



Device Number : DSE-932-027 REV. 1.0

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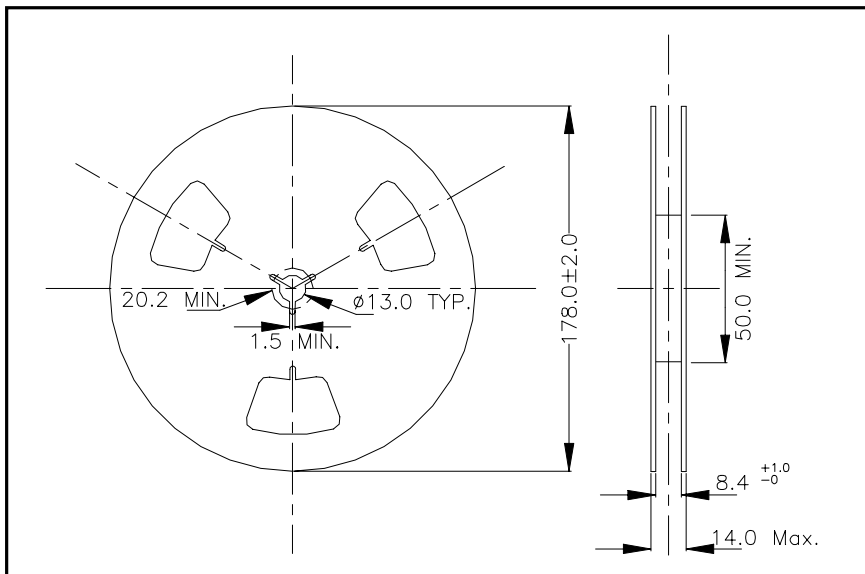
MODEL NO: 93-22SURSYGC/S530-A2/TR8

