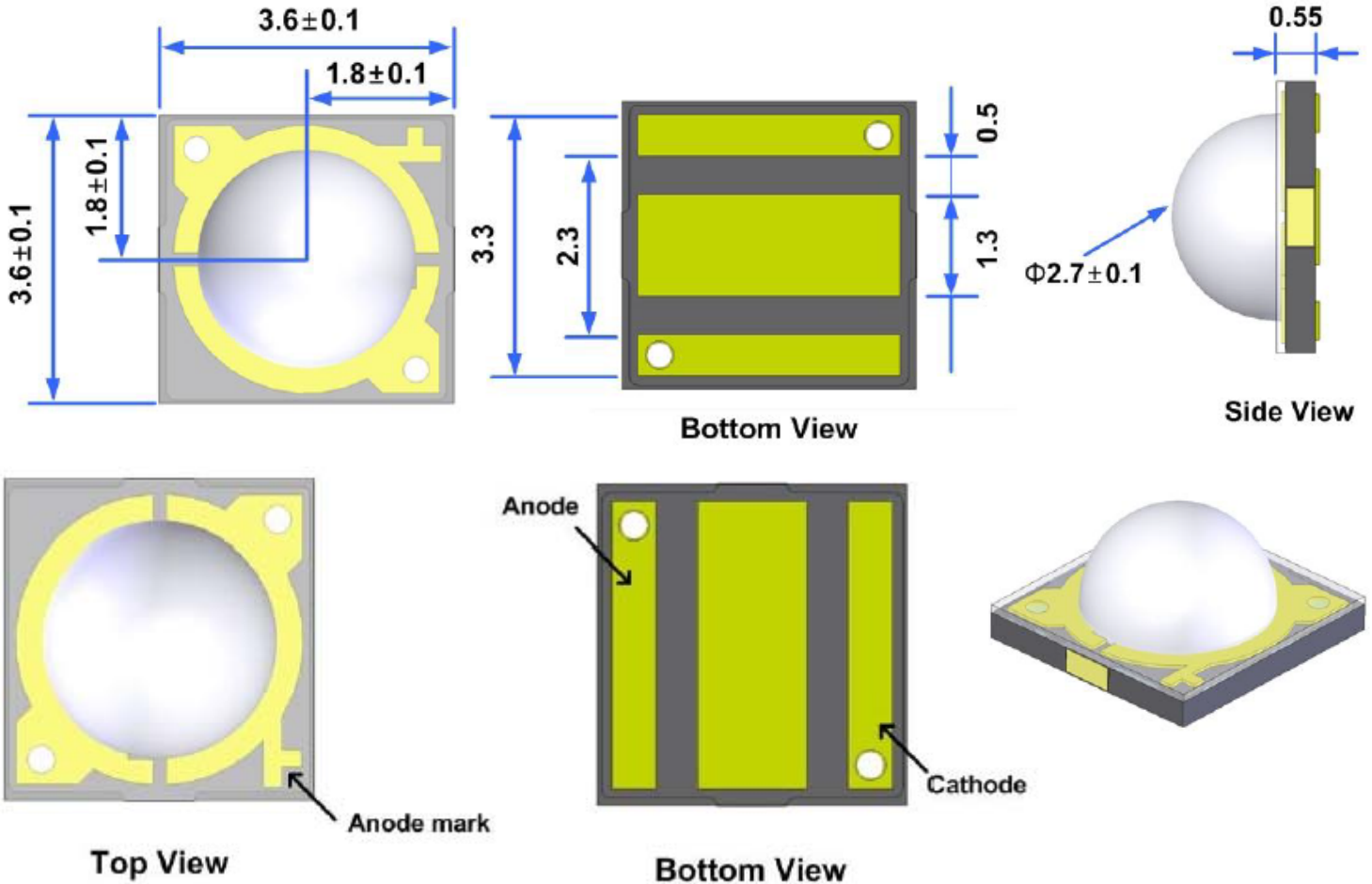


**SPECIFICATION**
**CSHD1414GT2C**
**PACKAGE OUTLINES**

**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.

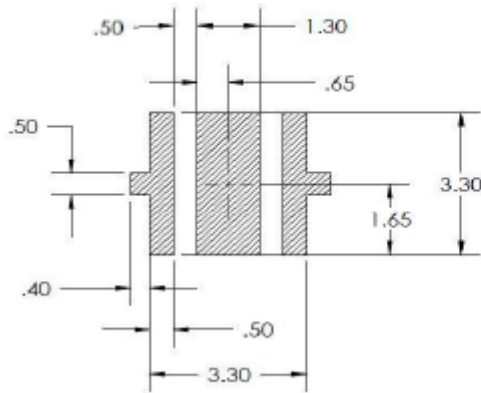
Part Number	Chip Material	Color of Emission	Lens Type	Viewing Angle
CSHD1414GT2C	InGaN	Green	Water Clear	130°



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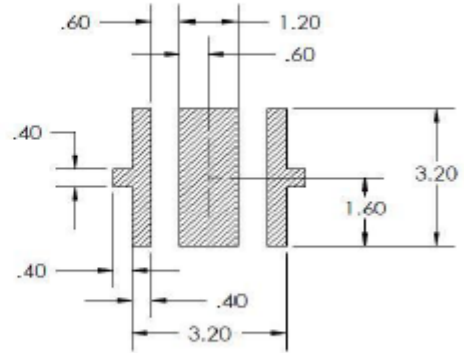
**RECOMMENDED SOLDER PADS**

**Recommended PCB solder pad:**



RECOMMENDED PCB SOLDER PAD

**Recommended stencil pattern:**



RECOMMENDED STENCIL PATTERN  
(HATCHED AREA IS OPENING)



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

Parameter	Symbol	Max Rating	Unit
Forward Current	I <sub>F</sub>	500	mA
Reverse Voltage	V <sub>R</sub>	5	V
Operating Temperature Range	T <sub>OP</sub>	-40~+85	°C
Storage Temperature Range	T <sub>STG</sub>	-40~+100	°C
Peak Pulsing Current (1/10 duty f = 10KHz)	I <sub>FP</sub>	700	mA
Soldering Temperature	T <sub>SOL</sub>	Max 240°C for 5 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> = 350mA	-	95	-	lm
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 350mA	-	3.4	3.6	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> = 350mA	-	130	-	Deg
Wavelength	λ <sub>D</sub>	I <sub>F</sub> = 350mA	520	525	530	nm

