

CTL1206DRD3T DATASHEET

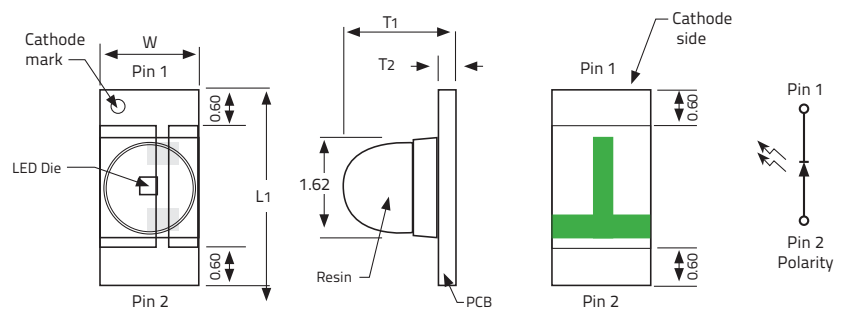
Chip Type LED, 1206, Dome Lens, Red (Ultra Bright Red)



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Part Number	Size	Emitting Color	Emitting Material	Lens-Color	Luminous Intensity ($I_F=20\text{mA}$) mcd	Wavelength nm λ_P	Viewing Angle (2θ 1/2)
CTL1206DRD3T	1206	Ultra Bright Red	AlInGaP	Water Clear	900.0 min 2850.0 typ	632	20°

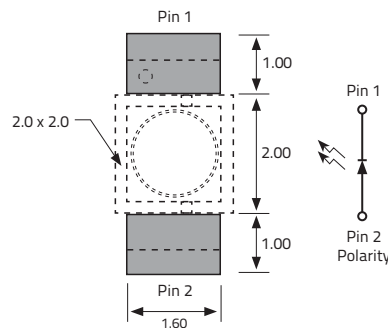
Electrical & Optical Specifications ($T_A=25^\circ\text{C}$)		GR1 (AlGaInP)	Unit
Forward Voltage (Min.) ($I_F=20\text{mA}$)	V_F	2.0	V
Forward Voltage (Max.) ($I_F=20\text{mA}$)	V_F	2.4	V
Reverse Current (Max.) ($V_R=5\text{V}$)	I_R	<100	μA
Peak Wavelength (Typ.) ($I_F=20\text{mA}$)	λ_P	632	nm
Dominant Wavelength (Typ.) ($I_F=20\text{mA}$)	λ_D	624	nm
Spectral Line Half Width (Typ.) ($I_F=20\text{mA}$)	$\Delta\lambda$	20	nm



Dimensions				Units: Inches (mm)			
L_1	W	T_1	T_2	L_1	W	T_1	T_2
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 ($T_A=25^\circ\text{C}$)		GR1 (AlGaInP)	Unit
Reverse Voltage	V_R	5	V
DC Forward Current	I_F	20	mA
Peak Forward Current 1/10 Duty Cycle @ 10KHz	I_{FP}	40	mA
Power Dissipation	P_D	48	mW
Operating Temperature	T_A	-40 ~ +85	°C
Storage Temperature	T_{stg}	-40 ~ +100	