Device Number : DSE-932-027 REV. 1.0

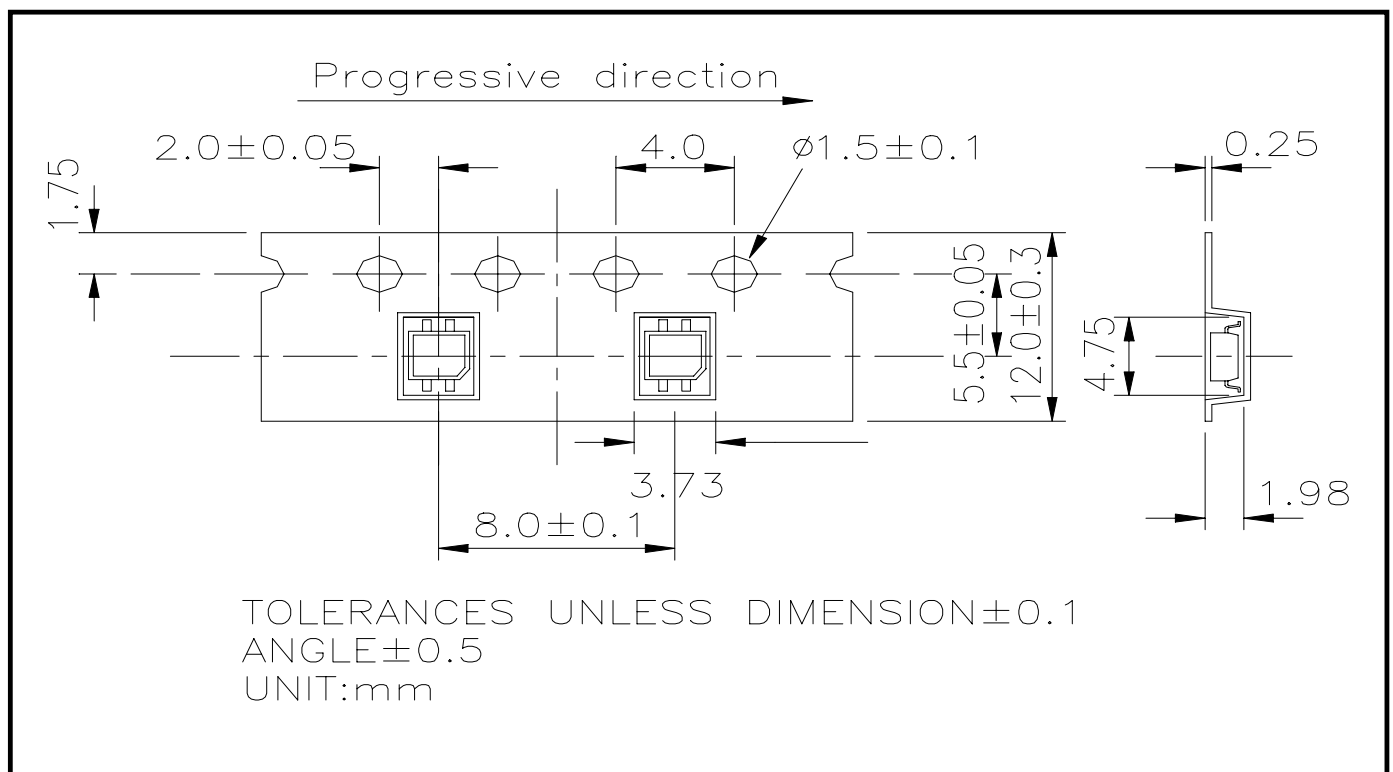
High performance SMD LED with Reflector

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■ **Package Dimensions :**



■ **Loaded quantity per reel 1000 PCS/reel :**





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■ **Absolute Maximum Ratings at Ta = 25°C**

Parameter	Symbol	Rating	Unit
Reverse Voltage	Vr	5	V
Forward Current	If	SUR: 25 SYG: 25	mA
Operating Temperature	Topr	-40 ~ +85	°C
Storage Temperature	Tstg	-40 ~ +90	°C
Soldering Temperature	Tsol	245 (for 5 second)	°C
Electrostatic Discharge	ESD	SUR: 2000 SYG: 2000	V
Power Dissipation	Pd	SUR: 60 SYG: 60	mW
Peak Forward Current(Duty 1/10 @ 1KHZ)	If(Peak)	SUR: 160 SYG: 160	mA



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■ **Electronic Optical Characteristics :**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I _v SUR: SYG:	1 0.6	2 1	-----	mcd	If=2mA
Luminous Intensity	I _v SUR: SYG:	17 11	41 17	-----	mcd	If=20mA
Viewing Angle	2 θ 1/2	-----	130	-----	deg	If=20mA
Peak Wavelength	λ_p SUR: SYG:	-----	632 575	-----	nm	If=20mA
Dominant Wavelength	λ_d SUR: SYG:	-----	624 573	-----	nm	If=20mA
Spectrum Radiation Bandwidth	$\Delta \lambda$ SUR: SYG:	-----	20 20	-----	nm	If=20mA
Forward Voltage	V _f SUR: SYG:	-----	2.0 2.0	2.4 2.4	V	If=20mA
Reverse Current	I _r	-----	-----	10	μA	V _r =5V



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■ Reliability Test Items And Conditions

NO	Item	Test Conditions	Test Hours/Cycle	Sample Size	Ac/Re
1	Solder Heat	TEMP : 260°C ± 5 °C	5 SEC	76 PCS	0/1
2	Temperature Cycle	H : +85°C 30min ∫ 5 min L : -55°C 30min	50 CYCLE	76 PCS	0/1
3	Thermal Shock	H : +100°C 5min ∫ 10 sec L : -10°C 5min	50 CYCLE	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	If = 20 mA	1000 HRS	76 PCS	0/1
7	High Temperature / High Humidity	85°C/85% RH	1000 HRS	76 PCS	0/1



