



MODEL NO: 12-215VGC/TR8

Device Number : DSE-125-004 REV. 1.2

Chip LEDs with Right Angle Lens

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Features :

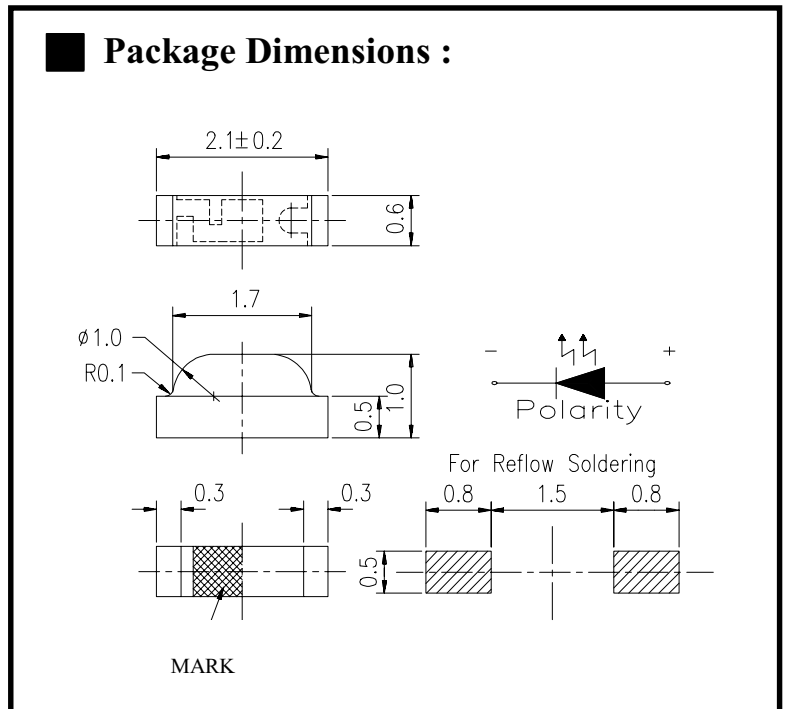
- Package in 8mm tape on 7" diameter reel.
- Compatible with automatic placement equipment.
- Compatible with infrared and vapor phase reflow solder process.
- Mono-color type.

Descriptions :

- The 12-215 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 $\pm 0.1\text{mm}$
 Angle $\pm 0.5^\circ$
 Unit = mm

PART NO	Chip		Lens Color
	Material	Emitted Color	
12-215 VGC/TR8	GaP	Green	Water Clear

