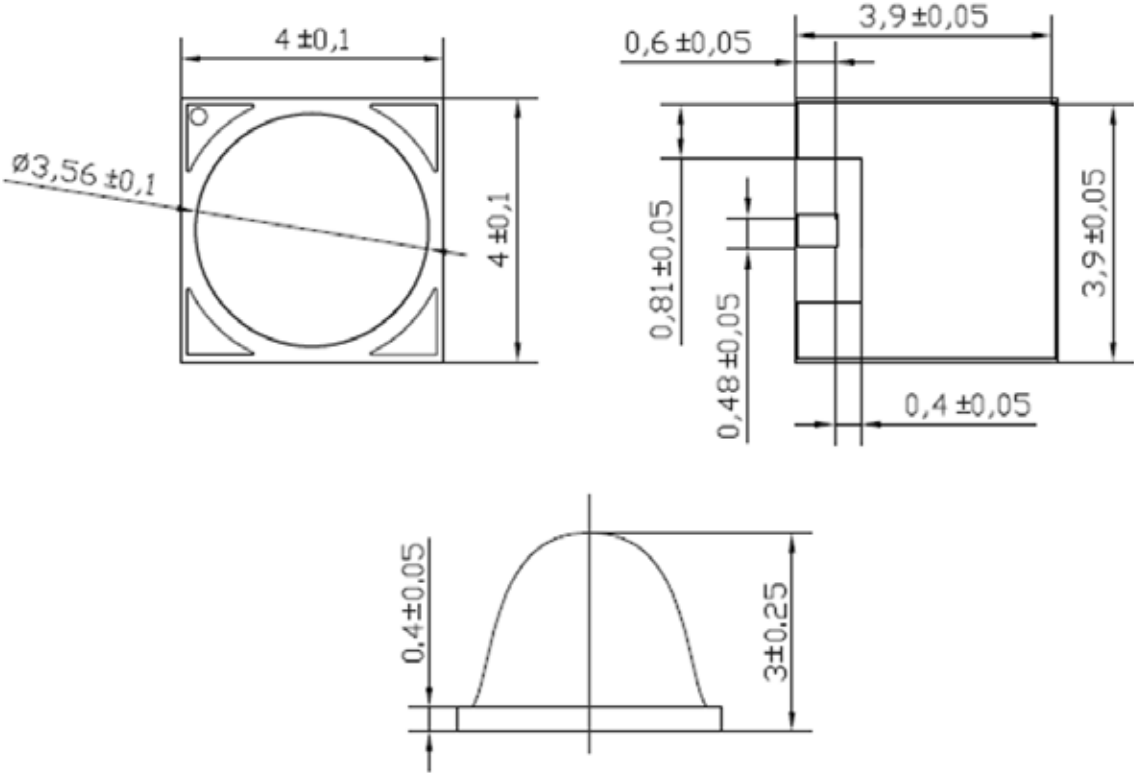


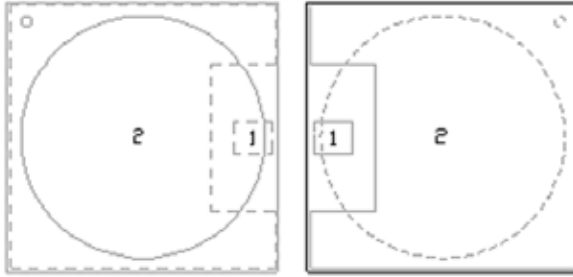
**SPECIFICATIONS** **CSHD1414IR940C-40D**
**MECHANICAL DIMENSIONS**


