



MODEL NO: 19-21SUBC/S400/TR8

Device Number : DSE-191-051 REV. 1.1

0.8mm Height Flat Top LEDs

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Features :

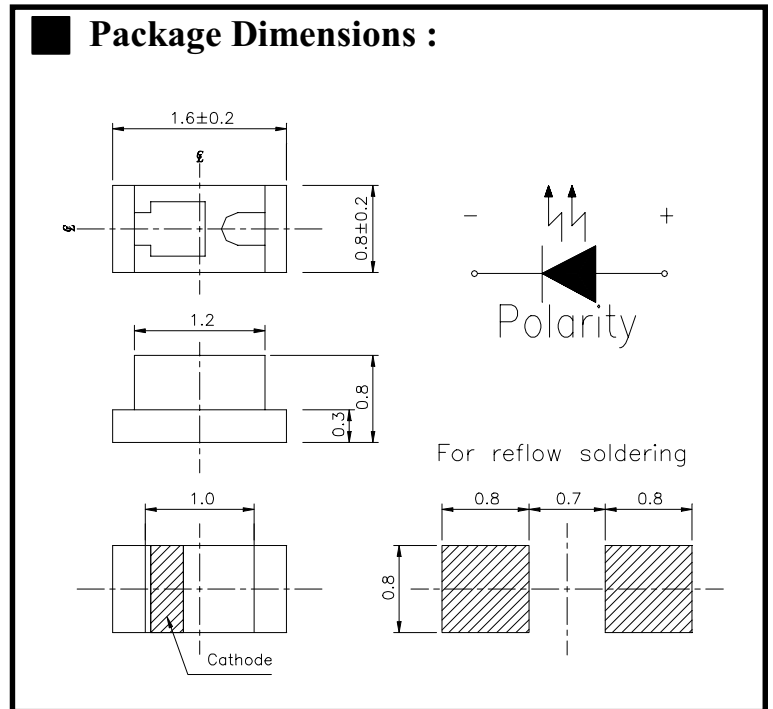
- Package in 8mm tape on 7" diameter reel.
- Compatible with automatic placement equipment.
- Compatible with infrared and vapor phase reflow solder process.
- Mono-color type.

Descriptions :

- The 19-21 SMD Taping is much smaller than lead frame type components, thus enable smaller board size, higher packing density, reduced storage space and finally smaller equipment to be obtained.
- Besides, lightweight makes them ideal for miniature applications, etc.

Applications :

- Automotive: backlighting in dashboard and switch.
- Telecommunication: indicator and backlighting in telephone and fax.
- Flat backlight for LCD, switch and symbol.
- General use.



Notes :

Tolerances Unless Dimension ± 0.1mm
 Angle± 0.5°
 Unit = mm

PART NO	Chip		Lens Color
	Material	Emitted Color	
19-21SUBC/S400/TR8	GaInN	Super Blue	Water Clear

Office: NO. 25, Lane 76, Sec. 3, Chung Yang Rd., Tucheng 236, Taipei, Taiwan, R.O.C.

