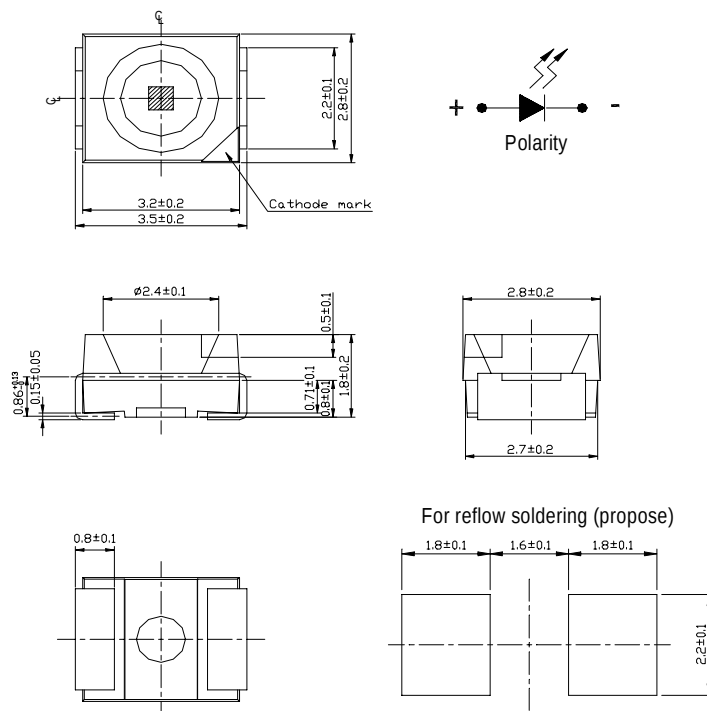


Package Dimensions



Notes: All dimensions are in millimeters.

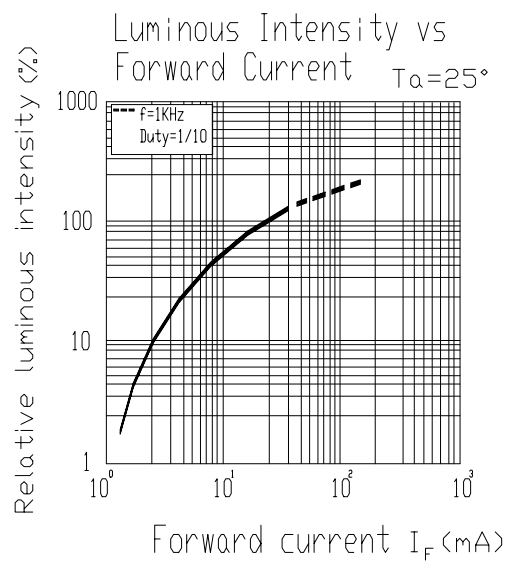
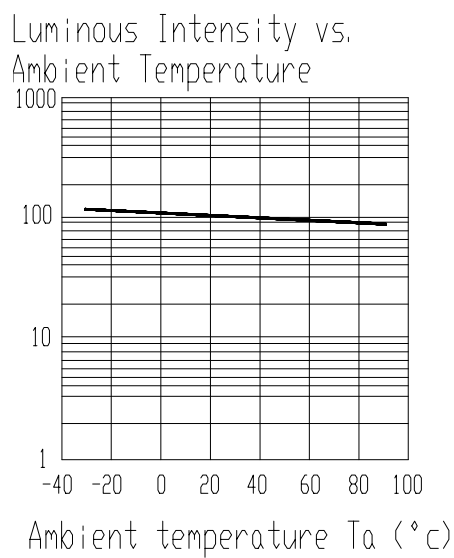
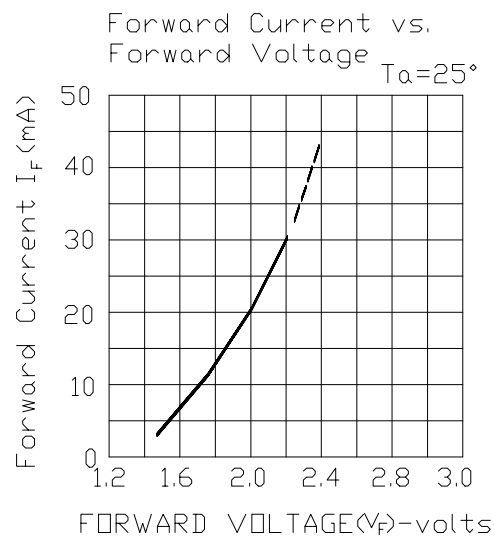
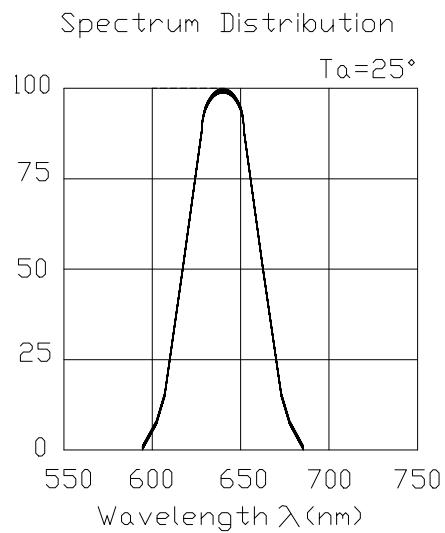
Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Reverse Voltage	V_R	5	V
Forward Current	I_F	30	mA
Operating Temperature	T_{opr}	-40 ~ +85	°C
Storage Temperature	T_{stg}	-40 ~ +100	°C
Soldering Temperature	T_{sol}	260 (for 5 second)	°C
Electrostatic Discharge	ESD	2000	V
Power Dissipation	P_d	100	mW
Peak Forward Current(Duty 1/10 @ 1KHz)	$I_F(\text{Peak})$	160	mA

