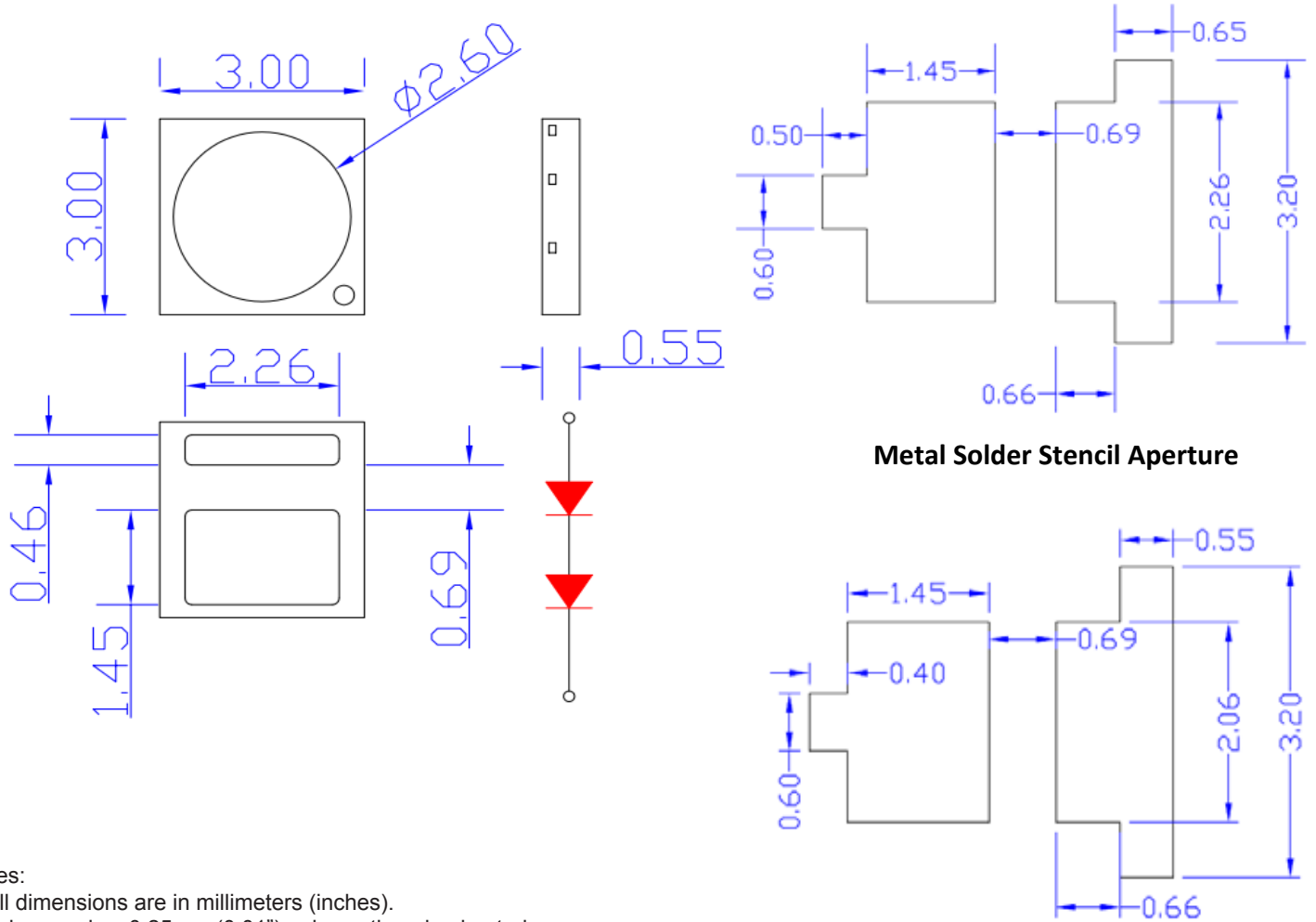


**SPECIFICATION**
**CSHF1212W4C30**
**PACKAGE OUTLINES**


- 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
CSHF1212W4C30	InGaN	White	Water Clear	110°



