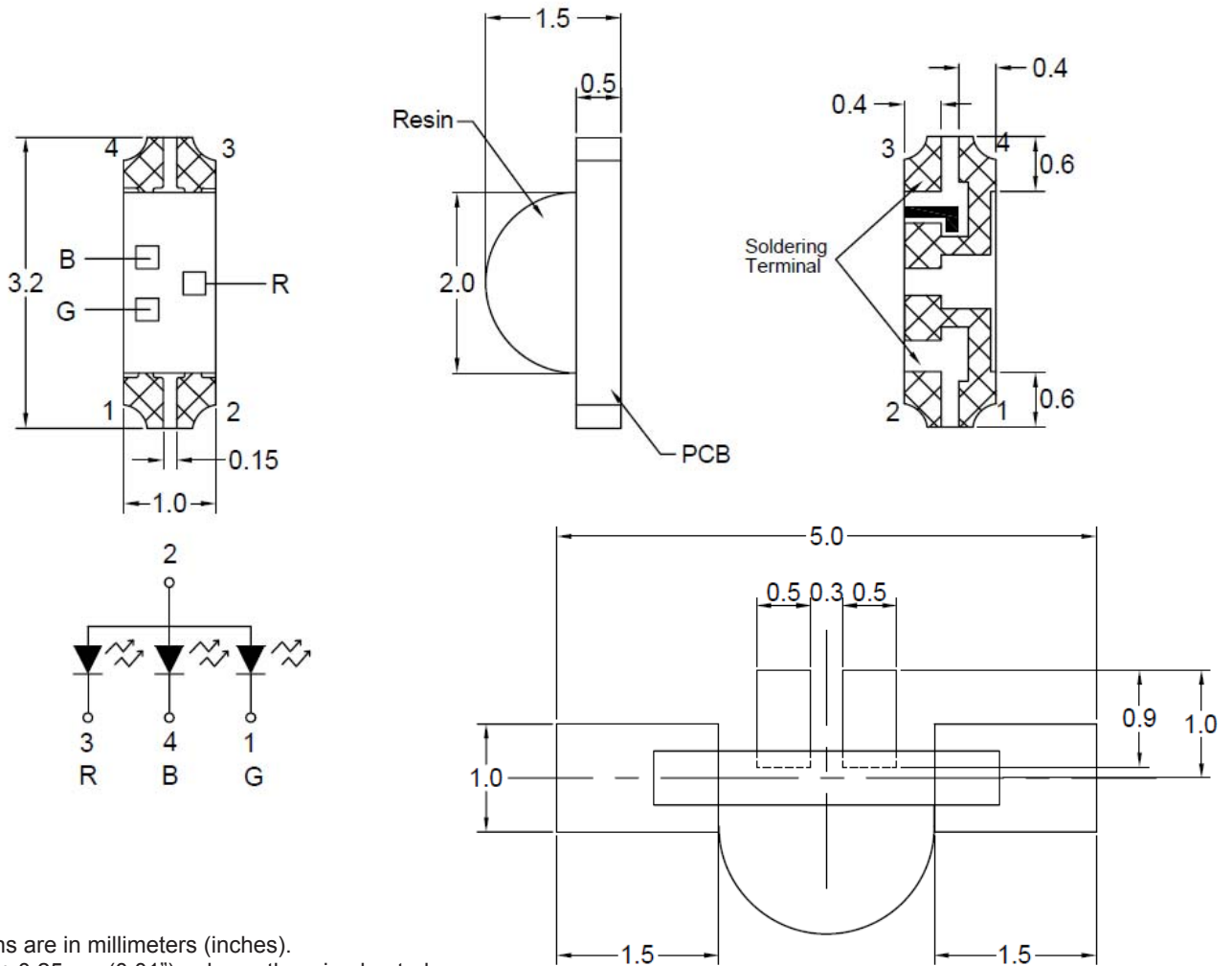


SPECIFICATION
CSRT125R2B2GT2C
PACKAGE OUTLINES

Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25\text{mm}$ (0.01") unless otherwise noted.
3. Specifications are subject to change without notice.

