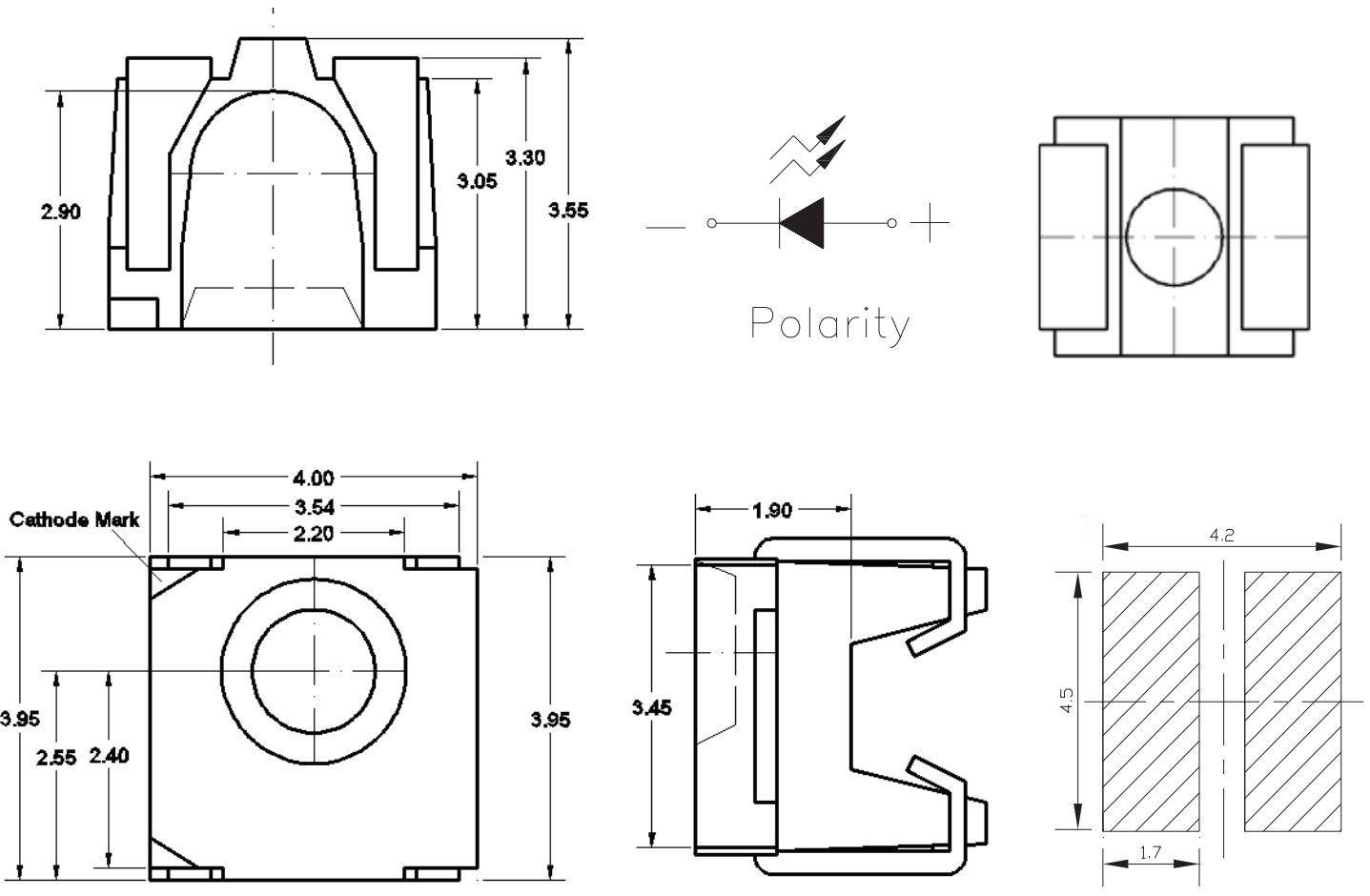


**SPECIFICATION** **CSPR1616GT3C**

**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
CSPR1616GT3C	InGaN	Green	Water Clear	120°



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

Parameter	Symbol	Max Rating	Unit
Forward Current	I <sub>F</sub>	30	mA
Reverse Current @ 5V	I <sub>R</sub>	10	μA
Power Dissipation	P <sub>d</sub>	95	mW
Operating Temperature Range	T <sub>OP</sub>	-40~+85	°C
Storage Temperature Range	T <sub>STG</sub>	-40~+90	°C
Peak Pulsing Current (1/10 duty f = 10KHz)	I <sub>FP</sub>	100	mA
Soldering Temperature	T <sub>SOL</sub>	Max 260°C for 10 sec Max	

