

# CTL1206DBL1T DATASHEET

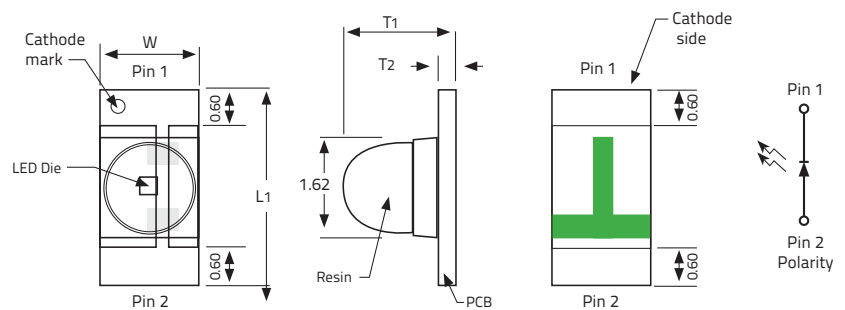
Chip Type LED, 1206, Dome Lens, Blue



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Part Number	Size	Emitting Color	Emitting Material	Lens-Color	Luminous Intensity (I <sub>F</sub> =20mA) mcd	Wavelength nm λ <sub>P</sub>	Viewing Angle (2θ 1/2)
CTL1206DBL1T	1206	Blue	AllnGaP	Water Clear	450.0 min 1440.0 typ	468	20°

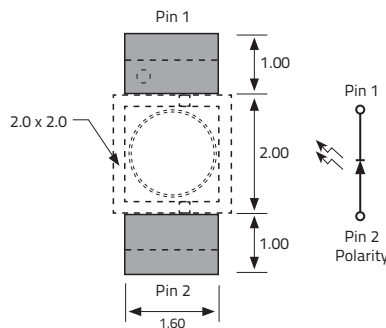
Electrical & Optical Specifications (T <sub>A</sub> =25°C)	GR1 (AlGaInP)	Unit
Forward Voltage (Min.) (I <sub>F</sub> =20mA)	V <sub>F</sub>	3.3 V
Forward Voltage (Max.) (I <sub>F</sub> =20mA)	V <sub>F</sub>	3.9 V
Reverse Current (Max) (V <sub>R</sub> =5V)	I <sub>R</sub>	<100 uA
Peak Wavelength (Typ.) (I <sub>F</sub> =20mA)	λ <sub>P</sub>	468 nm
Dominant Wavelength (Typ.) (I <sub>F</sub> =20mA)	λ <sub>D</sub>	470 nm
Spectral Line Half Width (Typ.) (I <sub>F</sub> =20mA)	Δλ	40 nm



Dimensions				Units: Inches (mm)			
L <sub>1</sub>	W	T <sub>1</sub>	T <sub>2</sub>	L <sub>1</sub>	W	T <sub>1</sub>	T <sub>2</sub>
0.1259±0.004 (3.20±0.1)	0.0629±0.004 (1.6±0.1)	0.0728±0.004 (1.85±0.1)	0.0118±0.004 (0.30±0.1)				

Absolute Maximum Ratings (T <sub>A</sub> =25°C)	GR1 (AlGaInP)	Unit
Reverse Voltage	V <sub>R</sub>	5 V
DC Forward Current	I <sub>F</sub>	20 mA
Peak Forward Current 1/10 Duty Cycle @ 10KHz	I <sub>FP</sub>	60 mA
Power Dissipation	P <sub>D</sub>	78 mW
Operating Temperature	T <sub>A</sub>	-40 ~ +85 °C
Storage Temperature	T <sub>stg</sub>	-40 ~ +100 °C