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

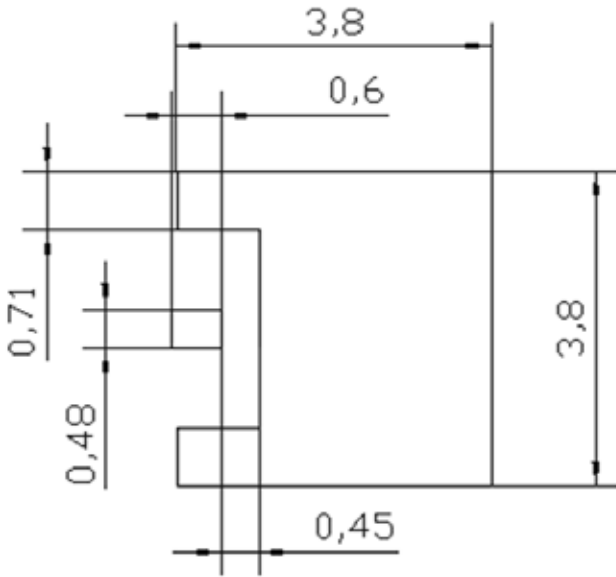
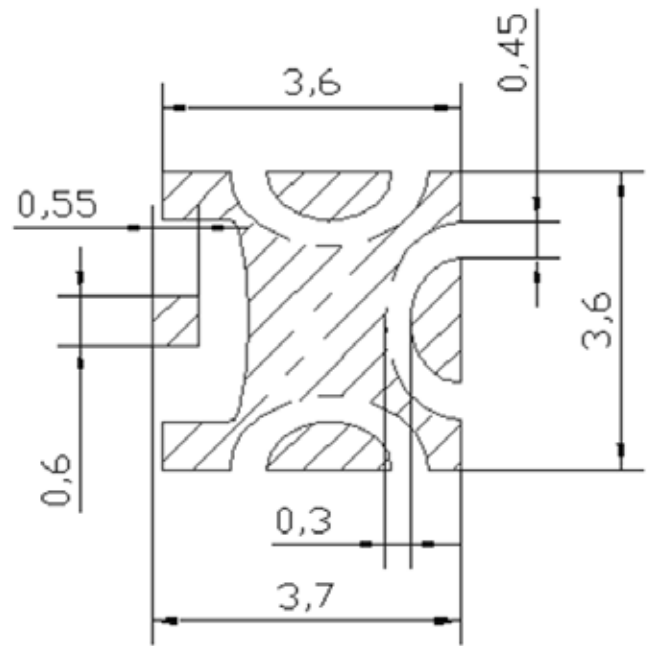
Part Number	Chip Material	Color of Emission	Lens Type	Viewing Angle
CSHD1414IR940C-40D	AlGaAs	IR	Water Clear	40°



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**RECOMMENDED SOLDER PATTERN**
**PAD CONFIGURATION**

**TOP**
**BOTTOM**

PAD	Function
1	Cathode
2	Anode, Thermal


**MCPCB LAYOUT**

**SOLDER MASK**

Note: unit (mm); tolerance  $\pm 0.05$



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**ABSOLUTE MAXIMUM RATINGS**
**(TA=25°C)**

Parameter	Symbol	Max Rating	Unit
Power Dissipation per Dice	P <sub>D</sub>	2.5	W
Continuous Forward Current per Dice	I <sub>F</sub>	1000	mA
Peak Current per Dice (duty cycle 1/10, 1kHz)	I <sub>PF</sub>	1500	mA
Thermal Resistance, Junction-Case	R <sub>TH, J-C1</sub>	5	°C/W
Operating Temperature	T <sub>OPR</sub>	-40~+80	°C
Storage Temperature	T <sub>STG</sub>	-40~+120	°C