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

Parameter	Symbol	Test Condition	Value			Unit
			Min	Typ	Max	
Luminous Intensity	I <sub>v</sub>	I <sub>F</sub> = 20mA	1400	1900	-	mcd
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 20mA	-	3.35	3.8	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>R</sub> = 5V	-	-	10	μA
Viewing Angle at 50% I <sub>v</sub>	2θ <sub>1/2</sub>	I <sub>F</sub> = 20mA	-	120	-	Deg
Dominant Wavelength	λ <sub>d</sub>	I <sub>F</sub> = 20mA	520	-	535	nm
Peak Wavelength	λ <sub>p</sub>	I <sub>F</sub> = 20mA	-	518	-	nm

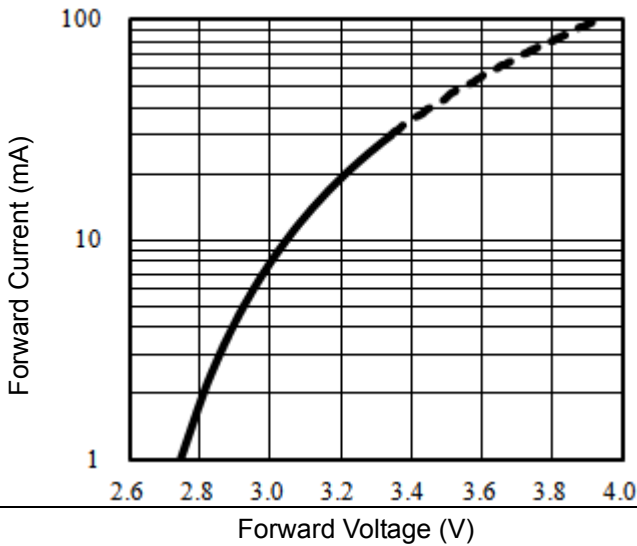
\*Tolerance of viewing angle: -10 / +5 deg.



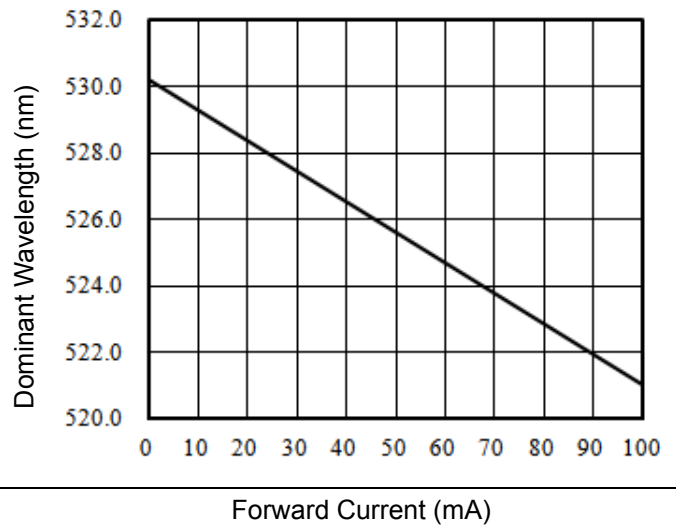
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## OPTICAL CHARACTERISTIC CURVES