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

Parameter	Symbol	Max Rating	Unit
Forward Current	IF	240	mA
Reverse Voltage	VR	10	V
Operating Temperature Range	TOP	-40~+85	°C
Storage Temperature Range	TSTG	-40~+85	°C
Peak Pulsing Current (1/10 duty f = 10KHz)	IFP	300	mA
Soldering Temperature	TSOL	Max 260°C for 10 sec Max	

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

Parameter	Symbol	Test Condition	Value			Unit
			Min	Typ	Max	
Luminous Intensity	Iv	IF = 150mA	-	120	-	lm
Forward Voltage	VF	IF = 150mA	-	6.1	6.6	V
Reverse Leakage Current	IR	VR = 5V	-	-	10	µA
Viewing Angle at 50% Iv	2θ1/2	IF = 150mA	-	110	-	Deg
Color Rendering Index	CRI	IF = 150mA	80	-	-	-
Correlated Color Temperature	CCT	IF = 150mA	-	3000	-	K

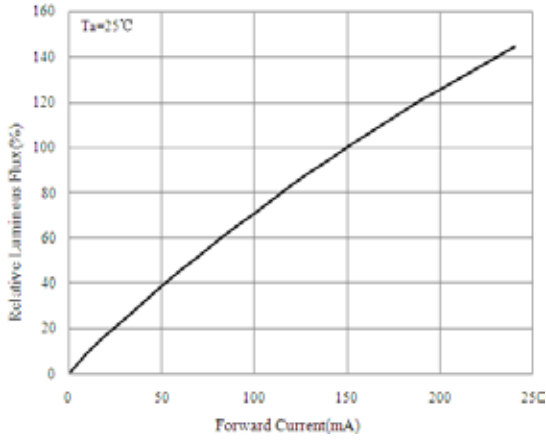
\*Tolerance of viewing angle: -10 / +5 deg.



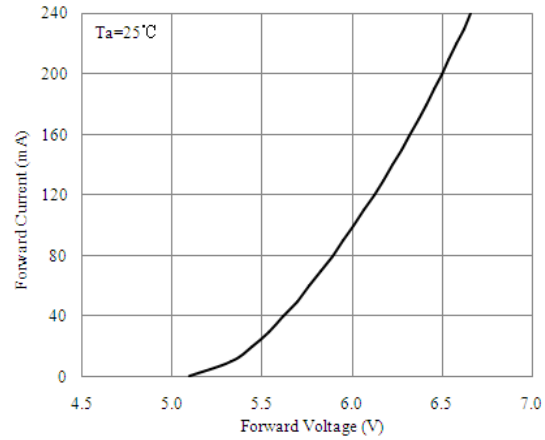
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## OPTICAL CHARACTERISTIC CURVES