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

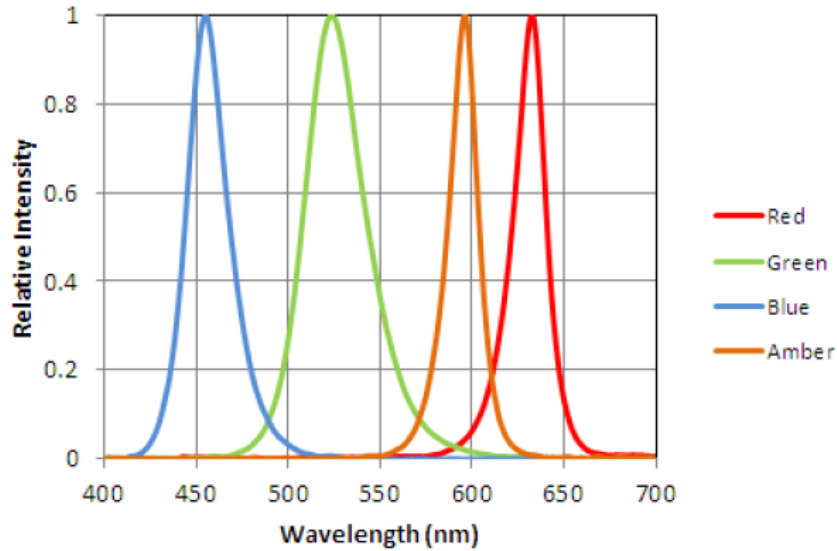


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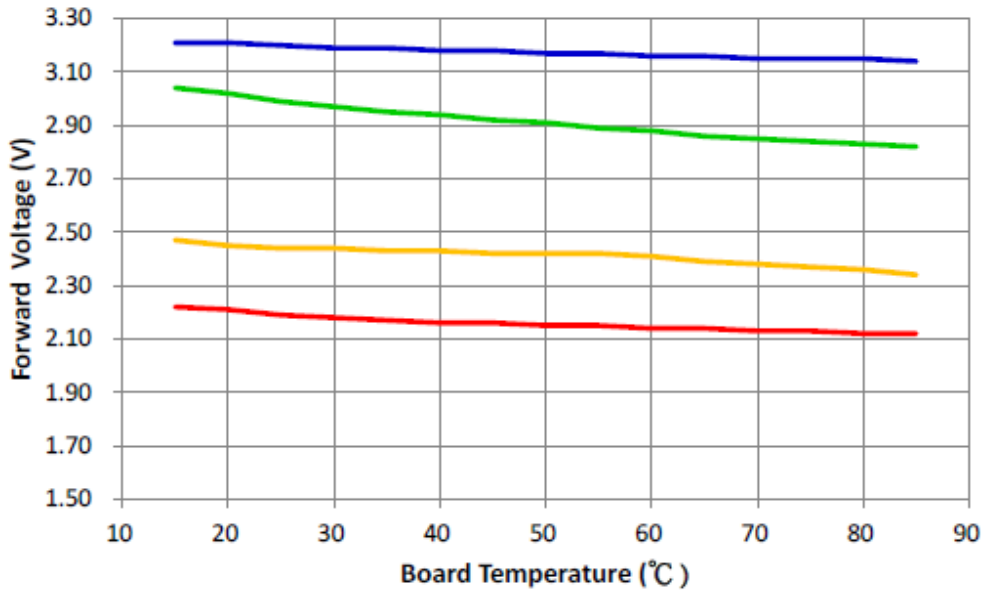
## OPTICAL CHARACTERISTIC CURVES

### Relative Spectral Distribution vs. Wavelength Characteristics

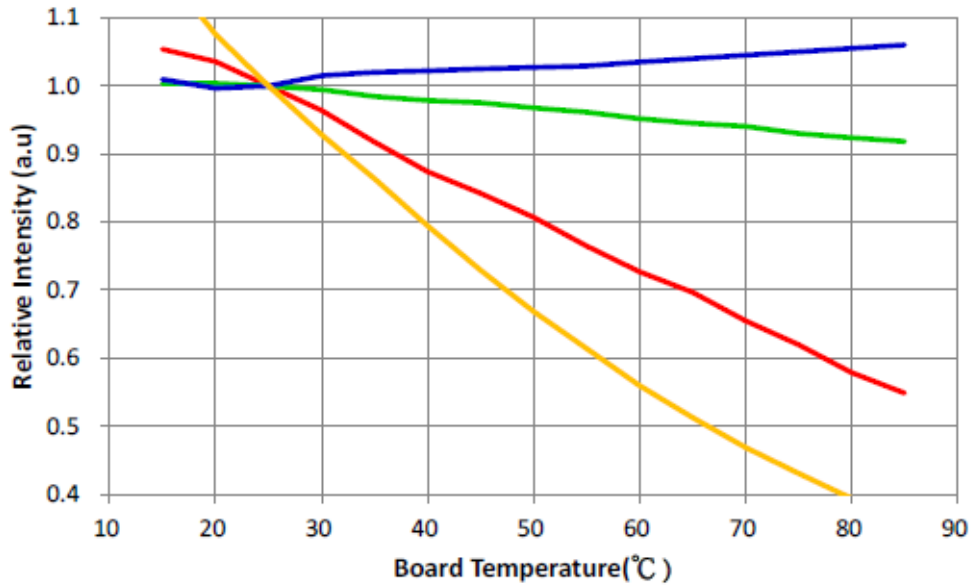
Nominal Red/Green/Blue/Amber - Thermal Pad Temperature = 25°C