TEL: 886-2-2267-2000, 2267-9936

FAX: 886-2-2267-6244, 2267-6189, 2267-6306

http://www.everlight.com



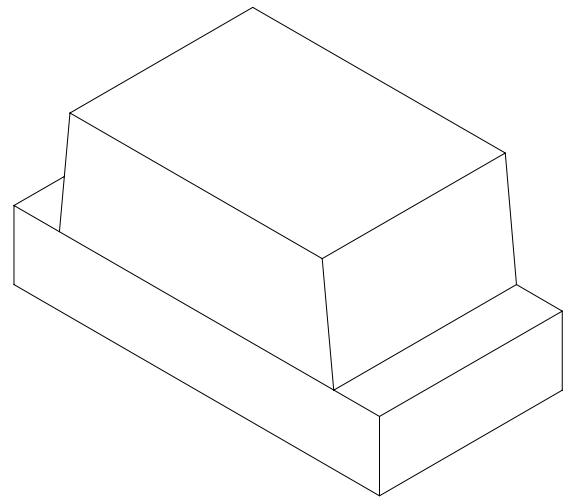
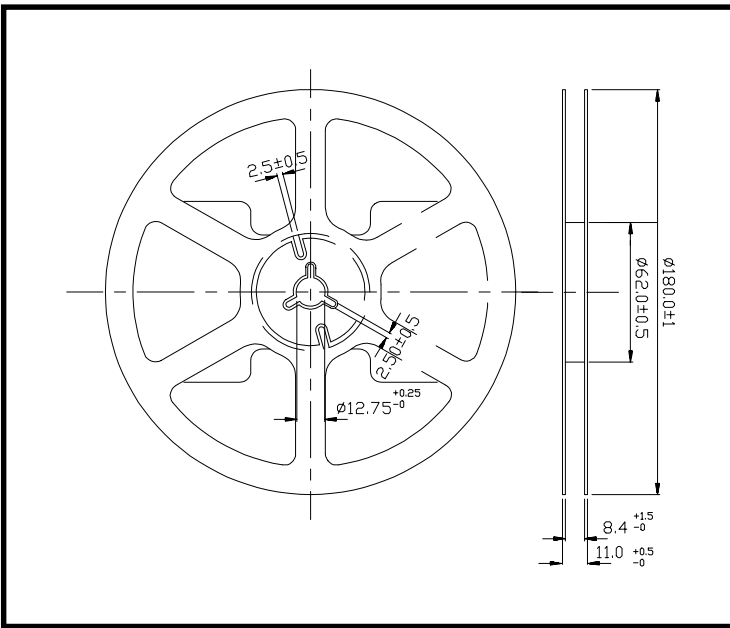
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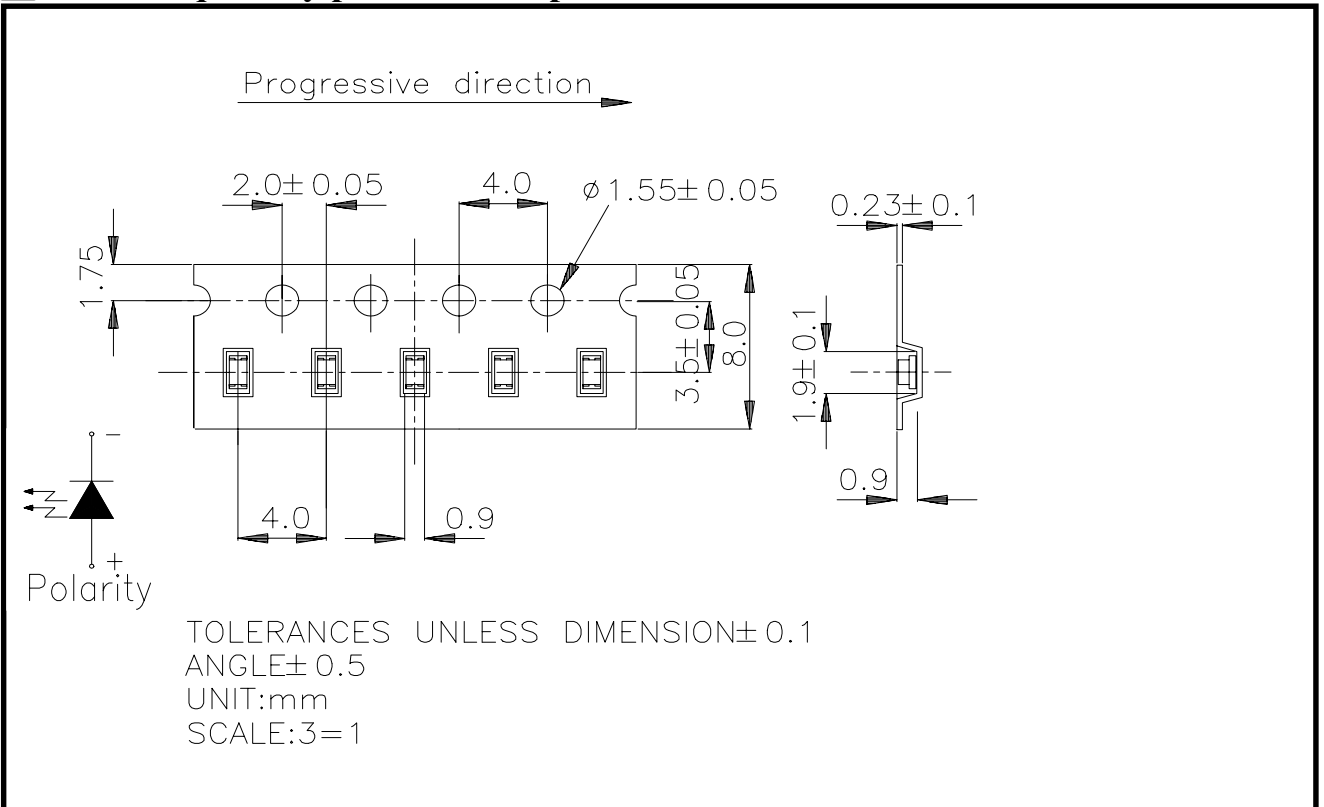
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Package Dimensions :