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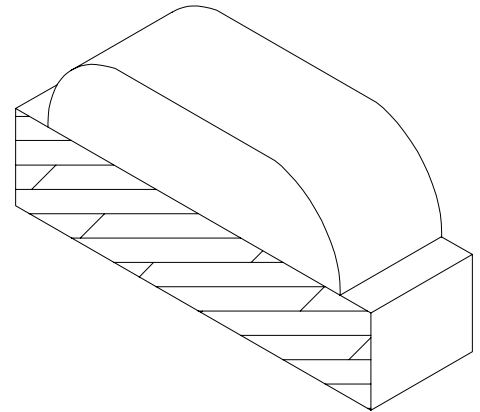
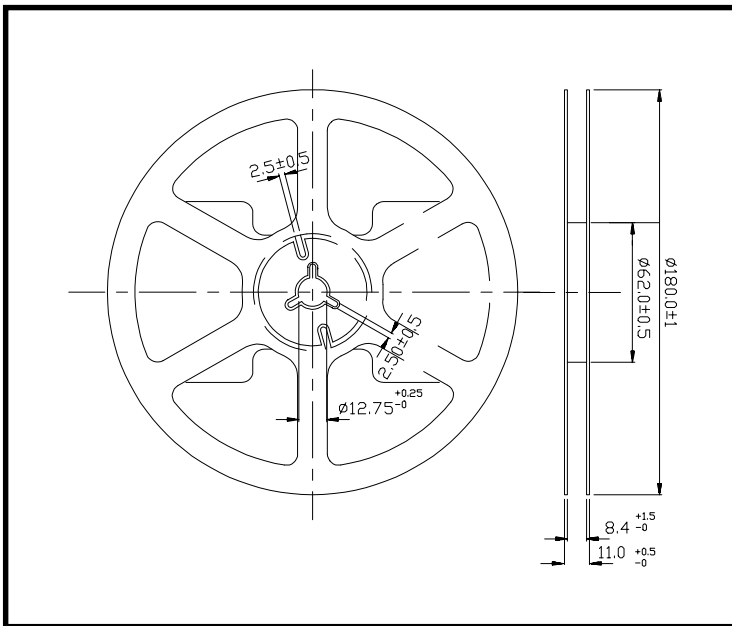
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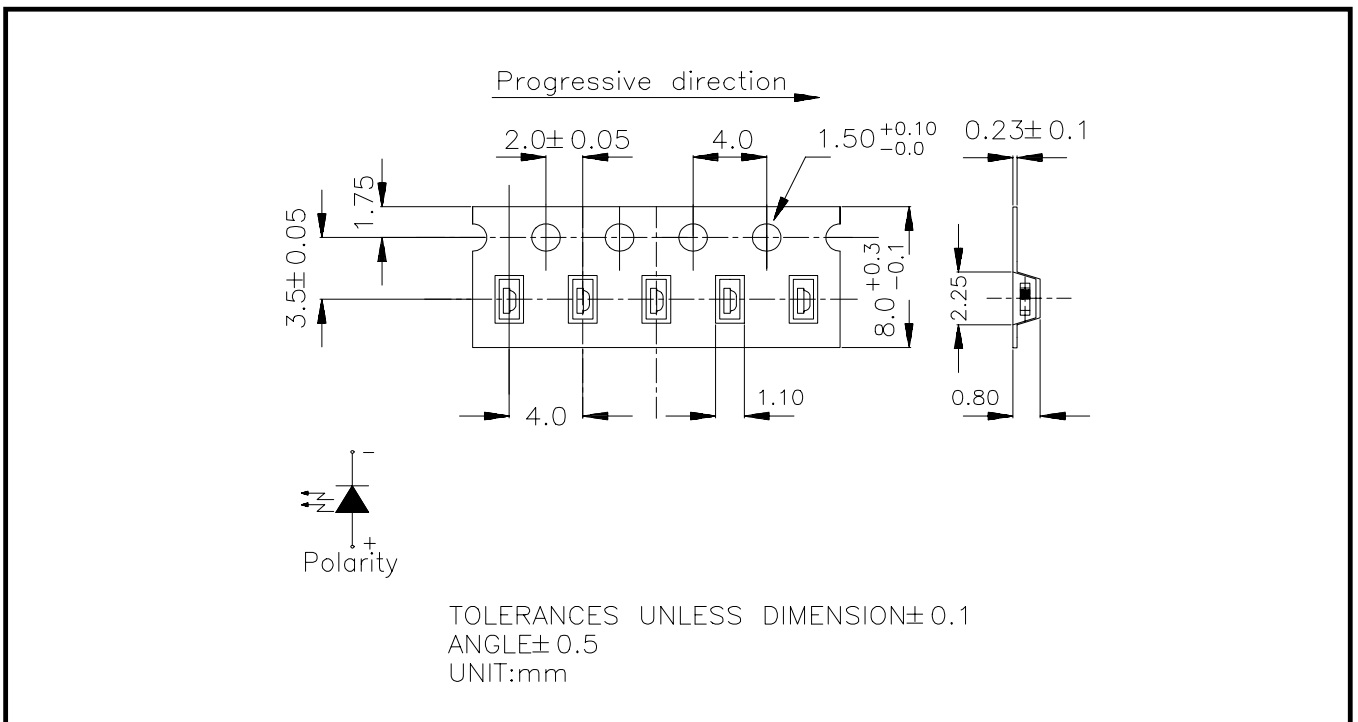
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■ Package Dimensions :



■ 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}	-40 ~ +85	°C
Storage Temperature	T _{stg}	-40 ~ +90	°C
Soldering Temperature	T _{sol}	260 (for 5 second)	°C
Power Dissipation	P _d	100	mW
Peak Forward Current(Duty 1/10 @ 1KHZ)	I _F (Peak)	160	mA

■ **Electronic Optical Characteristics :**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I _v	7	11	----	mcd	I _F =20mA
Viewing Angle	2θ 1/2	-----	130	-----	deg	I _F =20mA
Peak Wavelength	λ _p	-----	570	-----	nm	I _F =20mA
Dominant Wavelength	λ _d	-----	571	-----	nm	I _F =20mA
Spectrum Radiation Bandwidth	Δλ	-----	30	-----	nm	I _F =20mA
Forward Voltage	V _F	1.7	2.1	2.4	V	I _F =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