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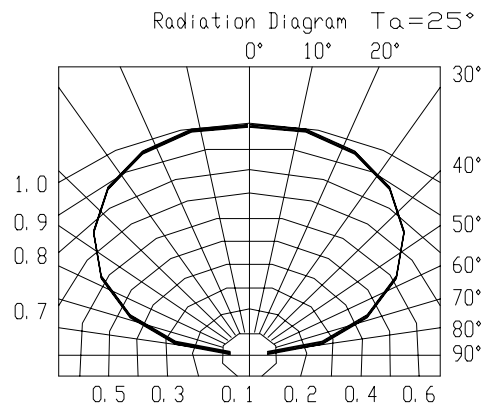
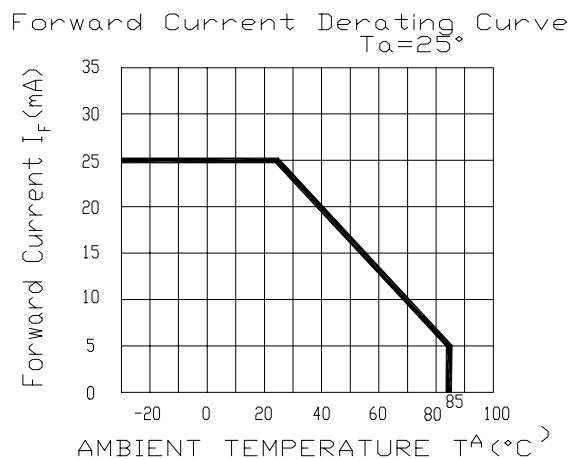
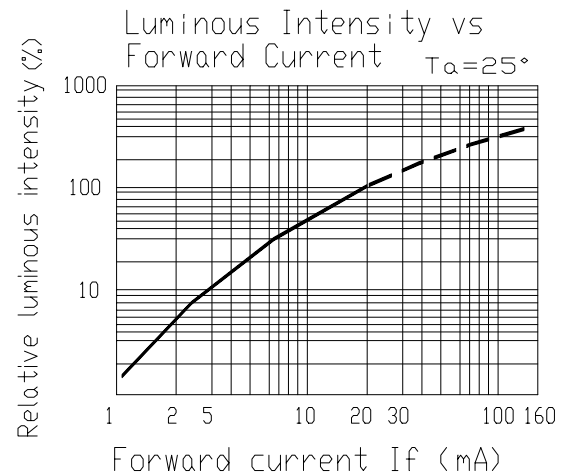
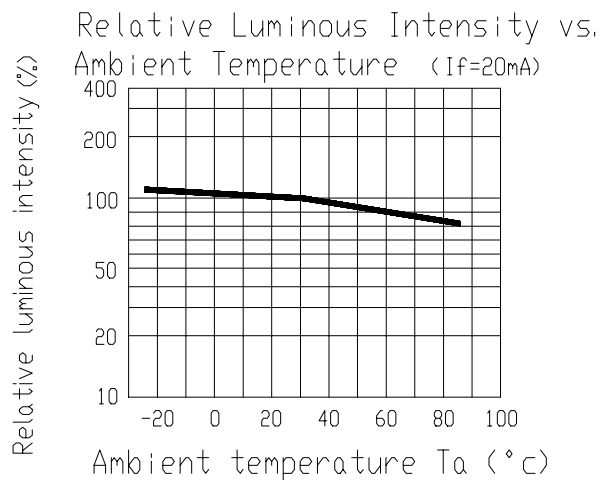
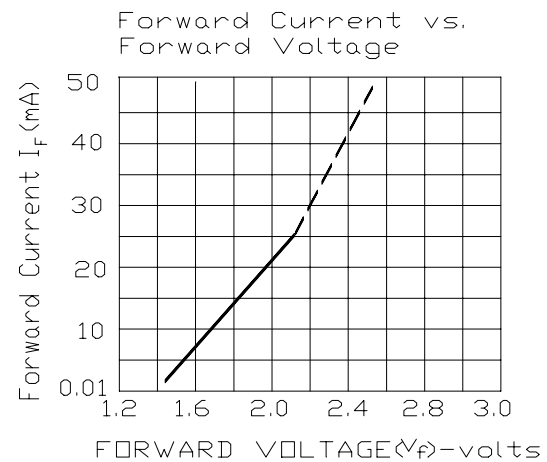
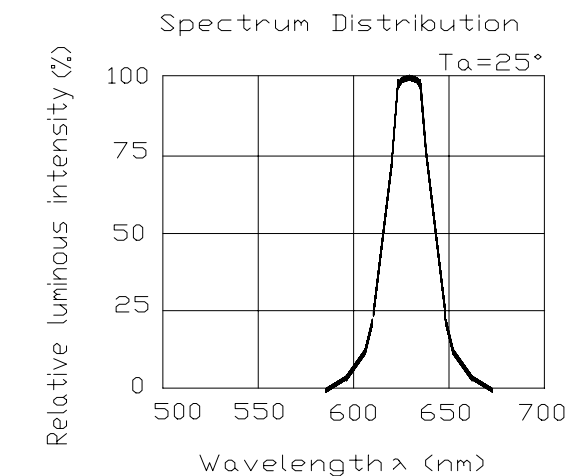
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Typical Electro-Optical Characteristic Curves(SUR)