Part Number	Chip Material	Color of Emission	Lens Type	Viewing Angle
CSRT125R2B2GT2C	InGaAlP	Red	Water Clear	120°
	InGaN	Green	Water Clear	120°
	InGaN	Blue	Water Clear	120°



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ABSOLUTE MAXIMUM RATINGS
(TA=25°C)

Parameter	Symbol	Max Rating		Unit
		Blue/ Green	Red	
Forward Current	IF	30	30	mA
Reverse Voltage	VR	5	5	V
Power Dissipation	Pd	108	72	mW
Operating Temperature Range	TOP	-20~+80		°C
Storage Temperature Range	TSTG	-30~+100		°C
Peak Pulsing Current (tp ≤ 10 μs, duty cycle = 0.005)	IFP	100	90	mA

OPTICAL-ELECTRICAL CHARACTERISTICS
(TA=25°C)

Parameter	Symbol	Test Condition	Color	Value			Unit
				Min	Typ	Max	
Luminous Intensity	Iv	IF = 20mA	Red	80	200	-	mcd
			Green	320	560	-	
			Blue	50	125	-	
Forward Voltage	VF	IF = 20mA	Red	-	2.0	2.4	V
			Green	-	3.1	3.6	
			Blue	-	3.1	3.6	
Viewing Angle at 50% Iv	2θ1/2	IF = 20mA	-	-	120	-	Deg
Dominant Wavelength	λD	IF = 20mA	Red	-	630	-	nm
			Green	-	525	-	
			Blue	-	470	-	

*Tolerance of viewing angle: -10 / +5 deg.


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TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES (RED)