Loaded quantity per reel 3000 pcs/reel :





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

Parameter	Symbol	Rating	Unit
Reverse Voltage	V _R	5	V
Forward Current	I _F	30	mA
Operating Temperature	T _{opr}	-20 ~ +80	°C
Storage Temperature	T _{stg}	-30 ~ +90	°C
Soldering Temperature	T _{sol}	260 (for 5 second)	°C
Electrostatic Discharge	ESD	100	V
Power Dissipation	P _d	140	mW
Peak Forward Current(Duty 1/10 @ 1KHZ)	I _{F(Peak)}	70	mA

■ **Electronic Optical Characteristics :**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I _v	12	18	-----	mcđ	I _F =20mA
Viewing Angle	2θ 1/2	-----	100	-----	deg	I _F =20mA
Peak Wavelength	λ _p	-----	-----	-----	nm	I _F =20mA
Dominant Wavelength	λ _d	-----	470	-----	nm	I _F =20mA
Spectrum Radiation Bandwidth	Δλ	-----	35	-----	nm	I _F =20mA
Forward Voltage	V _F	3.2	3.8	4.3	V	I _F =20mA
Reverse Current	I _R	-----	-----	50	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	I _F = 20 m A	1000 HRS	76 PCS	0/1
7	High Temperature / High Humidity	85°C/85% RH	1000 HRS	76 PCS	0/1