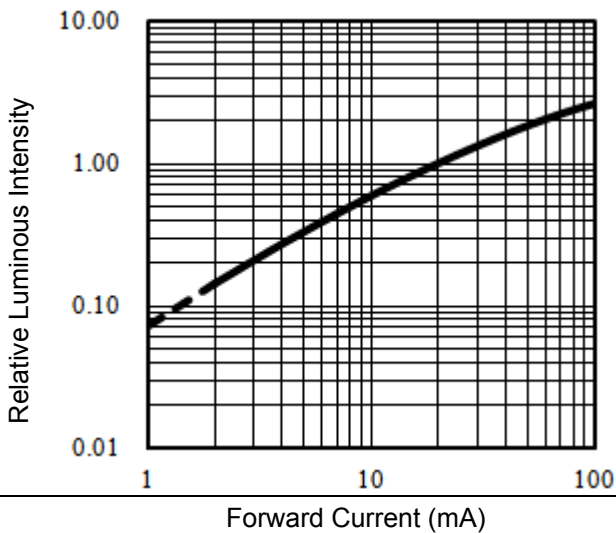
**Forward Current vs. Forward Voltage (Ta=25°C)**



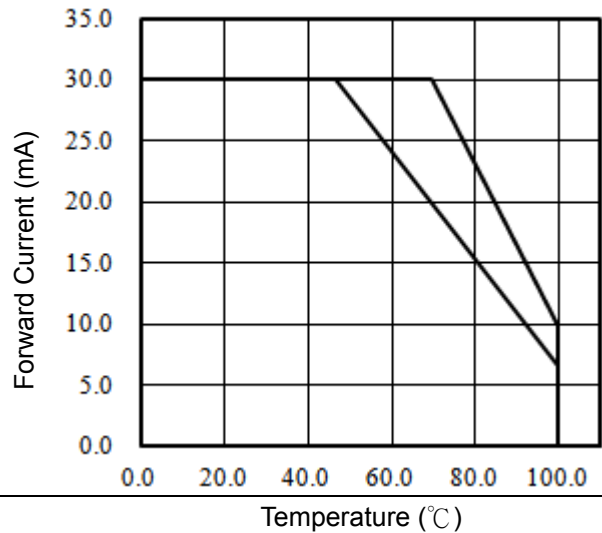
**Dominant Wavelength vs. Forward Current (Ta=25°C)**



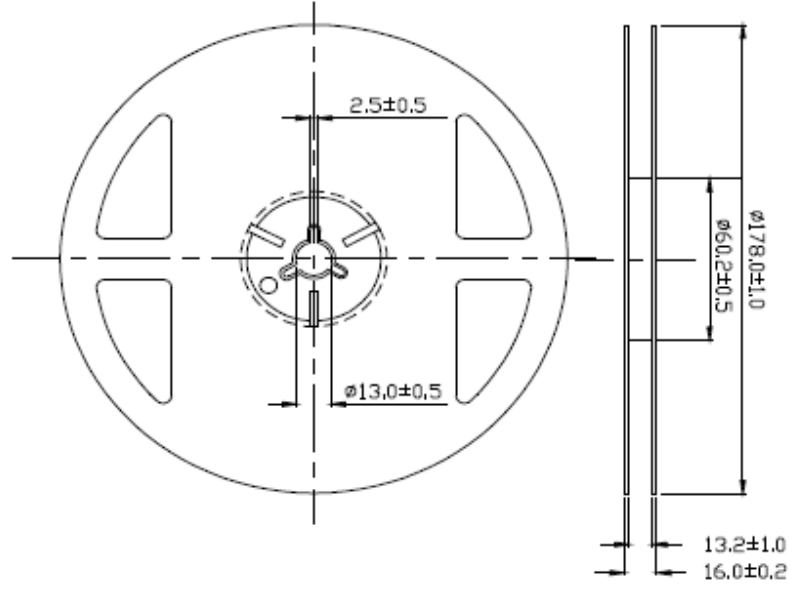
**Relative Luminous Intensity vs. Forward Current (Ta=25°C)**