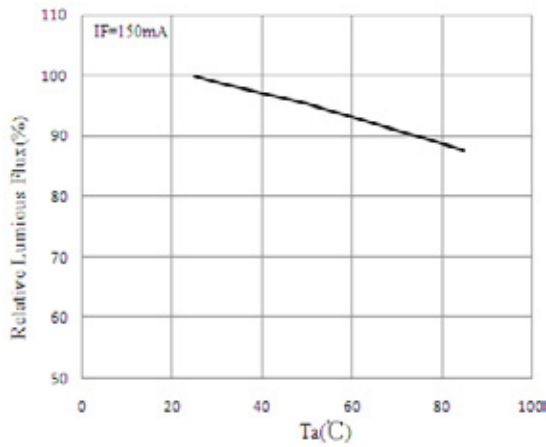
■ Forward Current vs. Luminous flux



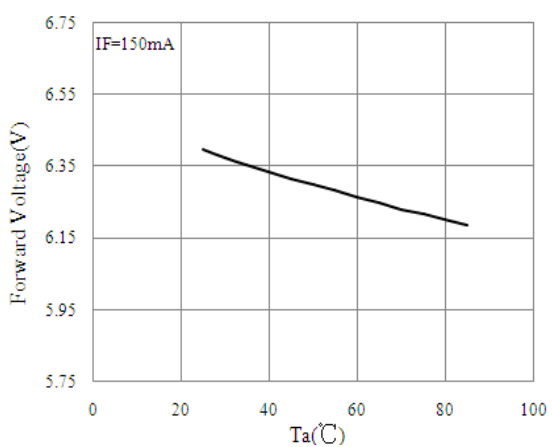
■ Forward Voltage vs. Forward Current



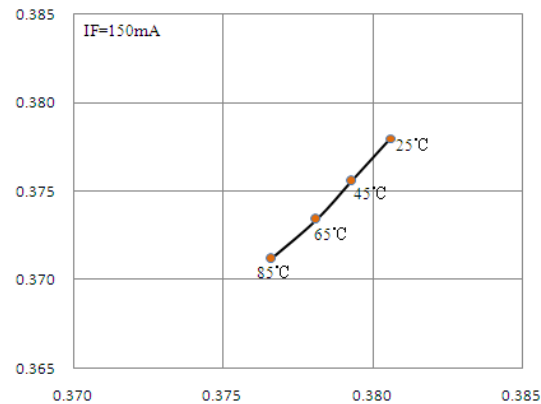
■ Tj—Relative Luminous flux



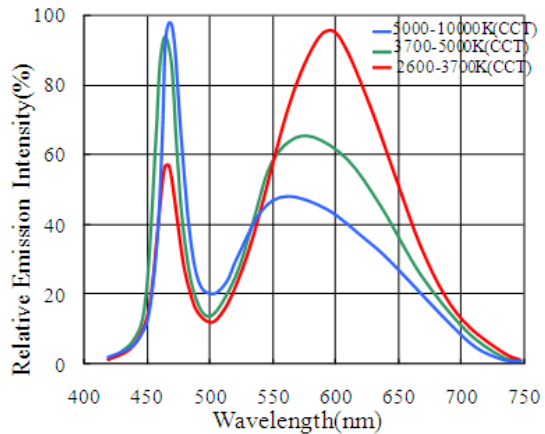