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I_v	6.0	10	-----	mcd	$I_F=20\text{mA}$
Viewing Angle	$2\theta_{1/2}$	-----	120	-----	deg	$I_F=20\text{mA}$
Peak Wavelength	λ_p	-----	640	-----	nm	$I_F=20\text{mA}$
Dominant Wavelength	λ_d	-----	625	-----	nm	$I_F=20\text{mA}$
Spectrum Radiation Bandwidth	$\Delta\lambda$	-----	45	-----	nm	$I_F=20\text{mA}$
Forward Voltage	V_F	1.7	2.0	2.8	V	$I_F=20\text{mA}$
Reverse Current	I_R	-----	-----	20	μA	$V_R=5\text{V}$

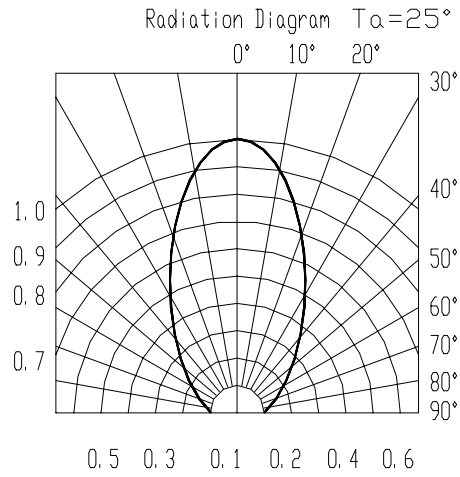
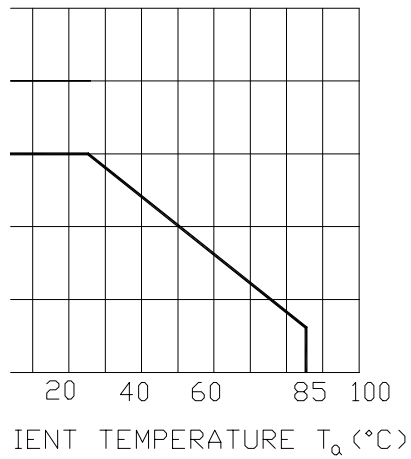
Typical Electro-Optical Characteristics Curves



Typical Electro-Optical Characteristics Curves

67-21VRC/TR8

1 Current Derating Curve



67-21VRC/TR8

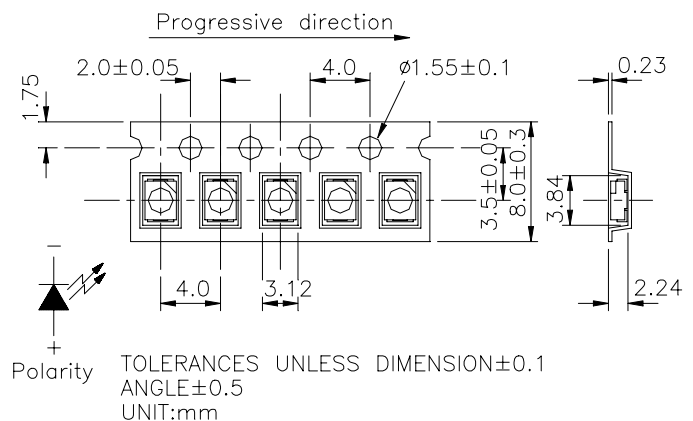
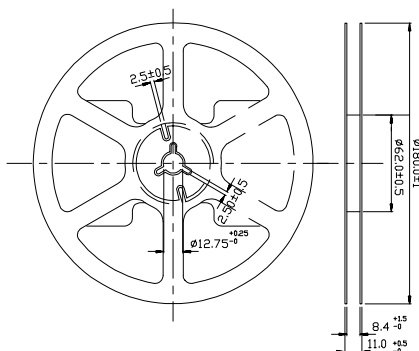
Reliability Test Items And Conditions