**OPTICAL-ELECTRICAL CHARACTERISTICS**
**(TA=25°C)**

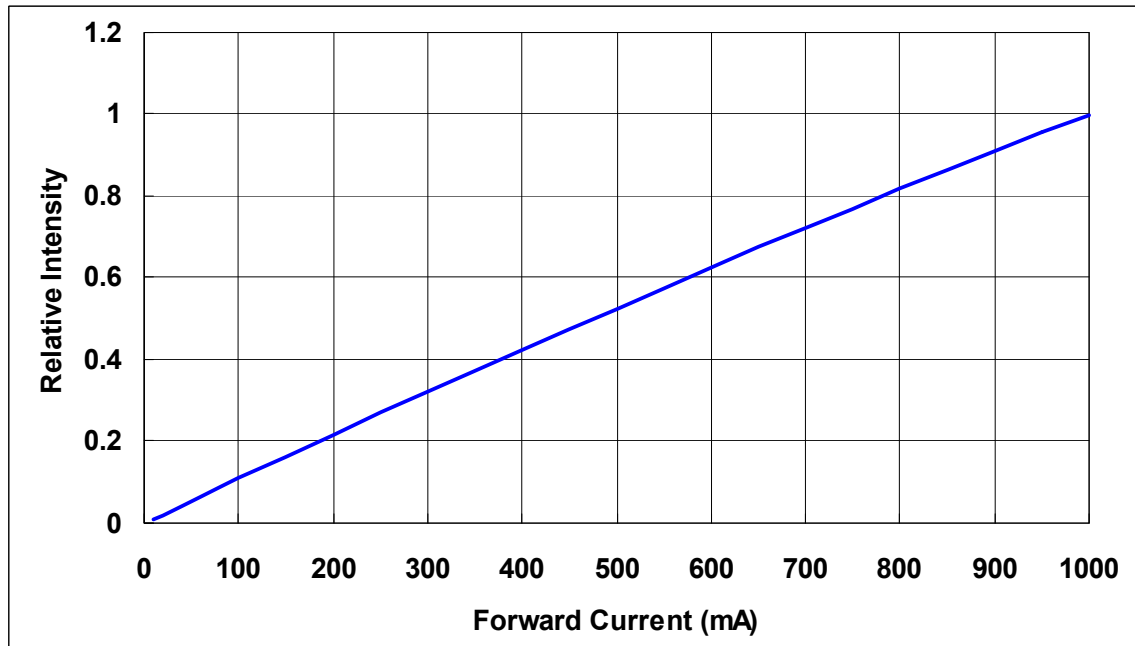
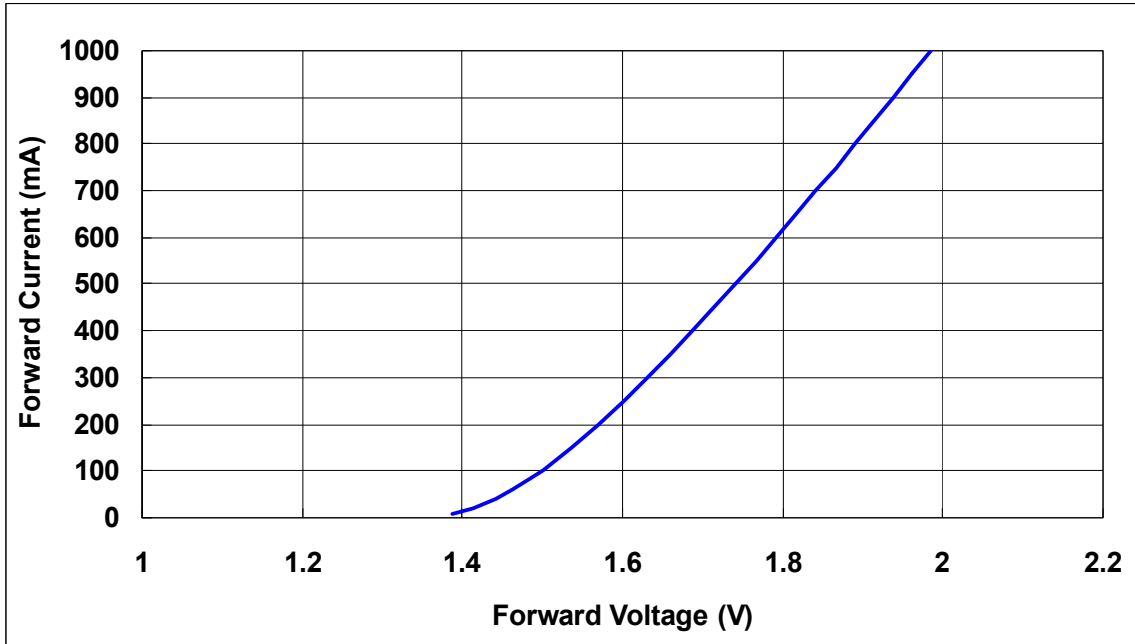
Characteristic	Symbol	Condition	Value			Unit
			Min.	Type.	Max.	
Forward Voltage per Dice	V <sub>F</sub>	I <sub>F</sub> = 1000mA	-	1.9	-	V
Peak Wavelength per Dice	λ <sub>P</sub>		930	940	950	nm
Radiant Flux	Φ <sub>E</sub>		500	800	-	mW
Radiant Intensity	I <sub>E</sub>		-	720	-	mW/sr
Viewing Angle	2θ 1/2		-	40	-	Deg