■ Tj—Forward Voltage



■ Tj vs. Chromaticity Coordinate



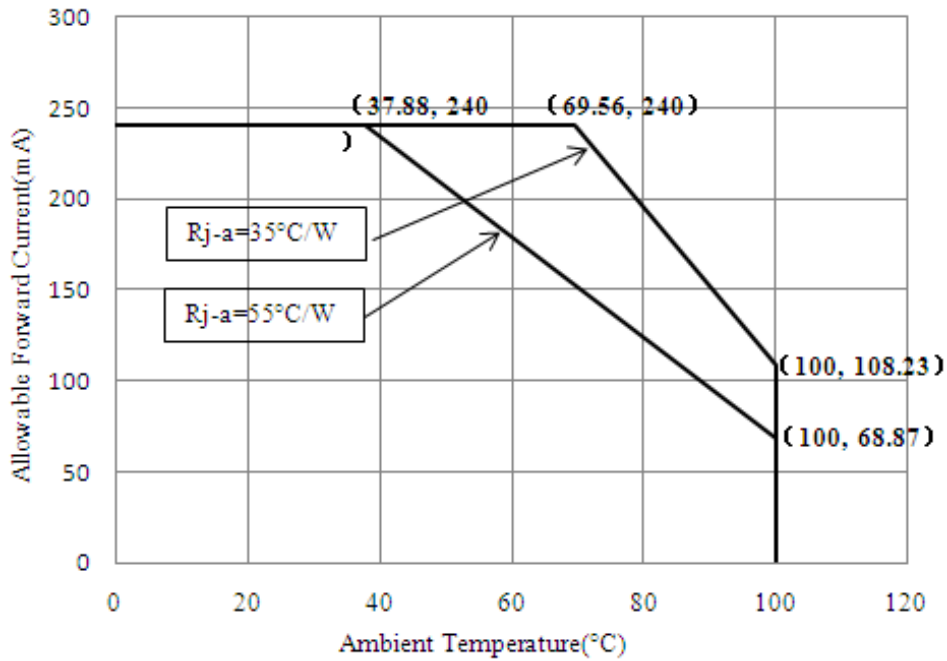
■ Color Spectrum, Ta = 25°C



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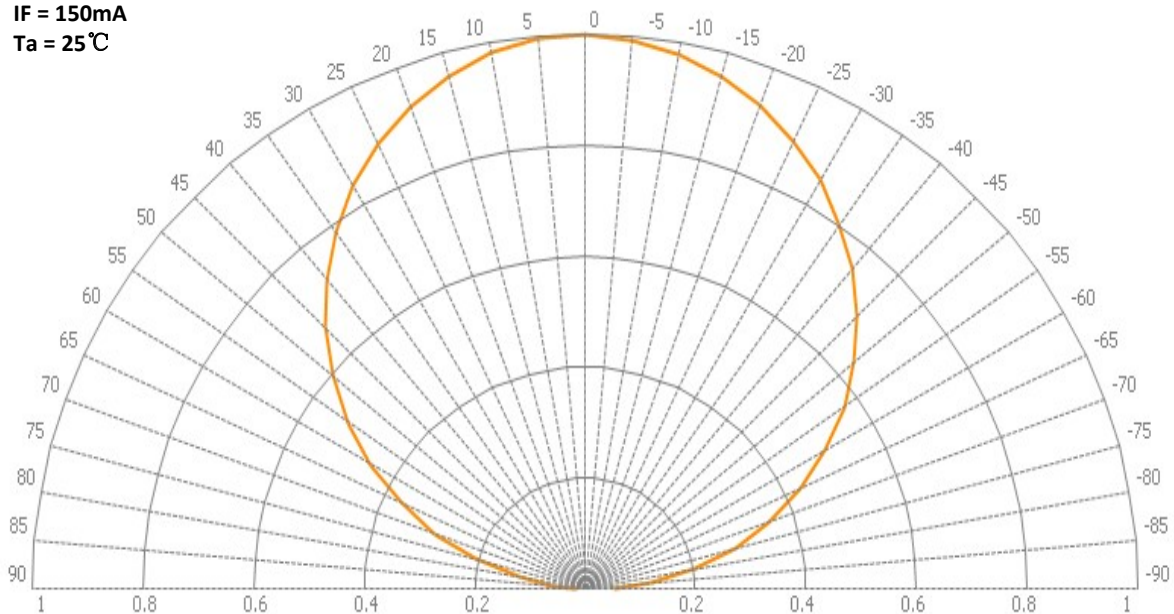
## OPTICAL CHARACTERISTIC CURVES