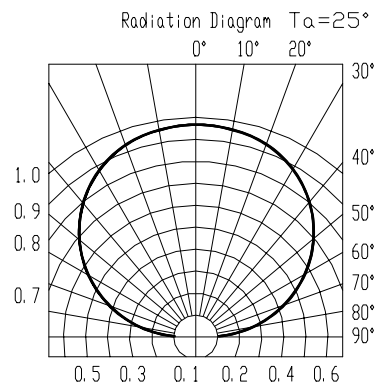
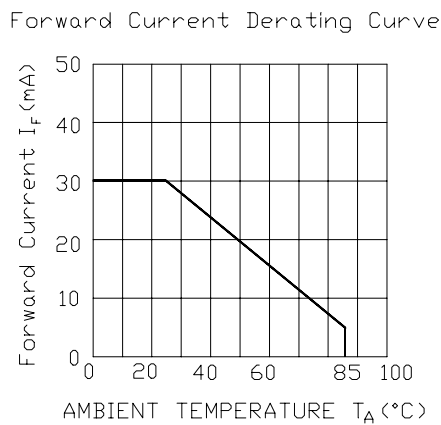
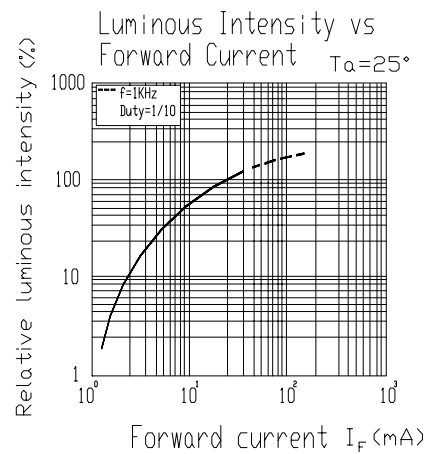
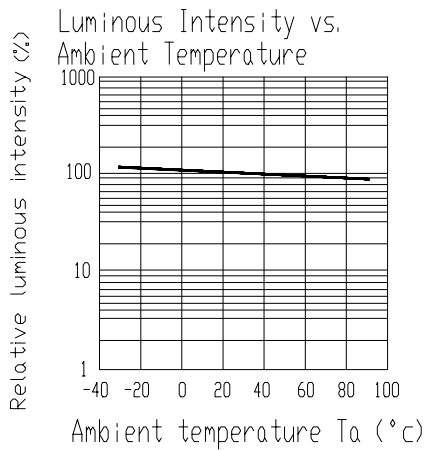
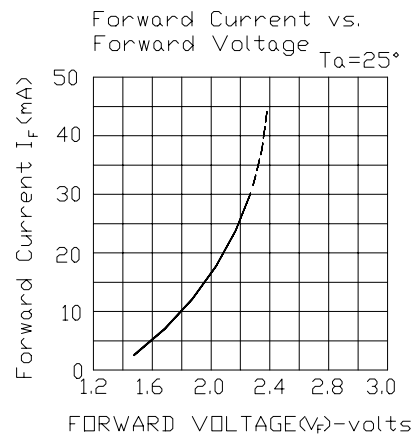
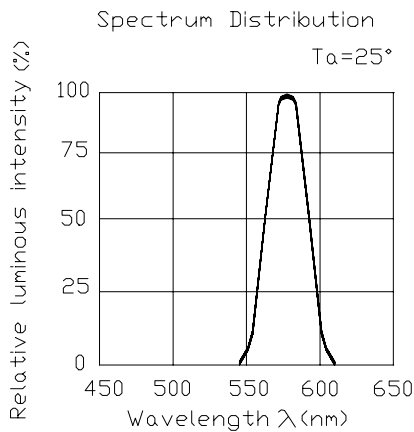
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Typical Electro-Optical Characteristic Curves