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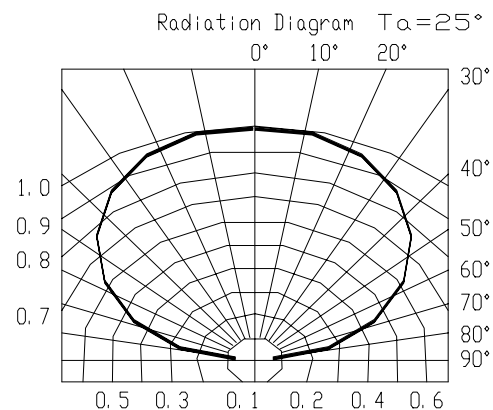
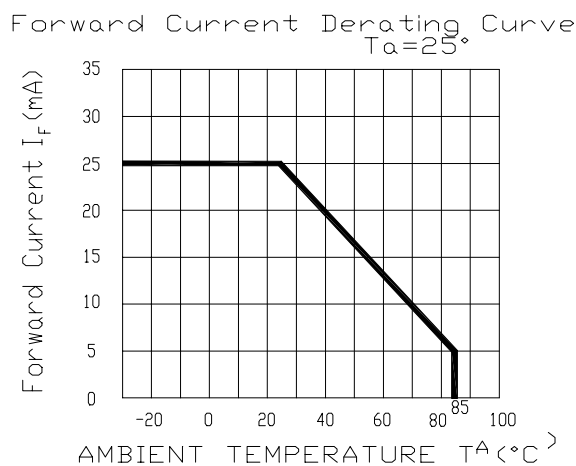
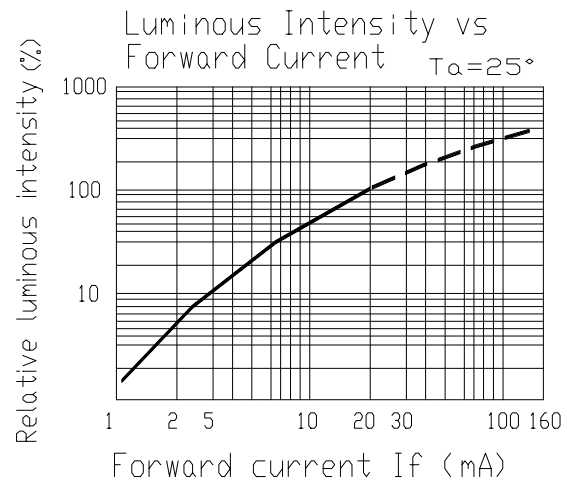
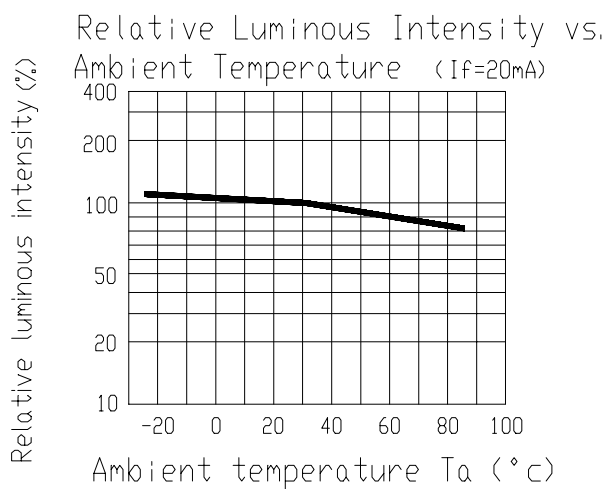
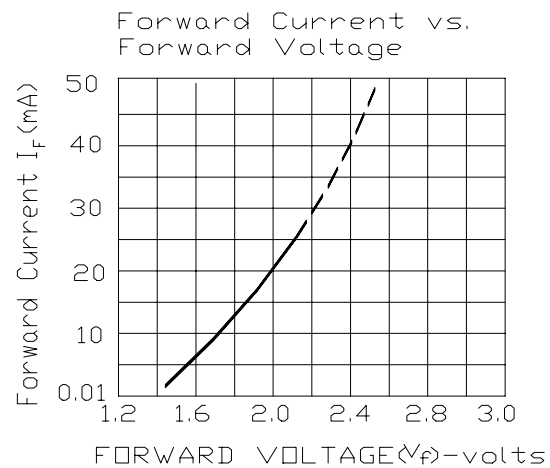
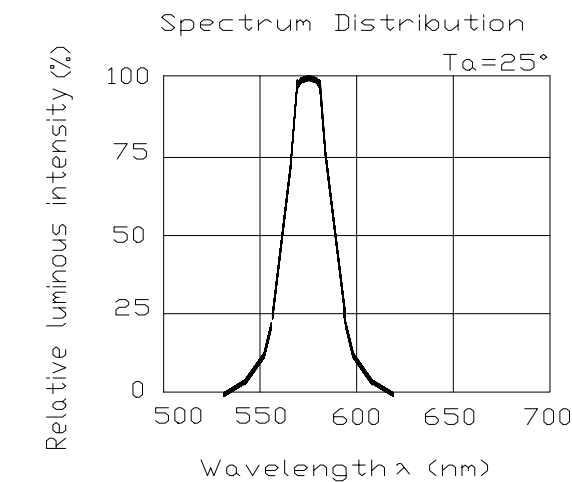
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Typical Electro-Optical Characteristic Curves(SYG)