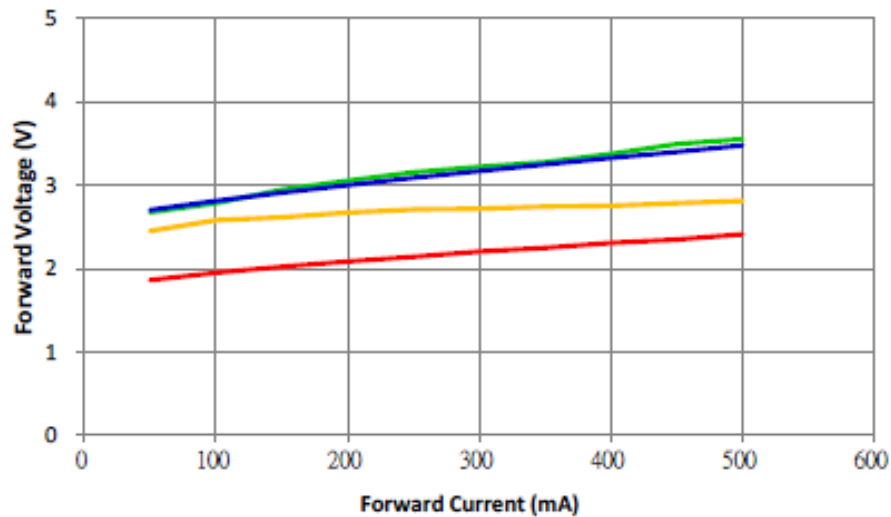
### Forward Voltage vs. Thermal Pad Temperature @350mA



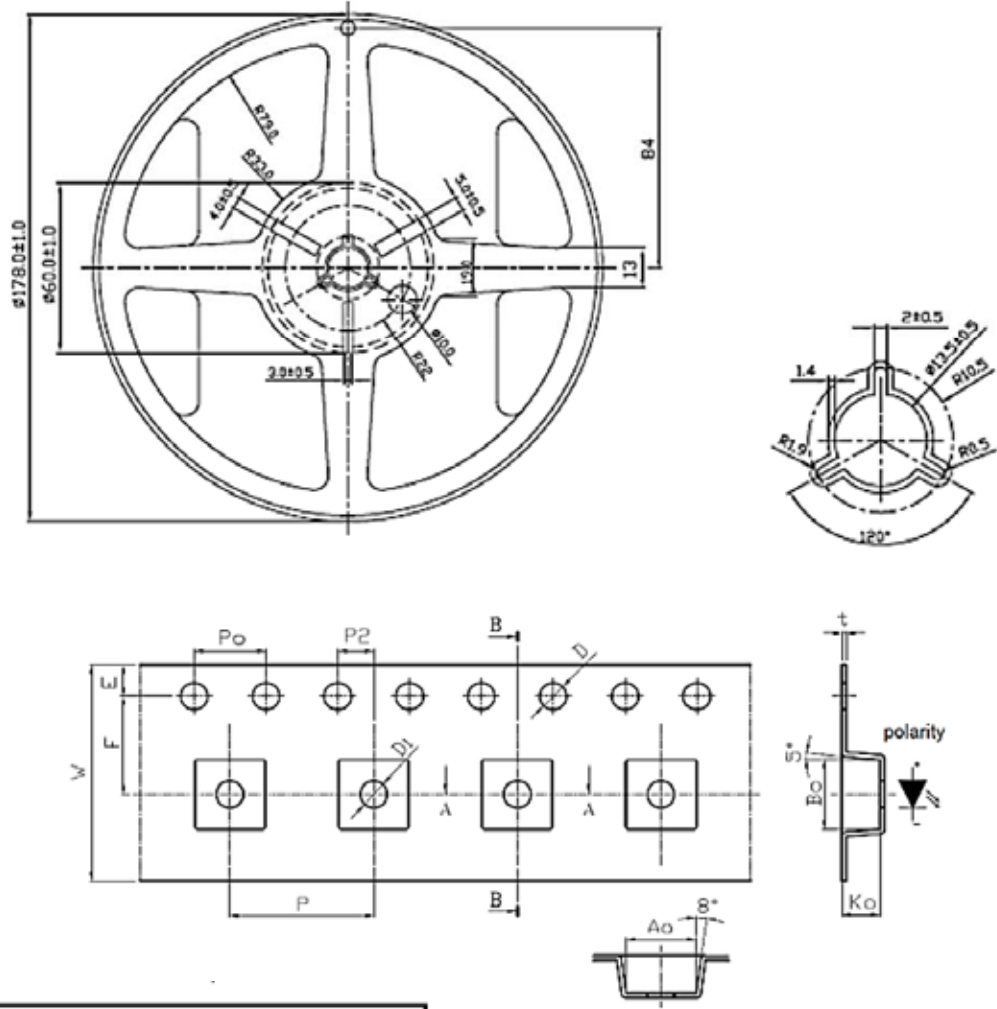
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**OPTICAL CHARACTERISTIC CURVES**
**Typical Efficacy vs. Thermal Pad Temperature @350mA**