Fig.1 Forward current vs. Forward Voltage

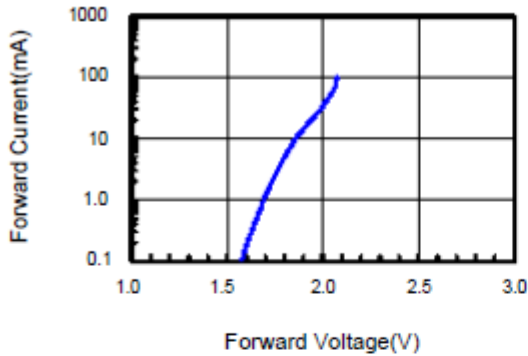


Fig.2 Relative Intensity vs. Forward Current

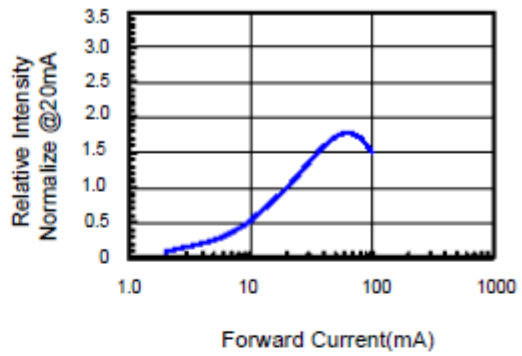


Fig.3 Forward Voltage vs. Temperature

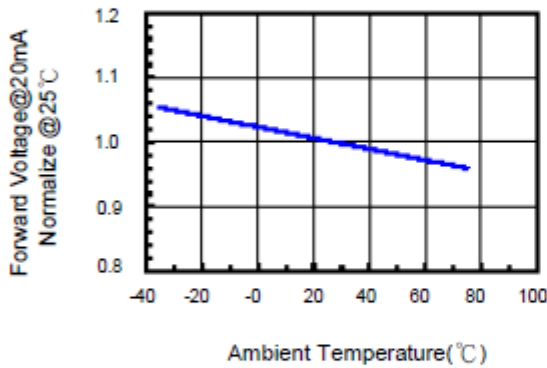


Fig.4 Relative Intensity vs. Temperature

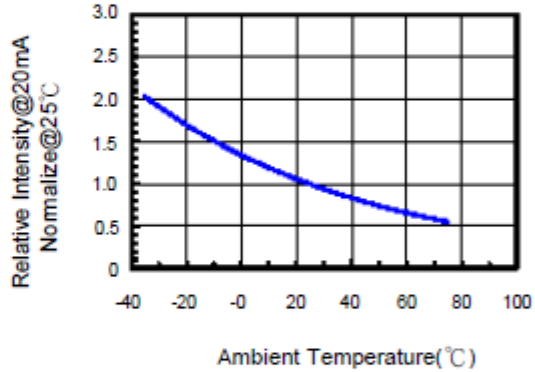


Fig.5 Relative Intensity vs. Wavelength

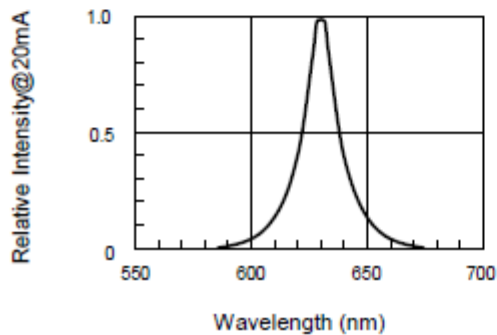
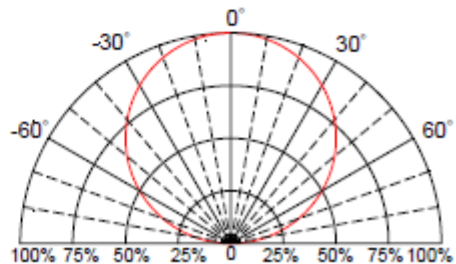


Fig.6 Directive Radiation



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TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES (GREEN)

