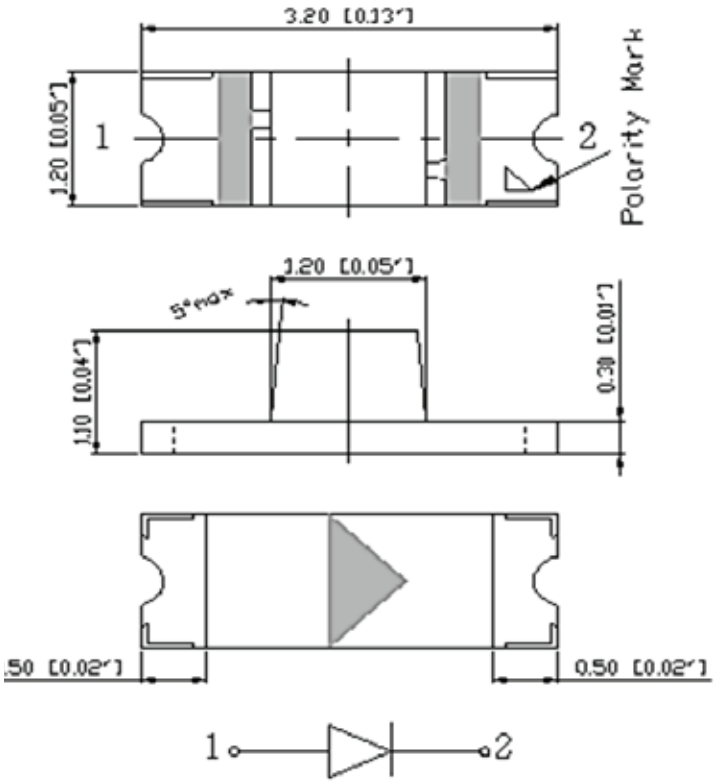
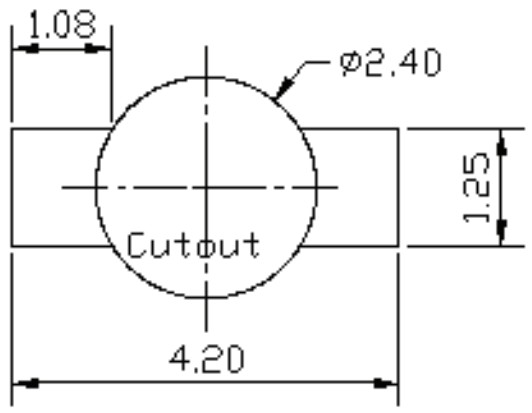


**SPECIFICATION** **CS124AR2C-R**
**PACKAGE OUTLINES**

**RECOMMENDED SOLDER PAD**


ITEM	MATERIALS
Resin (mold)	Epoxy
Lens Color	Water Transparent
Dice	AlGaInP/GaAs
Emitted Color	Red

- 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
CS124AR2C-R	InGaAlP	Red	Water Clear	140°



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

Parameter	Symbol	Max Rating	Unit
Forward Current	IF	30	mA
Reverse Current @ 5V	IR	10	μA
Power Dissipation	Pd	75	mW
Operating Temperature Range	TOP	-40~+85	°C
Storage Temperature Range	TSTG	-40~+85	°C
Peak Pulsing Current (1/10 duty f = 10KHz)	IFP	125	mA
Soldering Temperature	TSOL	Max 260°C for 5 sec Max	

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

Parameter	Symbol	Test Condition	Value			Unit
			Min	Typ	Max	
Luminous Intensity	Iv	IF = 20mA	50	110	-	mcd
Forward Voltage	VF	IF = 20mA	-	2.0	2.5	V
Reverse Leakage Current	IR	VR = 5V	-	-	10	μA
Viewing Angle at 50% Iv	2θ1/2	IF = 20mA	-	140	-	Deg
Peak Wavelength	λP	IF = 20mA	-	640	-	nm
Dominant Wavelength	λD	IF = 20mA	625	630	635	nm

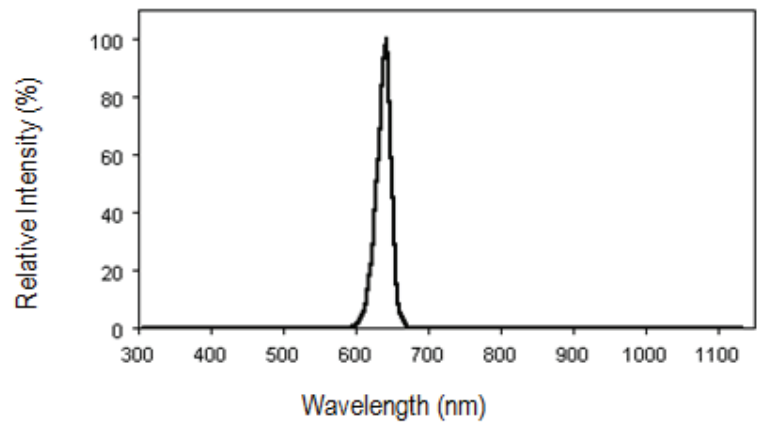
\*Tolerance of viewing angle: -10 / +5 deg.