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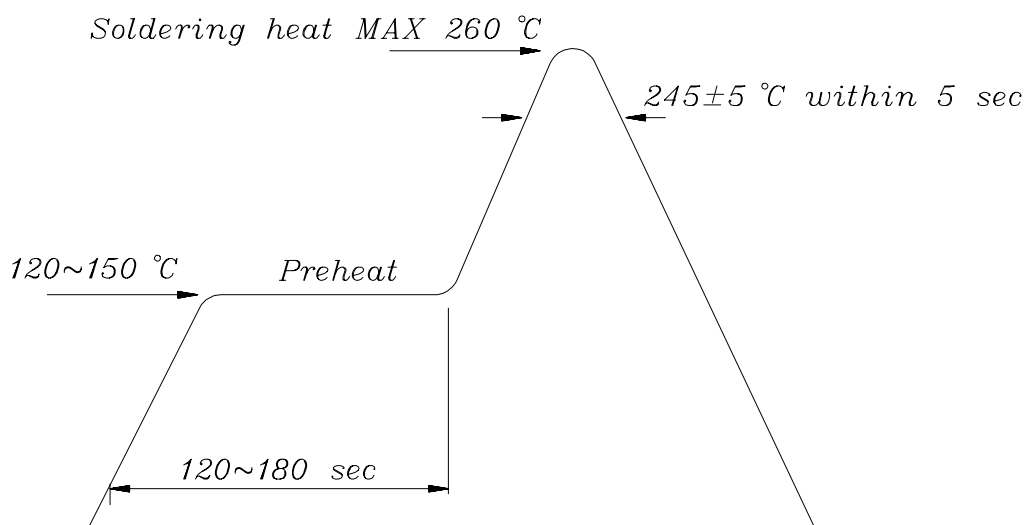
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■ Soldering heat reliability (DIP)

Please refer to the following figure :

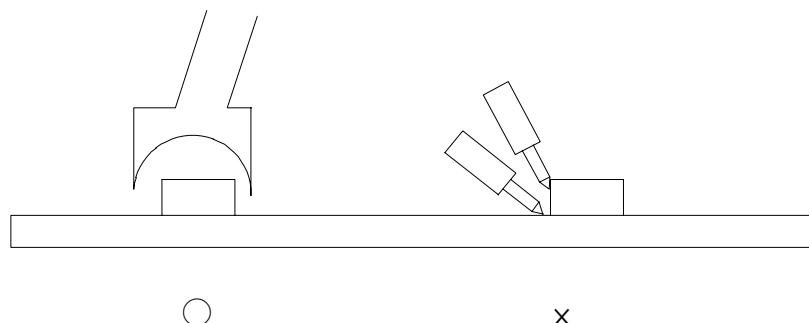


■ Soldering Iron

Basic spec is ≤ 5 sec when 245°C. If temperature is higher, time should be shorter (+10°C → -1sec). 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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■ Reflow Temp / Time :