Fig.1 Forward current vs. Forward Voltage

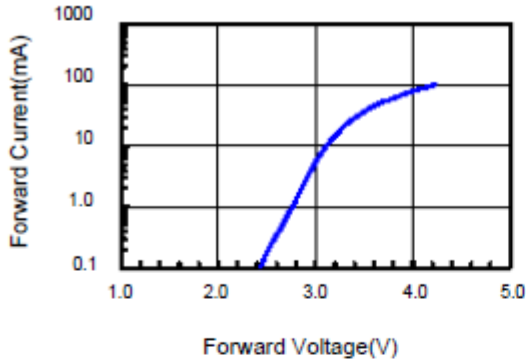


Fig.2 Relative Intensity vs. Forward Current

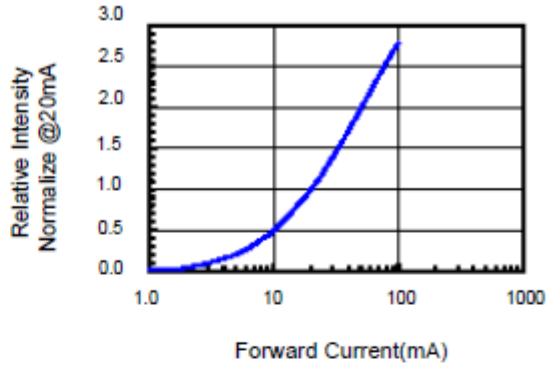


Fig.3 Forward Voltage vs. Temperature

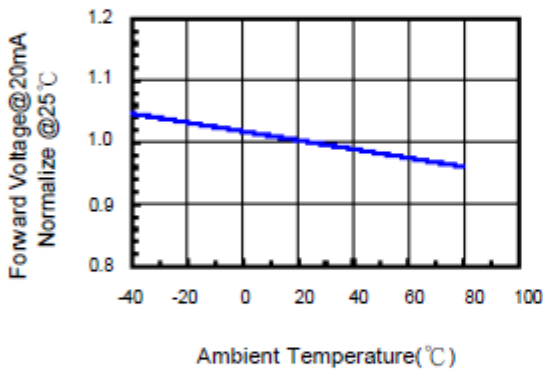


Fig.4 Relative Intensity vs. Temperature

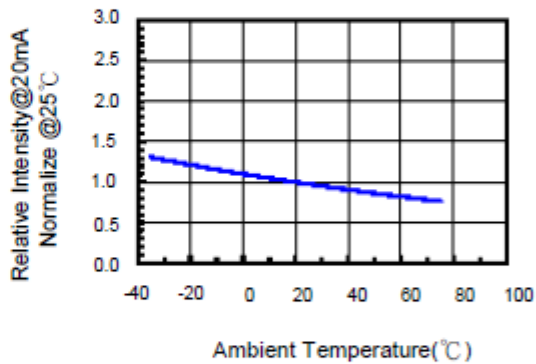


Fig.5 Relative Intensity vs. Wavelength

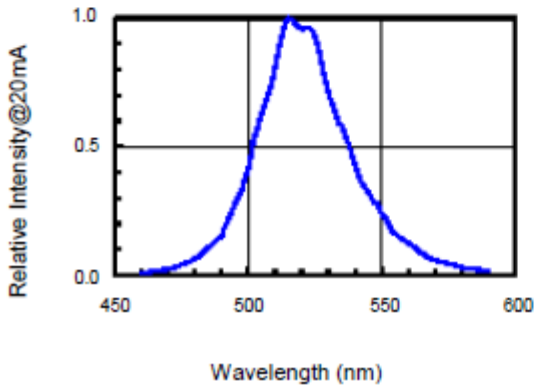
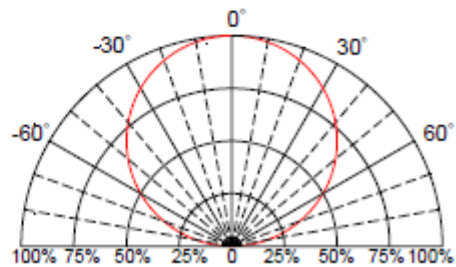


Fig.6 Directive Radiation



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TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES (BLUE)