No.	Items	Test Condition	Test Hours/Cycles	Sample Size	Ac/Rc
1	Solder Heat	Temp. : $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$	5 Sec.	76 PCS.	0/1
2	Temperature Cycle	H : $+85^{\circ}\text{C}$ 30min ∫ 5 min L : -55°C 30min	50 Cycles	76 PCS.	0/1
3	Thermal Shock	H : $+100^{\circ}\text{C}$ 5min ∫ 10 sec L : -10°C 5min	50 Cycles	76 PCS.	0/1
4	High Temperature Storage	Temp. : 100°C	1000 Hrs.	76 PCS.	0/1
5	Low Temperature Storage	Temp. : -55°C	1000 Hrs.	76 PCS.	0/1
6	DC Operating Life	$I_F = 20 \text{ mA}$	1000 Hrs.	76 PCS.	0/1
7	High Temperature / High Humidity	$85^{\circ}\text{C} / \text{RH}85\%$	1000 Hrs.	76 PCS.	0/1

Products are evaluated according to the above standard reliability

Package Dimensions

Loaded quantity per reel 2000 PCS/reel



Precautions For Use

1. Over-current-proof

Customer must apply resistors for protection , otherwise slight voltage shift will cause big current change (Burn out will happen).

2. Storage time

2.1 The operation of Temperature and RH are : $5^{\circ}\text{C} \sim 35^{\circ}\text{C}$, RH60%.

2.2 Once the package is opened, the products should be used within a week.

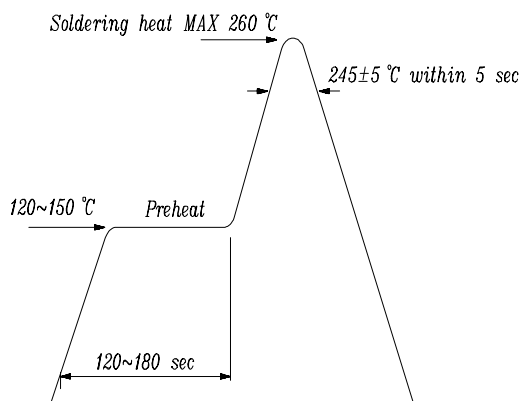
Otherwise, they should be kept in a damp proof box with descanting agent.

Considering the tape life , we suggest our customers to use our products within a year(from production date).

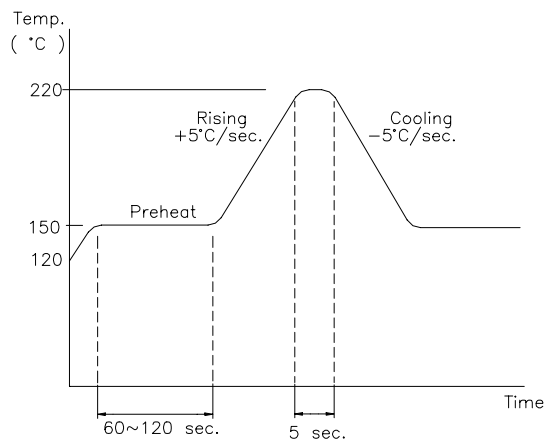
2.3 If opened more than one week in an atmosphere $5^{\circ}\text{C} \sim 35^{\circ}\text{C}$, RH 60%, they should be treated at $60^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for 12hrs.

2.4 When you discover that the desiccant in the package has a pink color (Normal = blue) , you should treat them in the same conditions as 2.3.

Soldering heat reliability (DIP)



Reflow Temp. / Time

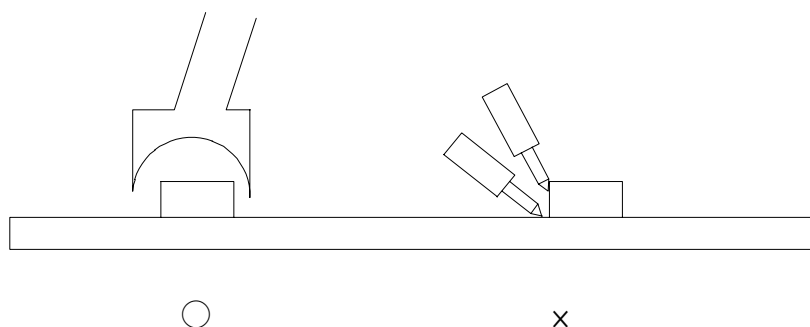


Soldering Iron

Basic spec is ≤ 5 sec when 245°C . If temperature is higher, time should be shorter ($+10^{\circ}\text{C} \rightarrow -1\text{sec}$). Power dissipation of Iron should be smaller than 15 W , and temperature should be controllable. Surface temperature of the device should be under 230°C .

Rework

1. Customer must finish rework within 5 sec under 245°C.
2. The head of iron can not touch copper foil.
3. Twin-head type is preferred.

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