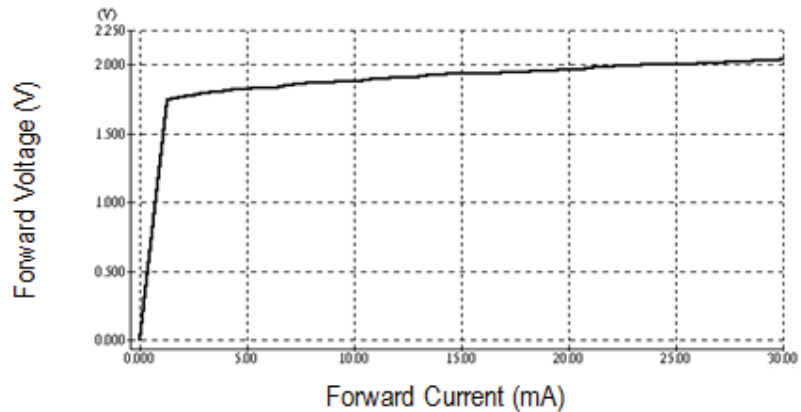
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## OPTICAL CHARACTERISTIC CURVES

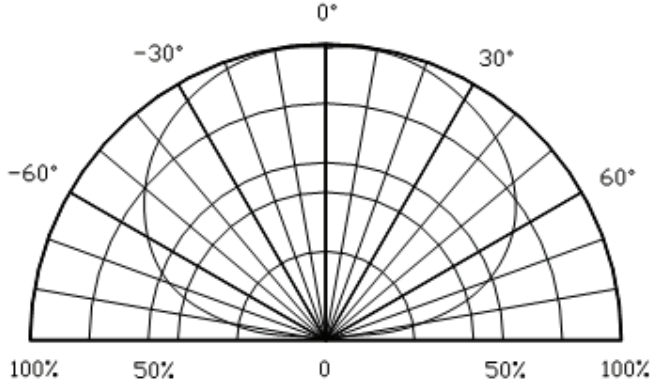
Relative Intensity vs. Wavelength



Forward Current vs. Forward Voltage



Directive Characteristics

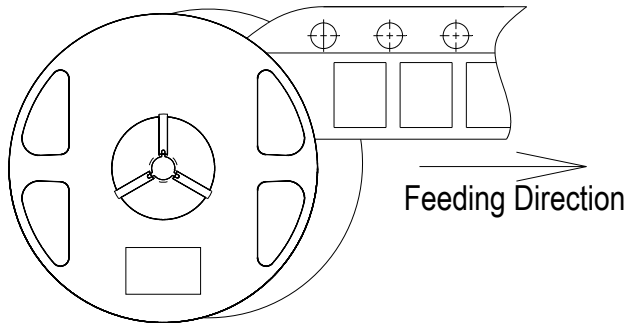


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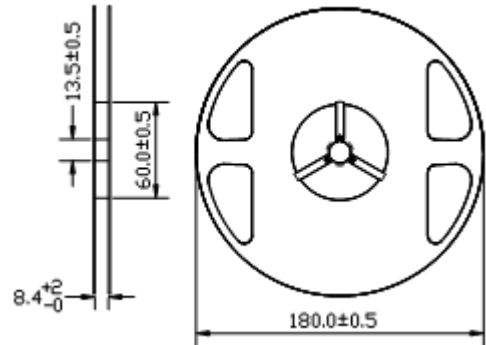
## PACKAGING SPECIFICATION