**Typical Forward Current Characteristics**

Thermal Pad Temperature = 25°C



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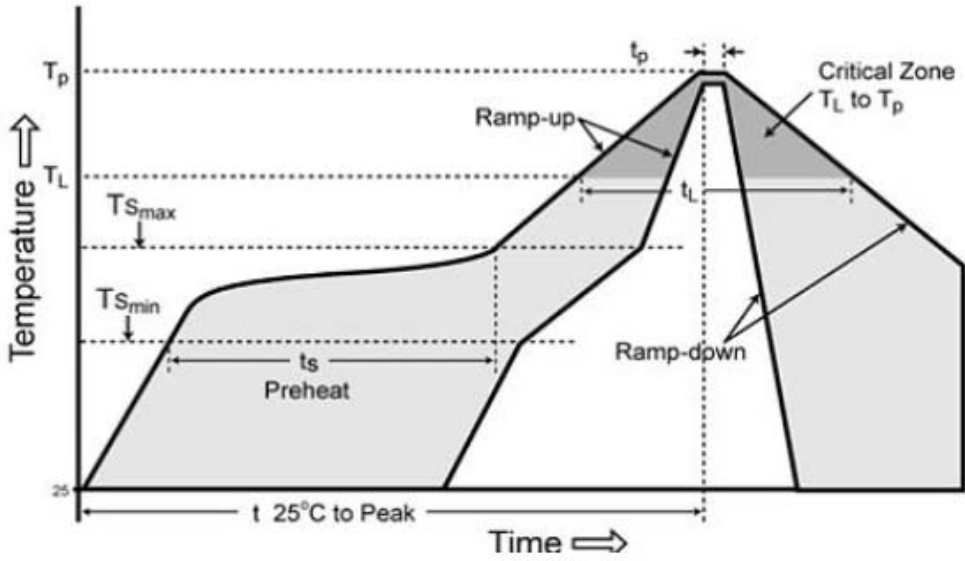
**PACKAGING SPECIFICATION**
**TAPE & REEL DIMENSIONS**


Symbol	Dimension
W	12.00±0.10
P	8.00±0.10
E	1.75±0.10
F	5.50±0.05
P2	2.00±0.05
D	1.50+0.10 or 1.50-0.00
D1	1.50±0.10
Po	4.00±0.10
10Po	40.00±0.20
Ao	3.90±0.10
Bo	3.90±0.10
Ko	2.15±0.1
t	0.26±0.05



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## SOLDERING CONDITIONS



Profile Feature	Pb-Free Assembly
Average ramp-up rate (TL to TP)	3°C/second max.
Preheat	
Temperature Min (Tsmin)	150°C
Temperature Max (Tsmax)	200°C
Time (min to max) (ts)	60-180 seconds
Time maintained above:	
Temperature (TL)	217°C
Time (tL)	60-150 seconds
Peak/Classification Temperature (Tp)	240°C
Time within 5°C of actual Peak Temperature (tp)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.



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