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



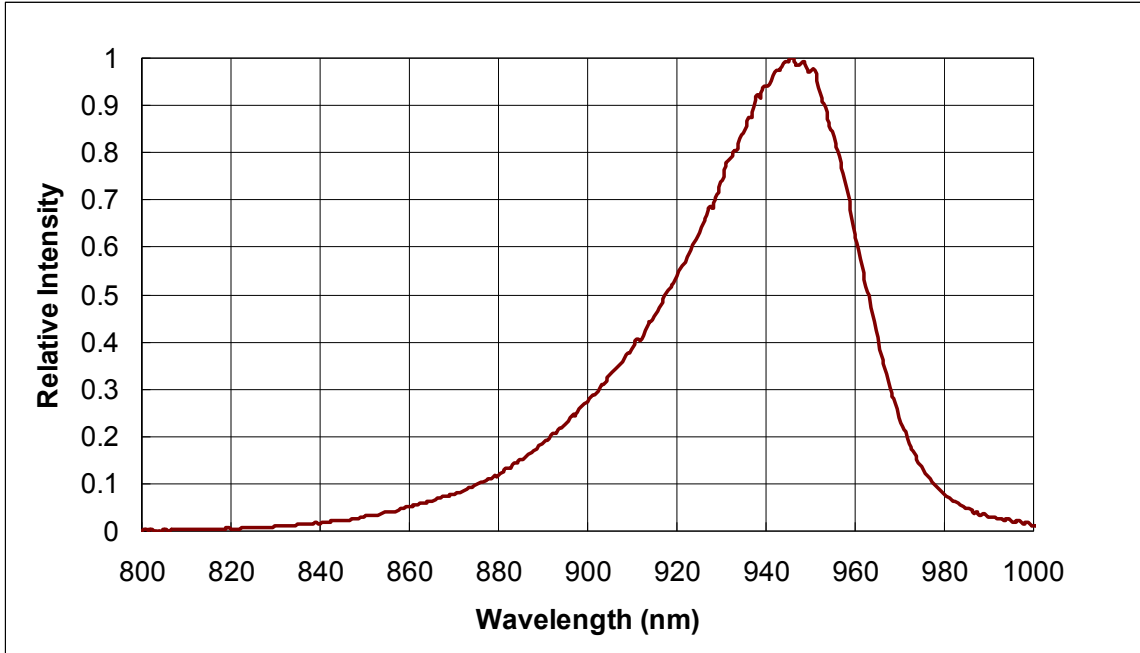
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## OPTICAL CHARACTERISTIC CURVES

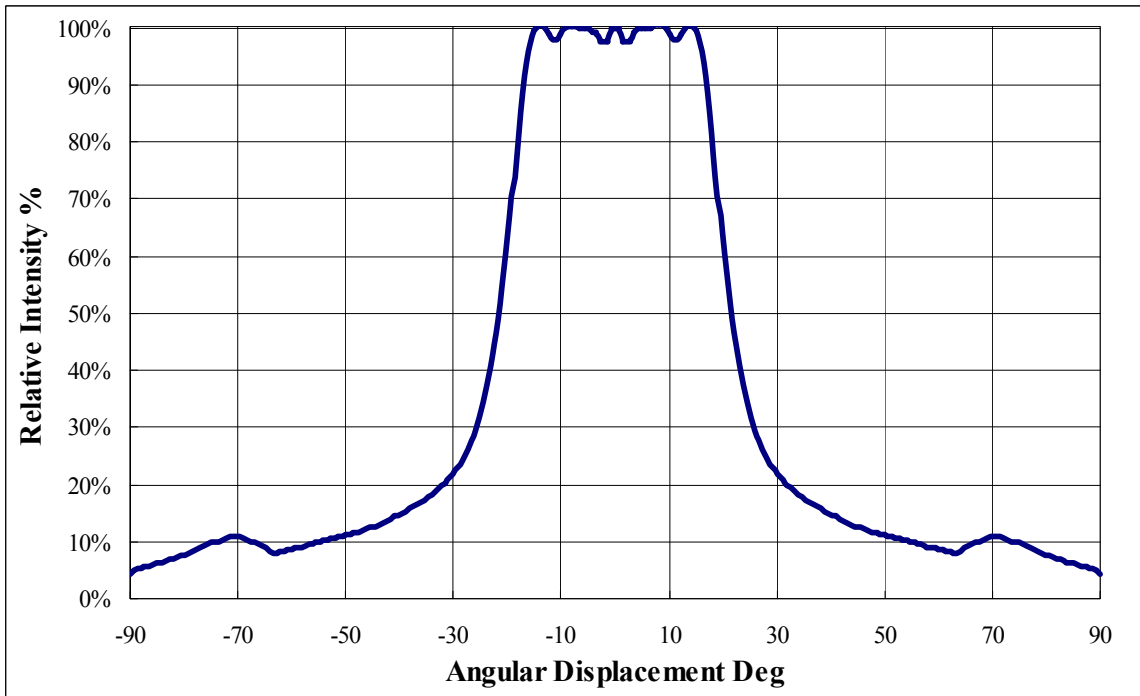


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## OPTICAL CHARACTERISTIC CURVES