## Soldering Pad Layout



Tolerances are all ±0.1mm

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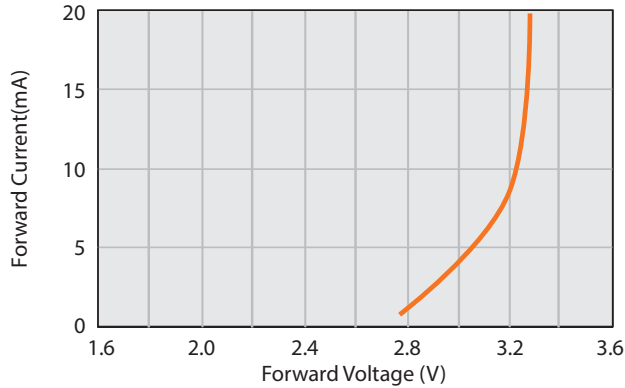
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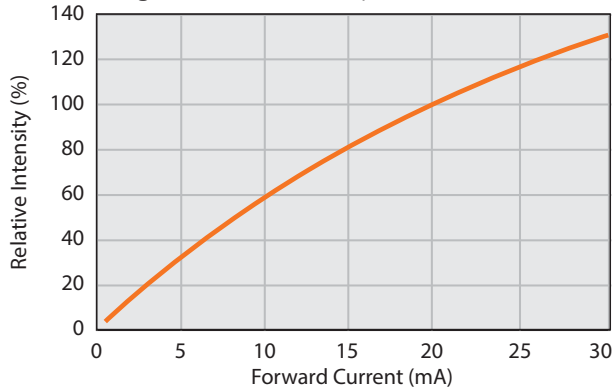
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## Graphs

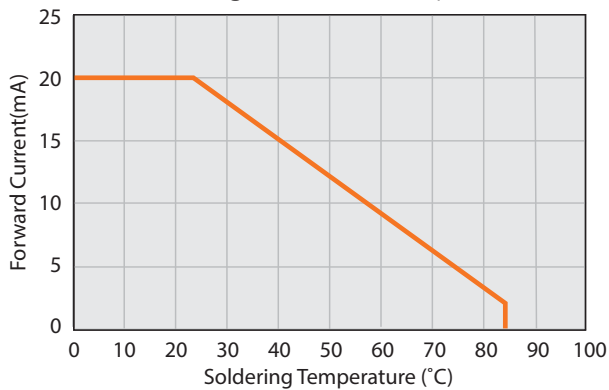
**Fig.1 Forward Current vs Forward Voltage**



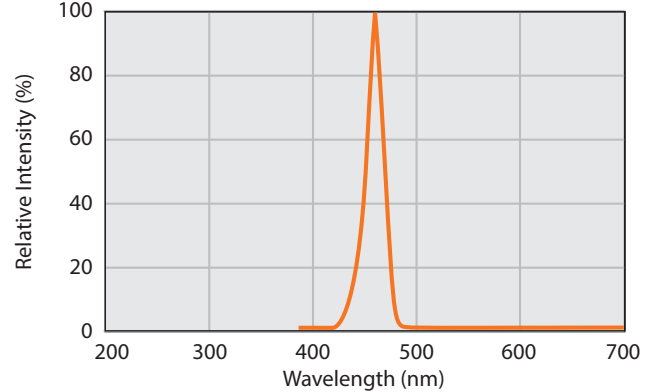
**Fig.2 Relative Intensity vs Forward Current**



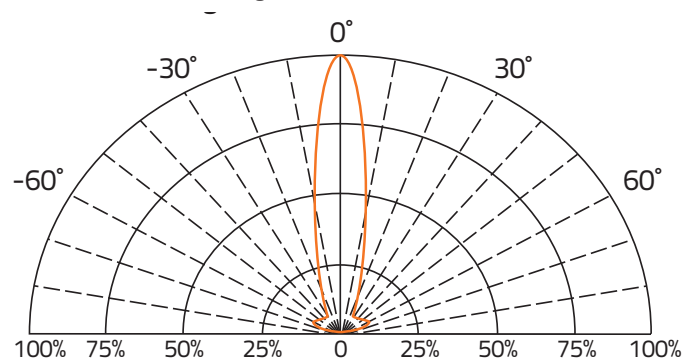
**Fig.3 Current vs Temp**



**Fig.4 Relative Intensity vs Wavelength**



**Fig.5 Direct Radiation**



Environmental information	
RoHS Status	6 of 6 Compliant
REACH Status	Compliant
Halogen Status	Halogen Free
Conflict Mineral Status	Conflict Mineral Free
Moisture Sensitivity Level (MSL)	3

Reflow profile	
Max Reflow Temperature	260°C
Number of Reflow Cycles	2
Time at Max Reflow Temperature	10 seconds

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## Label Example

Item: CTL1206DBL1T  
Chip Type LED, 1206, Dome Lens, Blue  
Qty: 2000 D/C: 1616

Lot: E1A1A22L12

BIN/HUE: X/C VF: 1.6V-2.4V

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**YOUR SINGLE SOURCE FOR SURFACE MOUNT PASSIVES**

### Codes:

VF: Forward Voltage | BIN: Luminous Intensity | HUE: Dominant Wavelength

## Luminous Intensity Classification (BIN Code)

BIN Code	Iv(mcd) at 20mA	
	Min.	Max.
V	450.0	560.0
W	560.0	715.0
X	715.0	900.0
Y	900.0	1125.0
Z	1125.0	1440.0