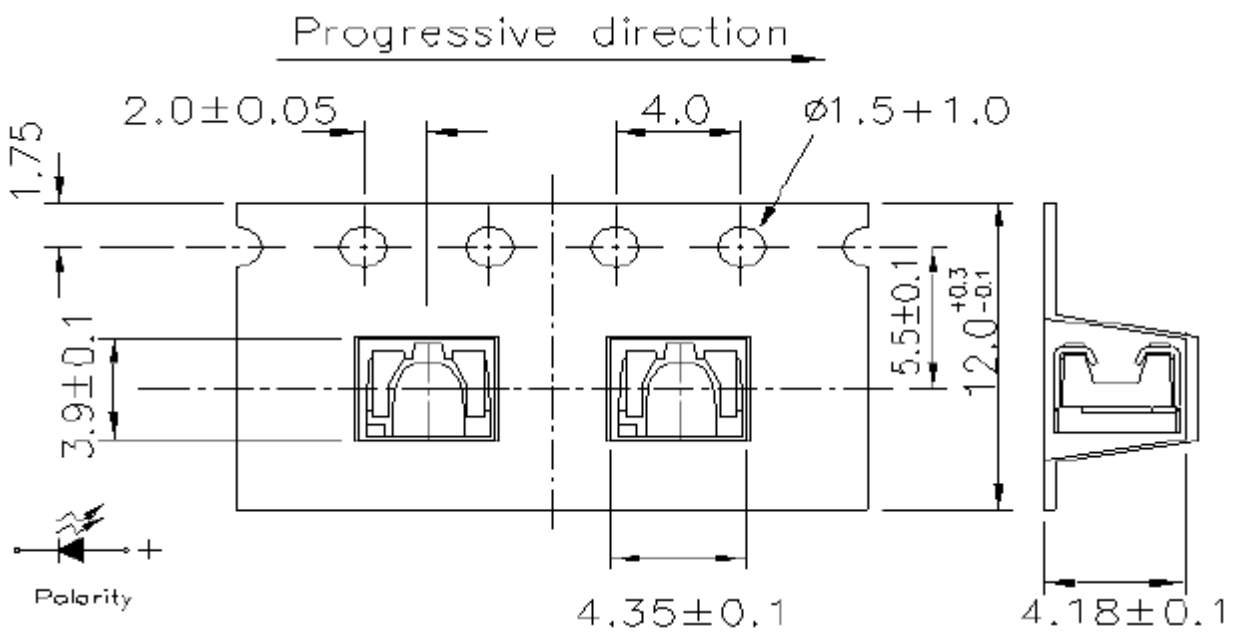

**Max. Permissible Forwarded Current (Ta=25°C)**



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**PACKAGING SPECIFICATION**
**Reel Dimensions**


Note: Unit = mm

**Carrier Tape Dimensions: Loaded Quantity 500 pcs Per Reel**



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## SOLDERING CONDITIONS

### 1. Over-current-proof

Customer must apply resistors for protection, otherwise slight voltage shifts will cause big current change (Burn out will happen).

### 2. Storage

2.1 Do not open moisture proof bag before the products are ready to use

2.2 Before opening the package: The LED's should be kept at 30°C or less and 90% RH or less.

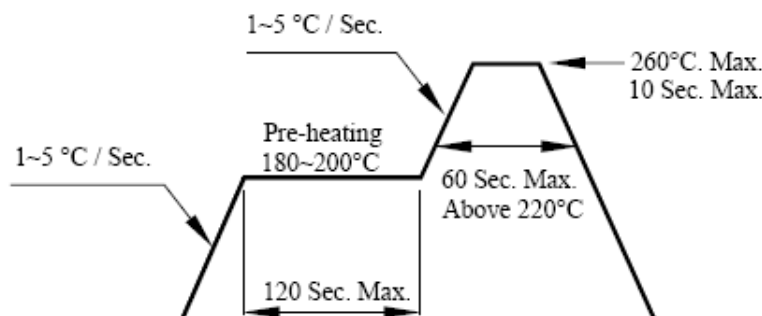
2.3 After opening the package: The LED's floor life is 1 year under 30°C or less and 60% RH or less. If unused LED's remain, it should be stored in moisture proof packages.

2.4 If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions.

Baking Treatment :  $60 \pm 5^\circ\text{C}$  for 24 hours

### 3. Soldering Condition

#### 3.1 Pb-free solder temperature profile



3.2 Reflow soldering should not be done more than two times.

3.3 When soldering, do not put stress on the LEDs during heating

3.4 After soldering, do not wrap the circuit board.



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