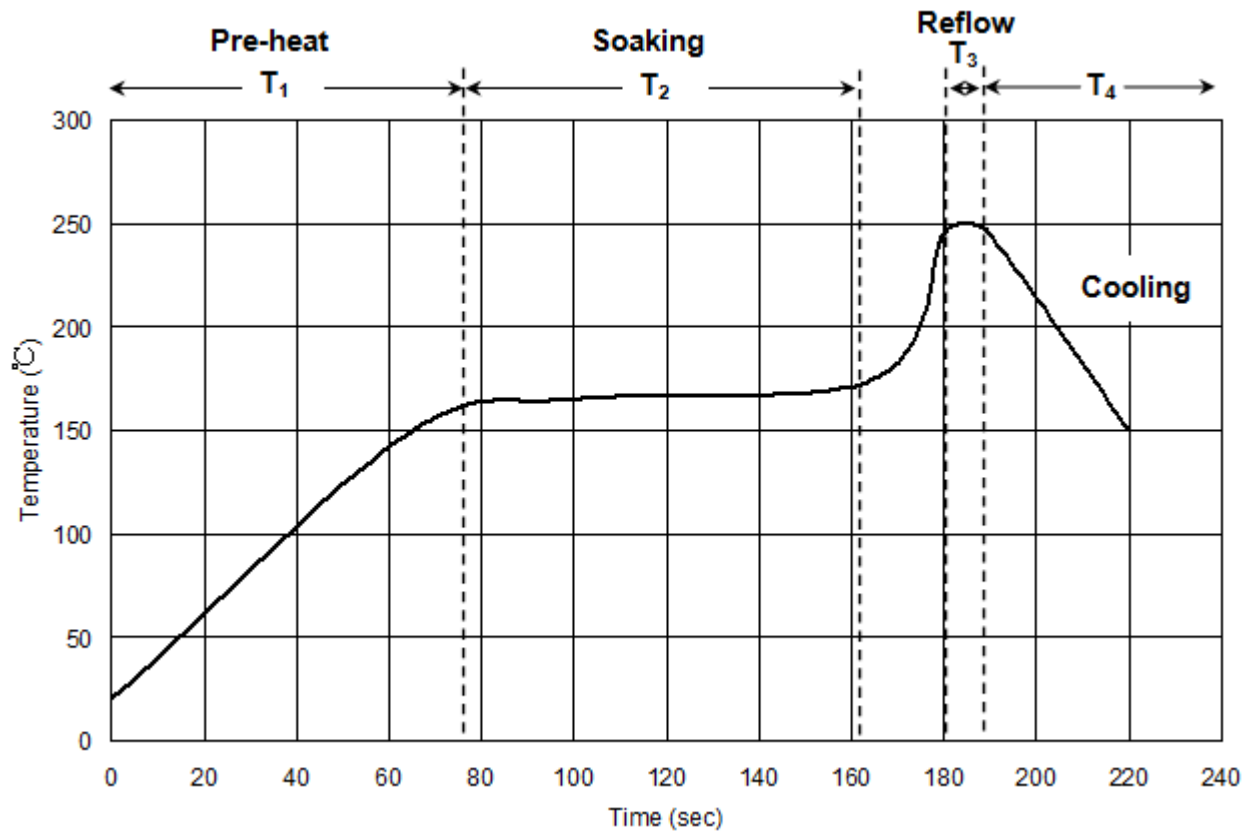


## TYPICAL RADIATION PATTERN



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## REFLOW SOLDERING CHARACTERISTICS