### Maximum Forward Current vs. Ambient Temperature



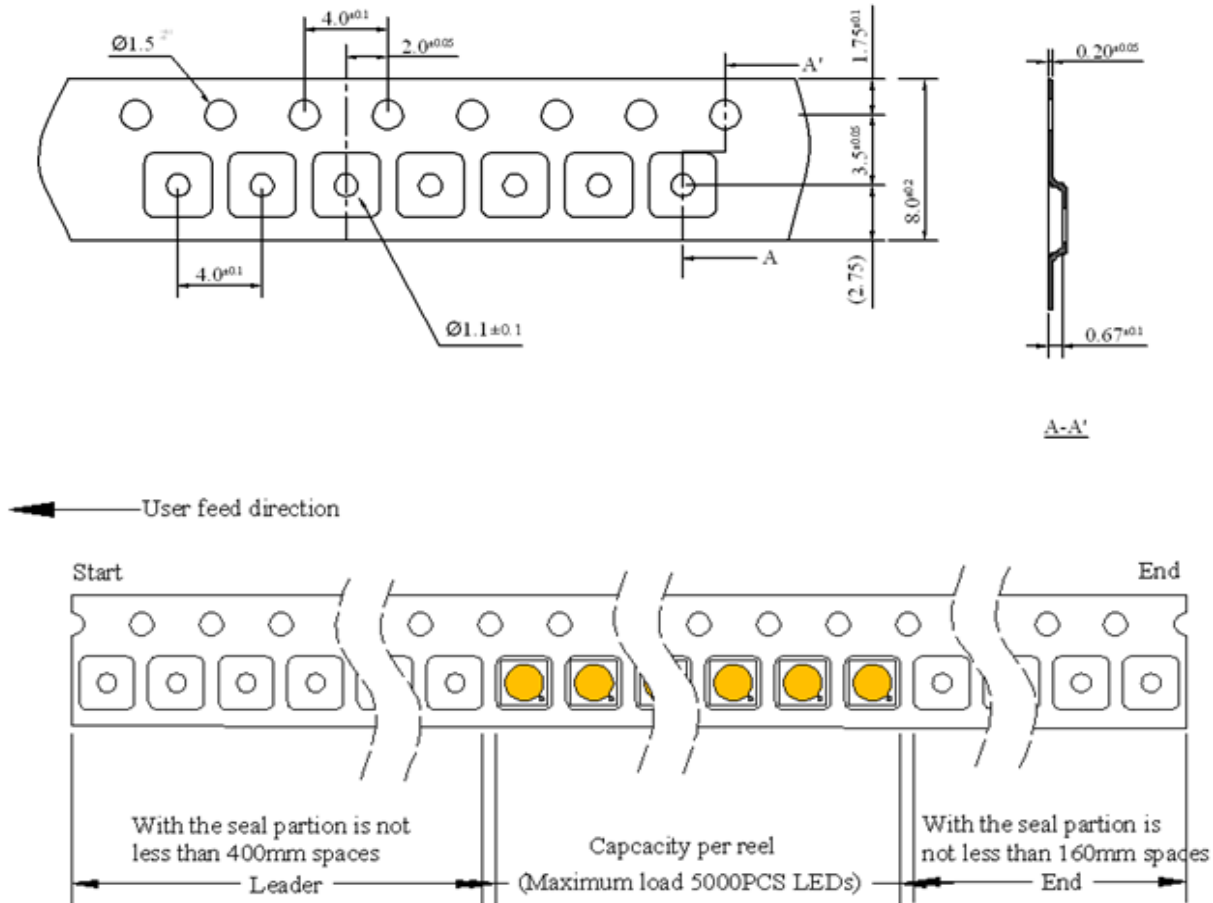
### Directivity

IF = 150mA  
Ta = 25°C



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## PACKAGING SPECIFICATION

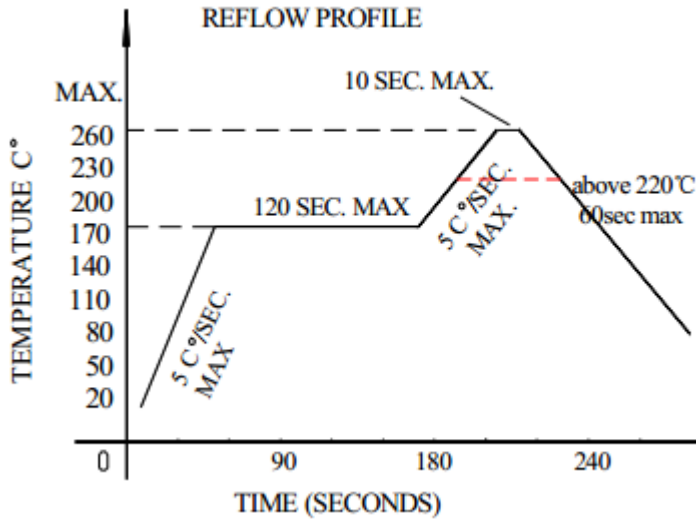


- Quantity : Max 5000pcs/Reel
- Cumulative Tolerance : Cumulative Tolerance/10 pitches to be  $\pm 0.2$ mm
- Adhesion Strength of Cover Tape Adhesion strength to be 0.1-0.7N when the cover tape is turned off from the carrier tape at the angle of  $10^\circ$  to the carrier tape.
- Package : P/N, Manufacturing data Code No. and Quantity to be indicated on a damp proof Package.



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## SOLDERING CONDITIONS



Reflow soldering		Hand Soldering	
Pre-heat	160~180°C	Temperature	300°C Max
Pre-heat time	120 Seconds Max	Soldering time	3 second Max
Peak temperature	260°C Max		
Soldering time	10 Seconds Max		
Condition	Refer to Temperature-profile		



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