Fig.1 Forward current vs. Forward Voltage

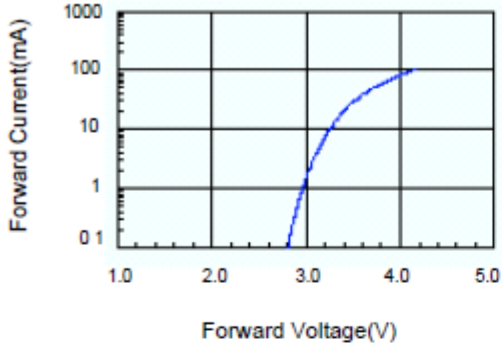


Fig.2 Relative Intensity vs. Forward Current

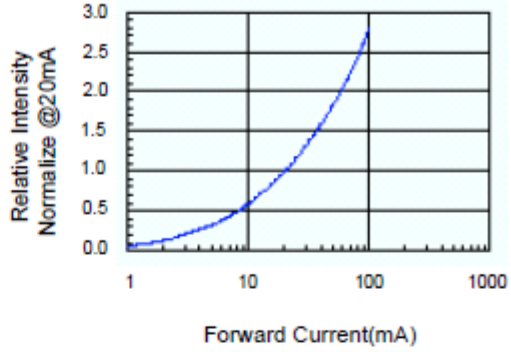


Fig.3 Forward Voltage vs. Temperature

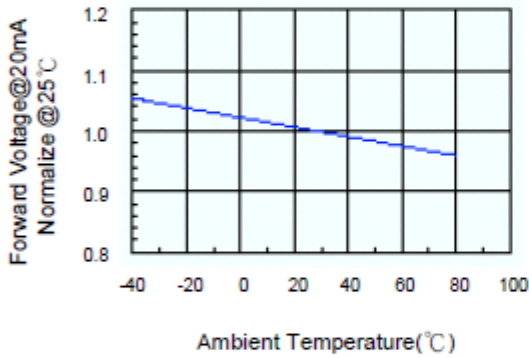


Fig.4 Relative Intensity vs. Temperature

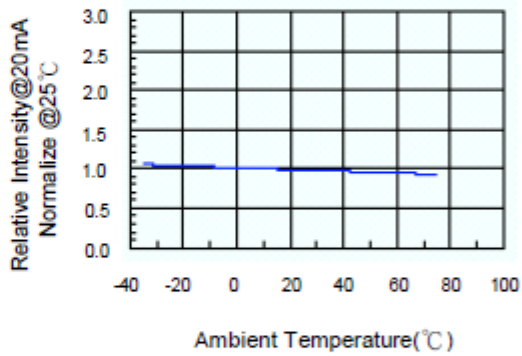


Fig.5 Relative Intensity vs. Wavelength

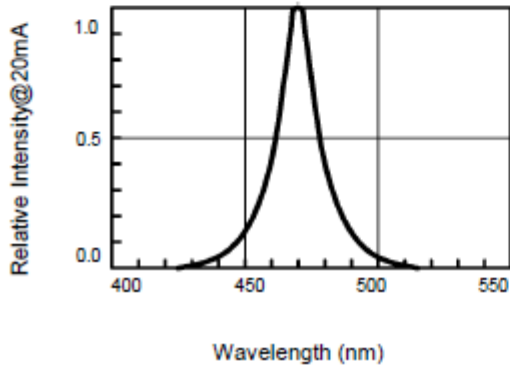
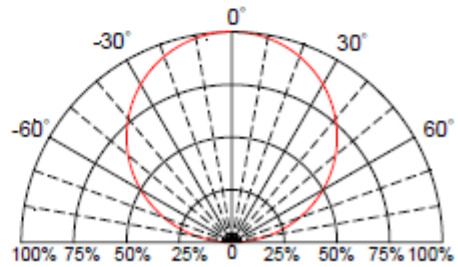


Fig.6 Directive Radiation



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SOLDERING CONDITIONS

PRECAUTION FOR USE

Storage time:

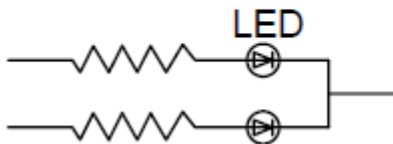
1. The operation of temperature and RH are: 5°C~35°C, RH60%.
2. Once the package is opened, the products should be used within a week. Otherwise, they should be kept in a damp proof box with desiccating agent. Considering the tape life, we suggest our customers to use products within a year (from production date).
3. If opened more than one week in an atmosphere 5°C~35°C, RH60%, they should be treated at 60°C±5°C for 15 hrs.

Drive Method:

LED is a current operated device and therefore, requires some kind of current limiting device incorporated into the driver circuit. This current limiting device typically takes form of a resistor placed in series with the LED.

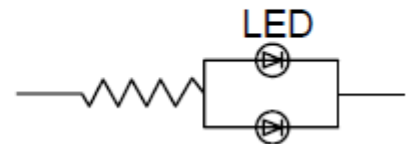
Considering worst case voltage variations that could occur across the current limiting resistor, the forward voltage should not be allowed to change by more than 40% of its desired value.

Circuit model A



(A) Recommended circuit.

Circuit model B



(B) The difference of brightness between LED could be found due to the VF-IF characteristics of the LED.

Cleaning:

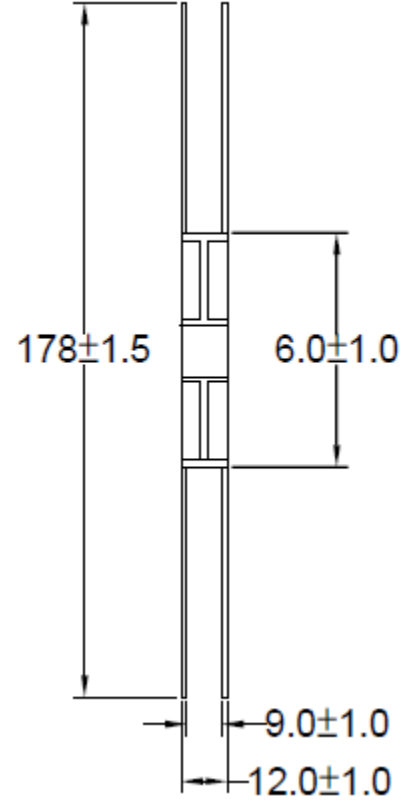
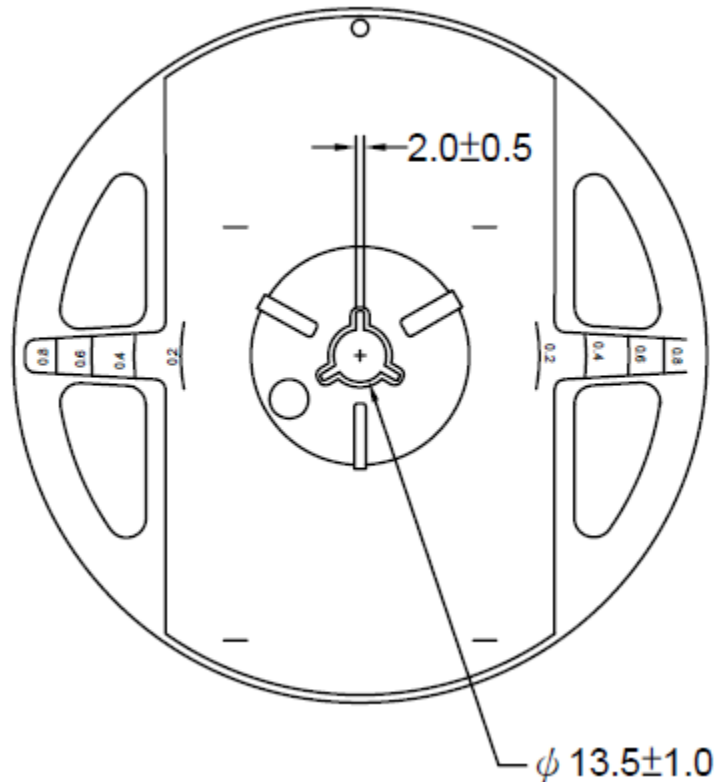
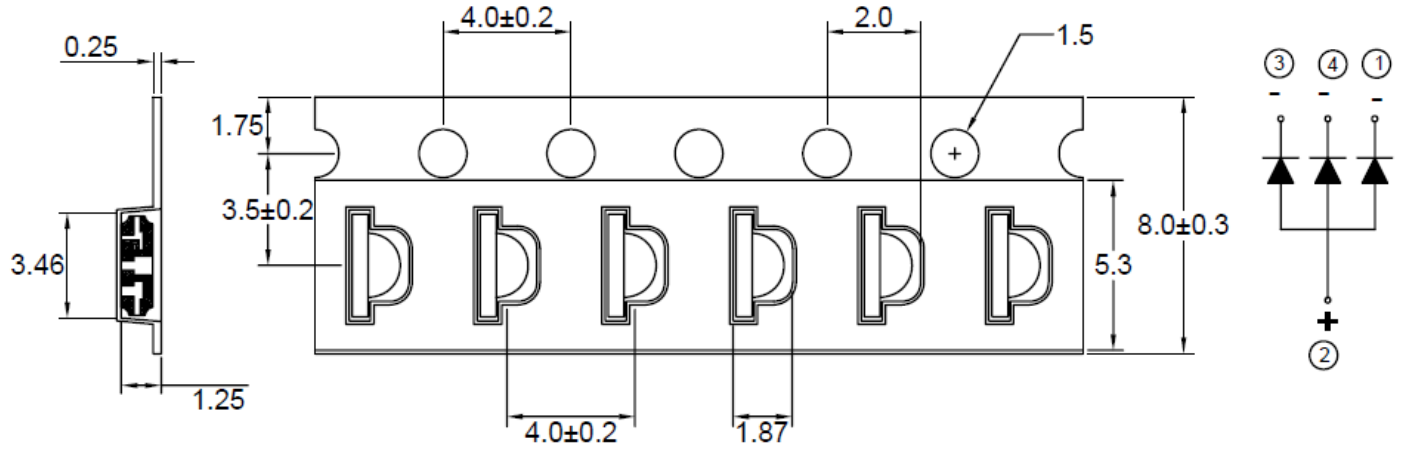
Use alcohol based cleaning solvent such as isopropyl alcohol to clean the LED.



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REEL PACKAGING

PACKAGING DIMENSIONS



Notes:

1. Tolerance unless mentioned is ±0.1mm, angle±0.5, unit=mm
2. 8.0mm tape, 7" reel
3. 3,000 pcs/Reel



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