## Dominant Wavelength Classification (HUE Code)

HUE Code	$\lambda_D$ (nm) at 20mA	
	Min.	Max.
A	460.0	464.0
B	464.0	468.0
C	468.0	472.0
D	472.0	476.0

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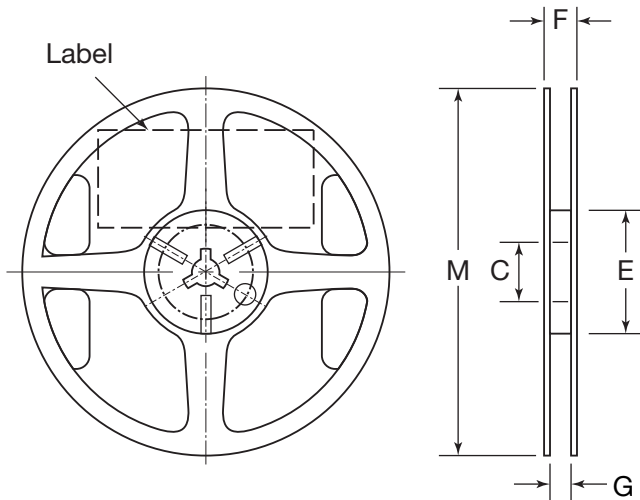
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## Reel Specifications

Units: mm



M	C	F	E	G
178±1.50	13.0±1.0	12.0±1.0	60.0±1.0	9.0±1.0

## Packaging Specifications

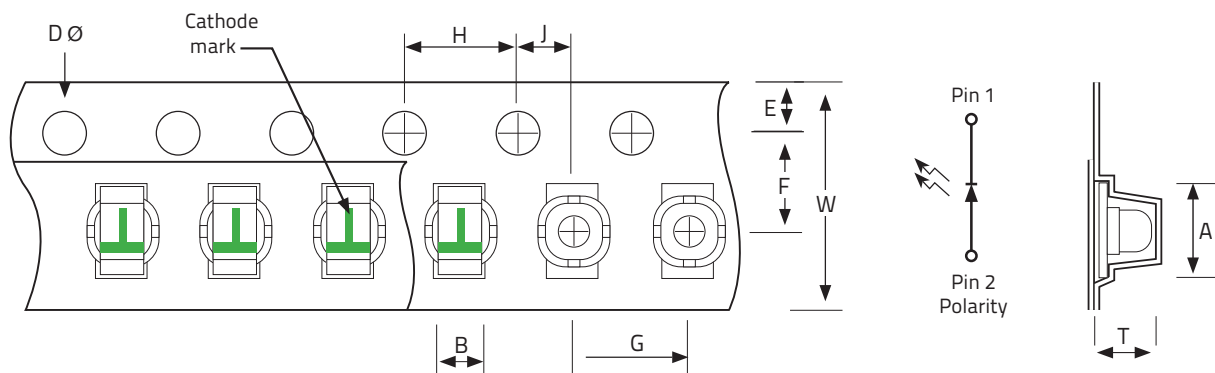
Reel Size:	7"
Quantity per Reel :	2,000

## Storage Specifications

1. Storage temperature and RH: 5°C~35°C, RH60%
2. Once the package is opened, the LEDs should be used within a week. Otherwise, they should be kept in a moisture proof bag with desiccant. We suggest that you use this product within one year from date code.
3. If opened for more than one week in an atmosphere of 5°C~35°C, RH60%. The parts should be heat treated at 60°C±5°C for 15 hours.

## Tape Specifications

Units: mm



T	W	A	B	F
2.17±0.10	8.0+0.30/-0.10	3.37±0.10	1.78±0.10	3.5±0.05
E	H	J	D	G
1.75±0.1	4.0±0.1	2.0±0.05	1.5±0.1	4.0±0.1

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## Environmental Test Criteria

Classification	Test Item	Test Condition	Sample Size
Endurance Test	Operating Life	1. 25°C 2. 1000hrs	40
	High Temperature Storage	1. 85°C±5°C 2. 1000hrs	40
	Temperature, Humidity Bias	1. 40°C 2. 93% 3. 1000hrs	40
Environmental Test	Solderability	1. 245°C / 3±1 sec 2. 260°C / 10±1 sec	40