Soldering Pad Layout



Tolerances are all $\pm 0.1\text{mm}$

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Graphs

Fig.1 Forward Current vs Forward Voltage

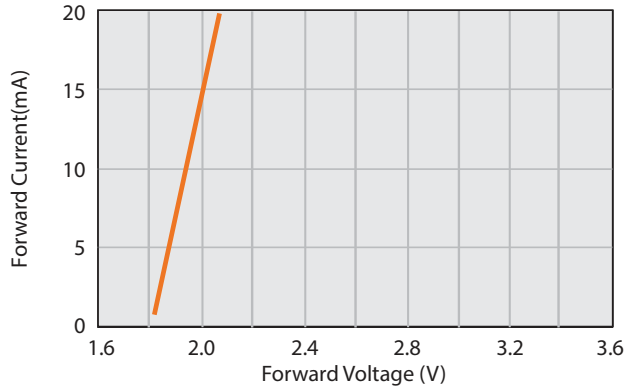


Fig.2 Relative Intensity vs Forward Current

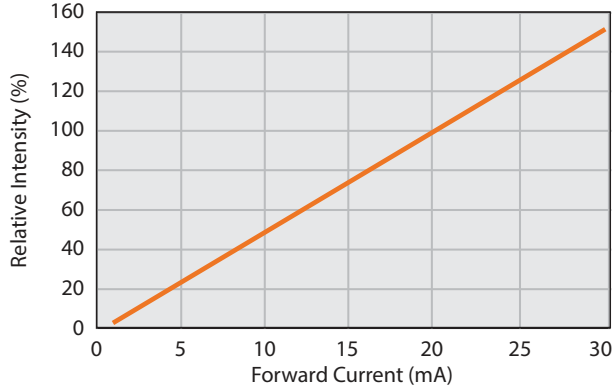


Fig.3 Current vs Temp

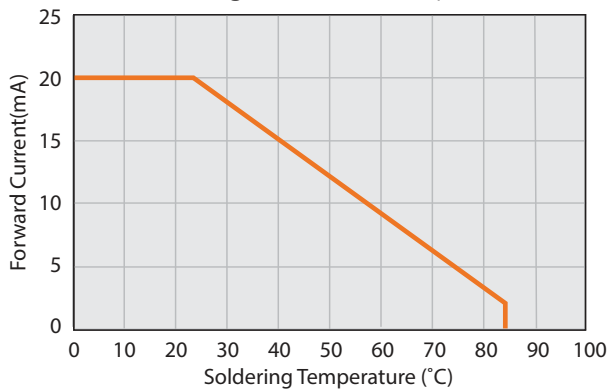


Fig.4 Relative Intensity vs Wavelength

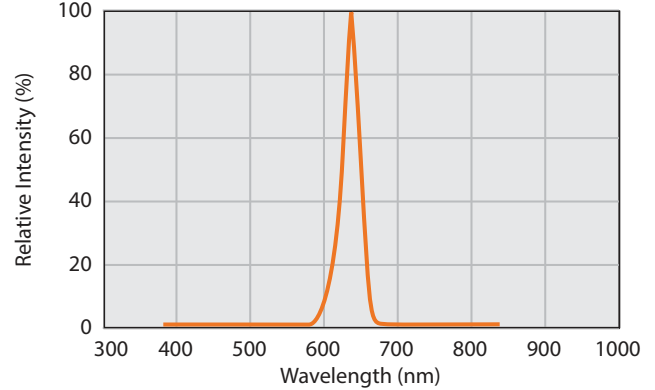
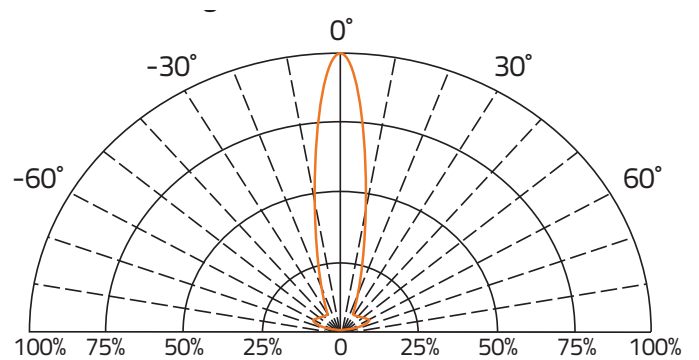


Fig.5 Direct Radiation



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: CTL1206DRD3T

Chip Type LED, 1206, Dome Lens, Red (Ultra Bright Red)

Qty: 2000

D/C: 1616

Lot: E1A1A22L12

BIN/HUE: AA/AC

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.
Y	900.0	1125.0
Z	1125.0	1440.0
AA	1440.0	1800.0
AB	1800.0	2250.0
AC	2250.0	2850.0

Dominant Wavelength Classification (HUE Code)

HUE Code	λ_D (nm) at 20mA	
	Min.	Max.
AC	615.0	630.0

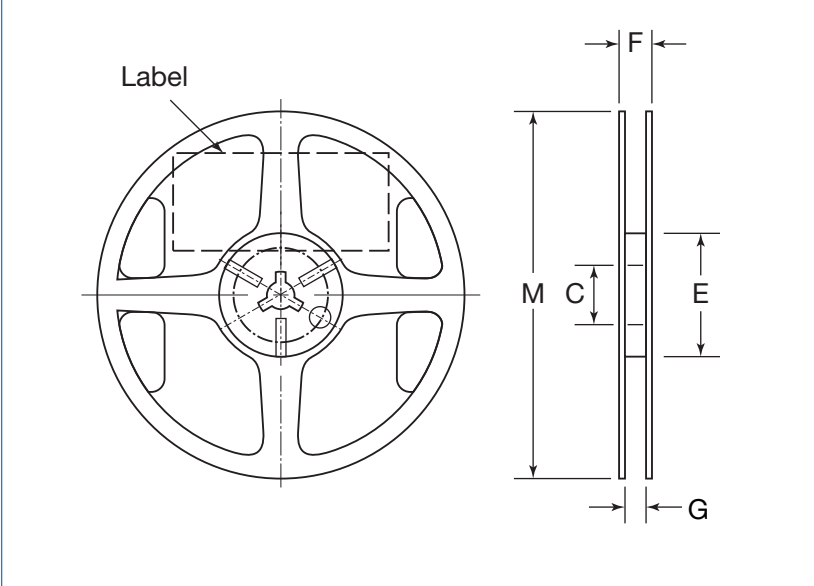
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Reel Specifications Units: mm



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

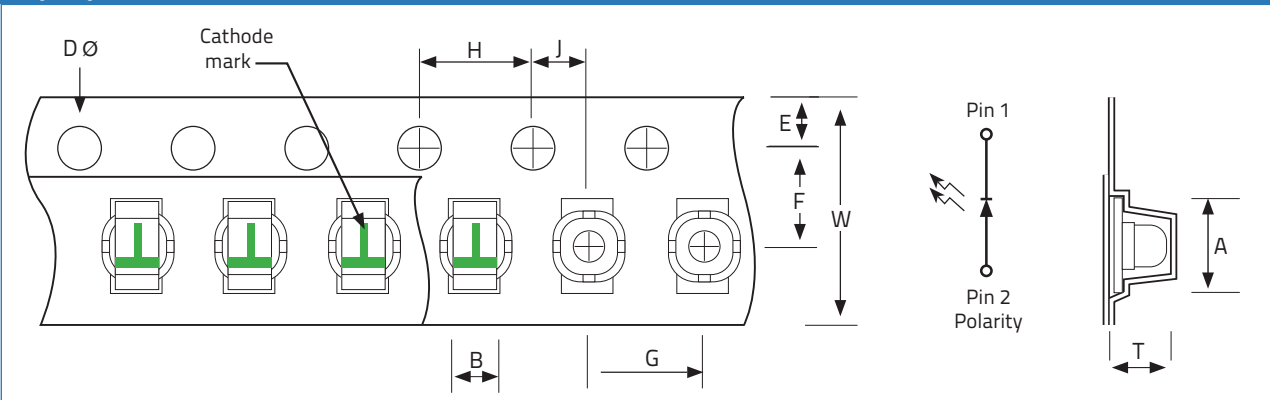
Packaging Specifications

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