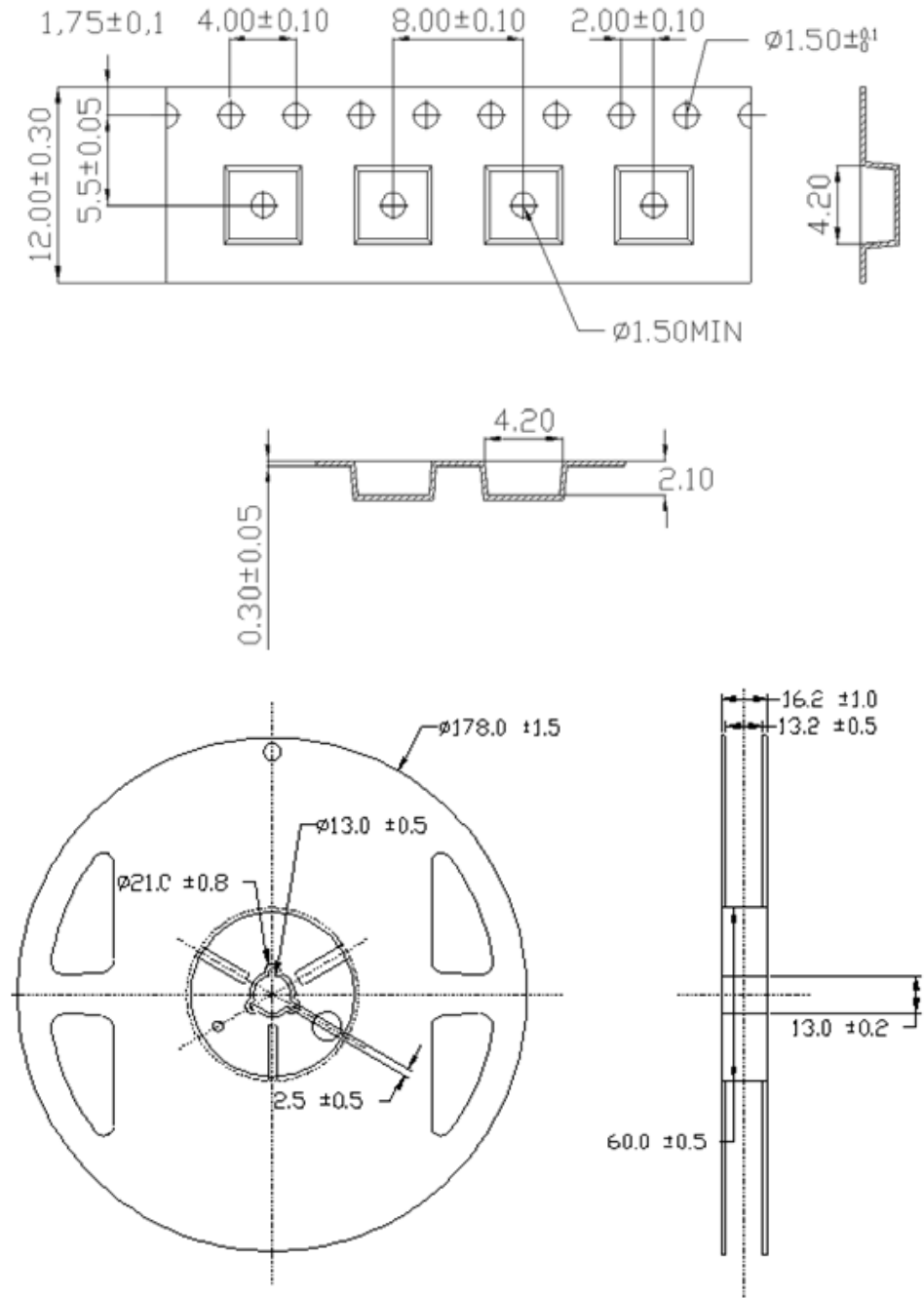
T1	Ramp up rate	1.0~3.0 °C/sec
	Pre-heat time	50~80 sec
T2	Soaking temperature	155~185 °C
	Dwell time during soaking	60~120 sec
T3	Reflow temperature	240~250 °C
	Reflow time	Max 10 sec
T4	Ramp up rate during reflow	1.2~2.3 °C/sec
	Cooling	1.0~6.0 °C.sec

Note: suggest using Sn96Ag3Cu0.5 lead free solder



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## PACKAGE DIMENSIONS (Unit: mm)



Notes:

1. Unit (mm)
2. Ship in moisture proof bag
3. 1 Reel/Bag
4. 700 (max)/Reel



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