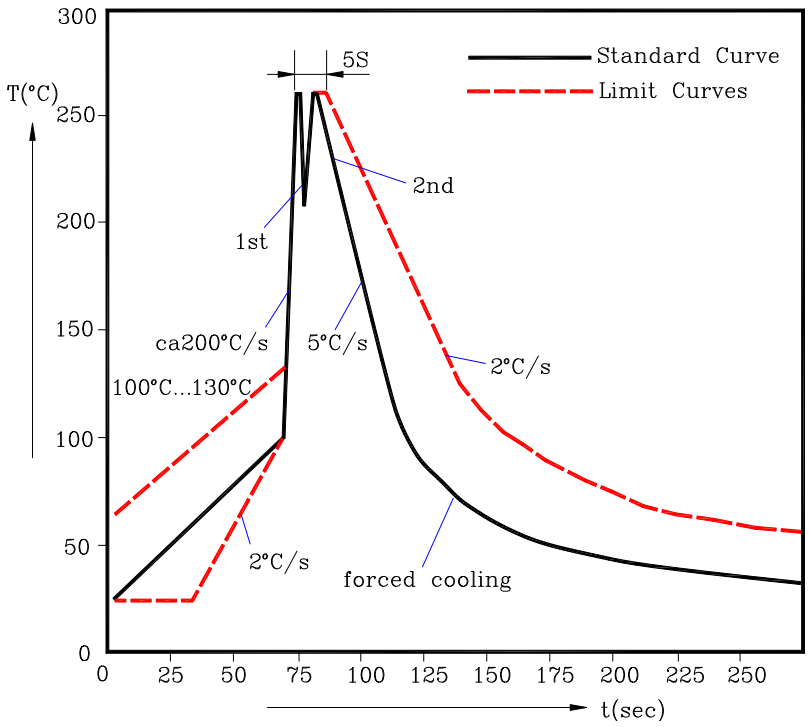


7. Soldering Profile

7-1. Reflow Soldering



7-2. TTW Soldering



8.Reliability Test Items and Conditions

8-1. The Reliability criteria of LED Lamps

Item	Symbol	Test Condition	Limit	
			Min	Max
Forward Voltage	V_F	I_F=20mA	-	U.S.L. × 1.1
Reverse Current	I_R	V_R=5V	-	U.S.L. × 2.0
Luminous Intensity	I_V	I_F=20mA	L.S.L. × 0.7	-

8-2. Results of Reliability Test

NO	Item	Test Condition	Test Hours/ Cycles	Sample Size	Ac/Re
1	Solder Heat	Temp : 260℃±5℃	5 SEC	22 PCS	0/1
2	Temperature Cycle	H : +100℃ 30min ∫ 5 min L : -40℃ 30min	100 CYCLE	22 PCS	0/1
3	Thermal Shock	H : +100℃ 5min ∫ 10 sec L : -40℃ 5min	100 CYCLE	22 PCS	0/1
4	High Temperature Storage	Temp : 85℃	1000 HRS	22 PCS	0/1
5	Low Temperature Storage	Temp : -30℃	1000 HRS	22 PCS	0/1
6	Life Test	Ta=RT, I_F = 350 mA	1000 HRS	22 PCS	0/1
7	High Temperature / High Humidity	Ta=85℃ / RH=85%	1000 HRS	22 PCS	0/1

9. Caution on usage

9-1. Static electricity and surge will damage the LEDs It is recommended to take measures to prevent ESD problem (for example, grounding equipment and the human body, using grounded soldering iron and so on).

9-2. Be careful never to exceed , even momentarily, the absolute maximum ratings specified in the data sheet.

9-3. Ciel Light will not be held responsible for any damage to the user that may result from accidents or any other reasons during operation of the user's unit if use to exceed the absolute maximum ratings, or not keep the matters that demand special attention.

9-4. Store and use where there is no corrosive gas.

10. Warranty period : One year after delivery.