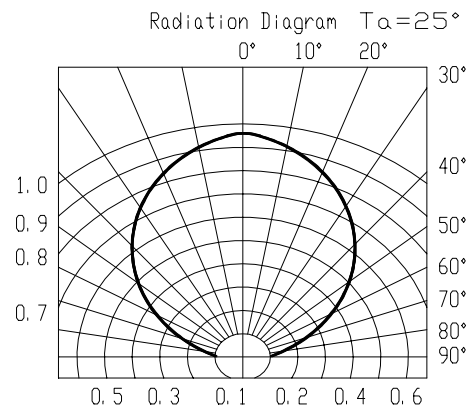
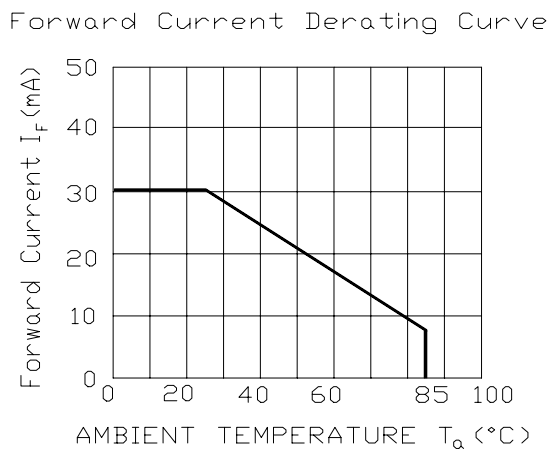
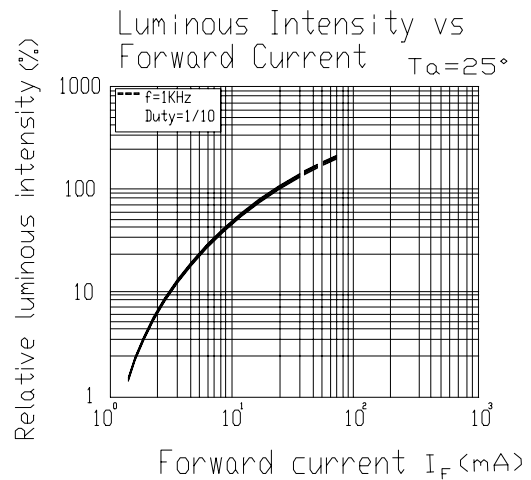
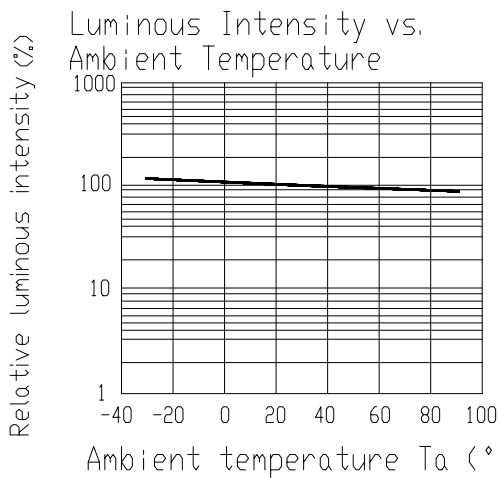
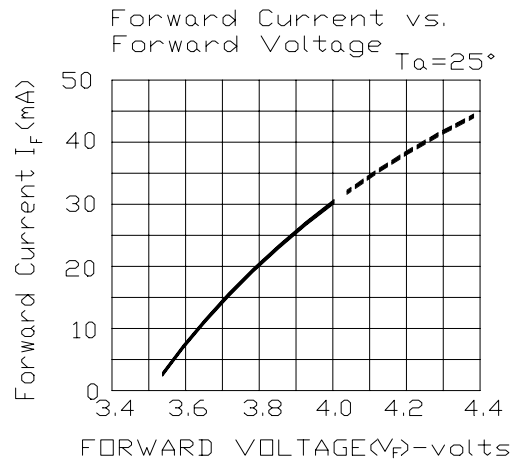
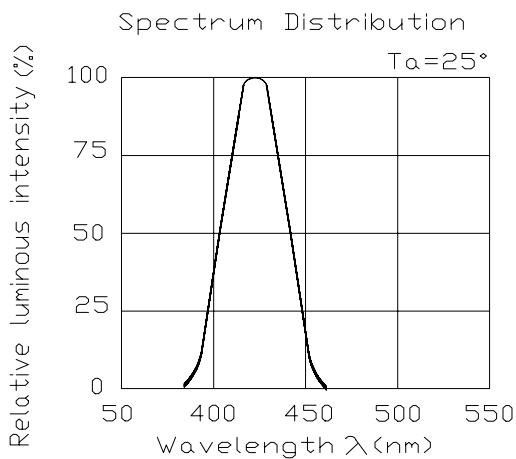
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Typical Electro-Optical Characteristic Curves





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■ Reflow Temp / Time :