### PACKAGING SPECIFICATIONS

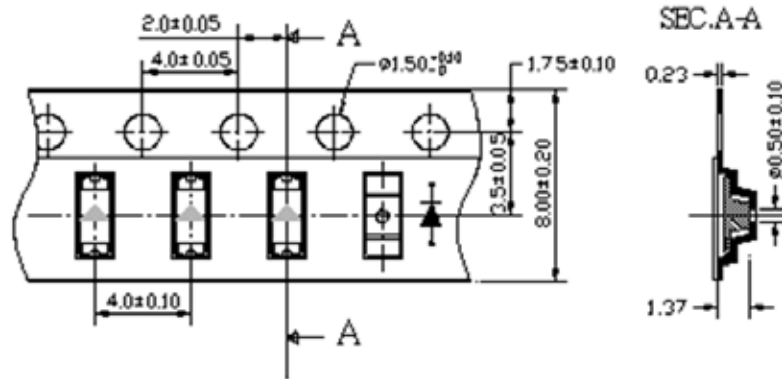
#### Feeding Direction



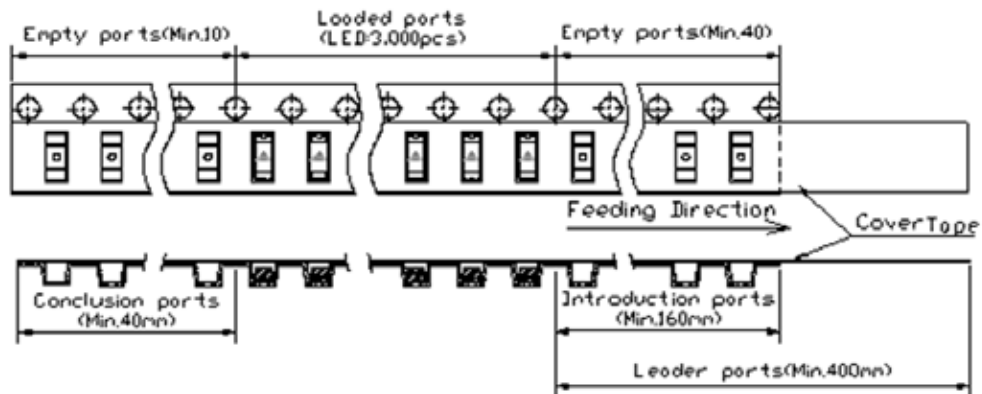
#### Dimensions of Reel (Unit: mm)



#### Dimensions of Tape (Unit: mm)



#### Arrangement of Tape



Notes:

1. Empty component pockets are sealed with top cover tape
2. Maximum number of missing lamp is two
3. Cathode is oriented towards the tape sprocket hole
4. 3,000 pcs/Reel

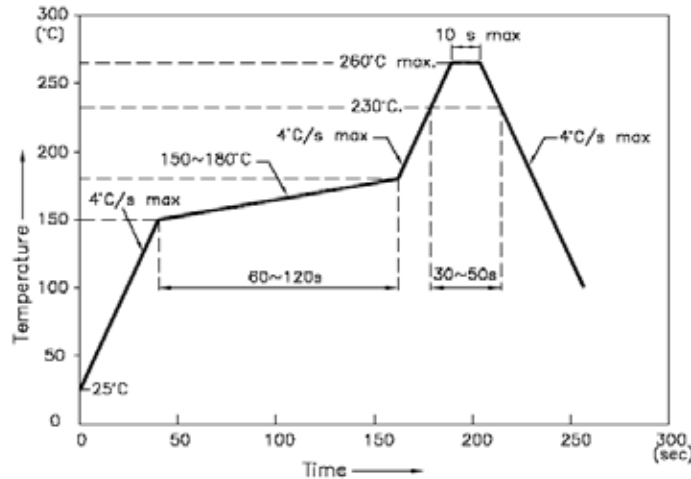


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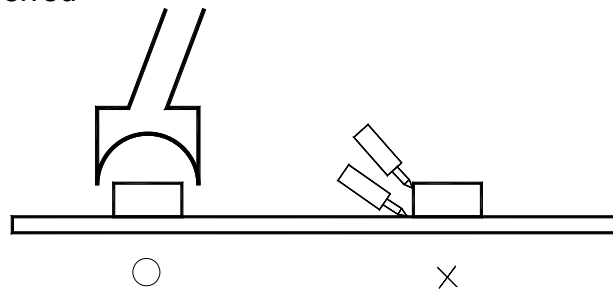
## SOLDERING CONDITIONS

### SOLDERING PROFILE

Reflow Temp/Time



- We recommend the reflow temperature 245°C ( $\pm 5$  °C) & the maximum soldering temperature should be limited to 260 °C.
- Do not cause stress to the epoxy resin while it is exposed to high temperature.
- Number of reflow process should be 2 times or less.
- Soldering Iron:
  - Basic spec is  $\leq 5$  sec when 260 °C. If the temperature is higher, time should be shorter (+10 °C  $\rightarrow$  -1 sec). Power dissipation of iron should be smaller than 20W and temperature should be controllable. Surface temperature of the device should be under 230 °C.
- Rework:
  - Customer must finish rework within 5 sec under 260 °C
  - The head of iron cannot touch copper foil
  - Twin-head type is preferred



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