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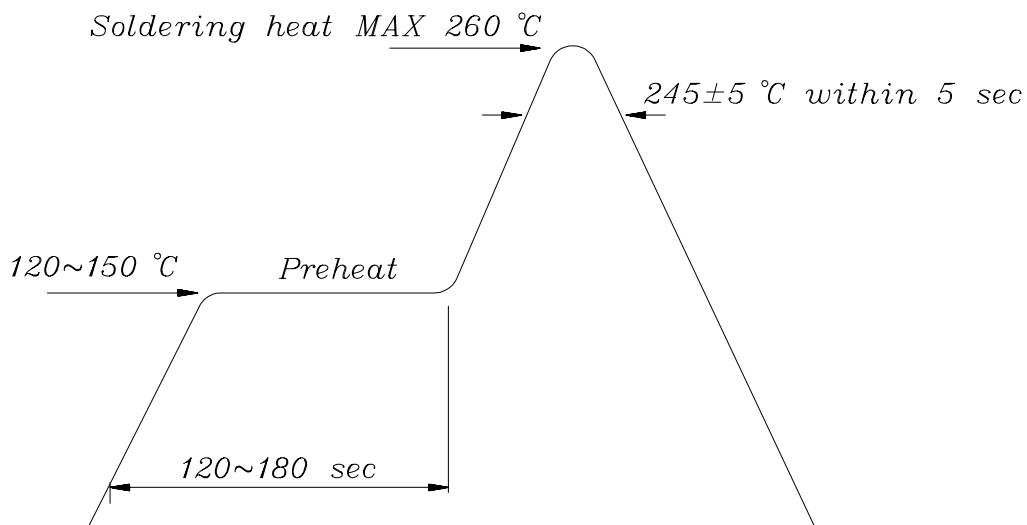
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■ **Soldering heat reliability (DIP)**

Please refer to the following figure :

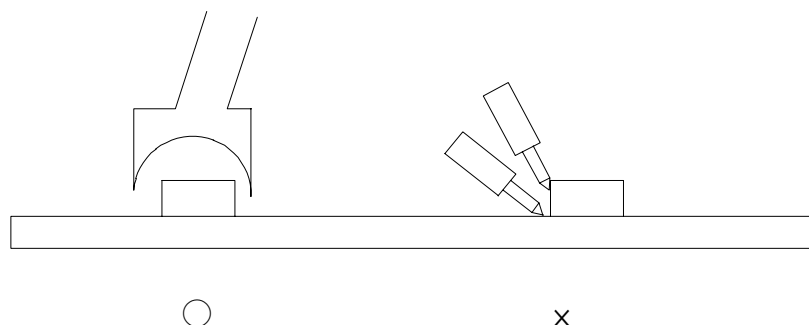


■ **Soldering Iron**

Basic spec is ≤ 5 sec when 260°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 260°C .
2. The head of iron can not touch copper foil.
3. Twin-head type is preferred.





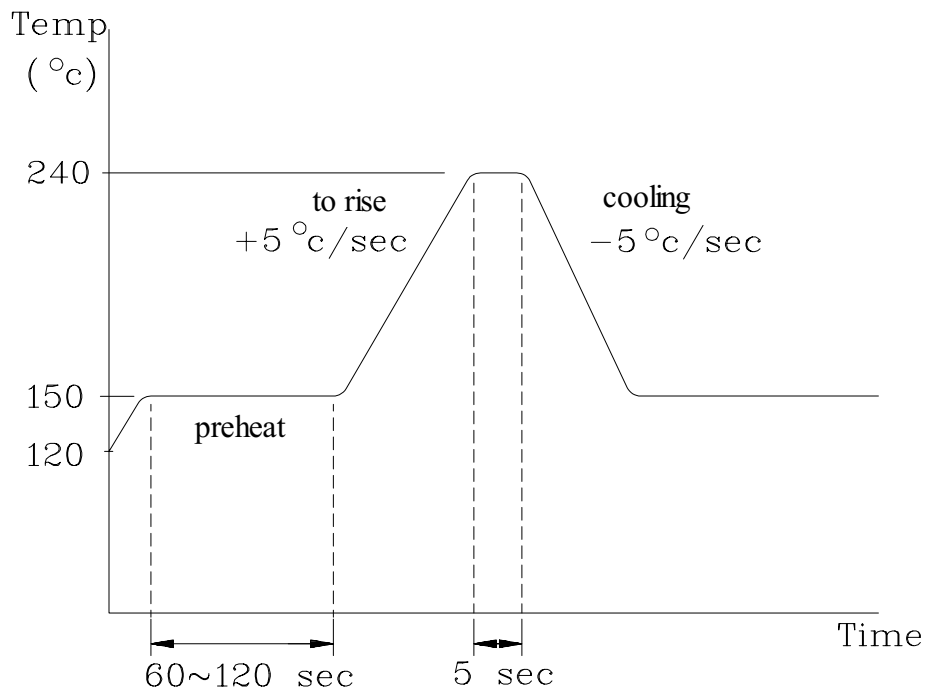
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■ Reflow Temp / Time :



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