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**DATA SHEET**

**PART NO.:L-C195KFWDT-5A**

**REV: A / 0**

CUSTOMER'S APPROVAL : \_\_\_\_\_

DCC : \_\_\_\_\_

DRAWING NO. :DS-31-10-0031

DATE : 2010-08-03

PAGE

1 of 9

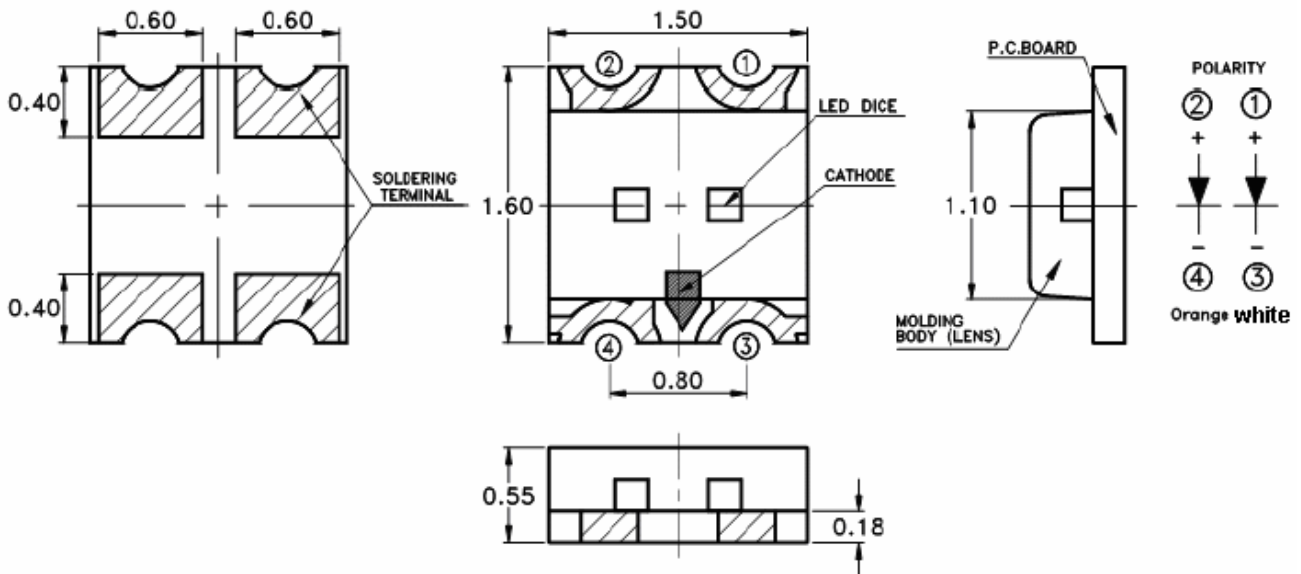


# SURFACE MOUNT DEVICE LED

Part No. :L-C195KFWDT-5A

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## ● PACKAGE OUTLINE DIMENSIONS



### Notes:

1. All dimensions are in millimeters.
2. Tolerance is  $\pm 0.1\text{mm}$  (.004") unless otherwise noted.



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### FEATURES

- \* LOW POWER CONSUMPTION
- \* I.C. COMPATIBLE
- \* LONGLIFE SOLID STATE RELIABILITY

### CHIP MATERIALS

- \* Dice Material : InGaN / AlInGaP
- \* Light Color : White & Orange
- \* Lens Color : WATER CLEAR

### ABSOLUTE MAXIMUM RATING : ( Ta = 25°C )

Symbol	Parameter	Rating		Unit
		White	Orange	
PD	Power Dissipation	72	75	mW
IPF	Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	100	80	mA
IF	Continuous Forward Current	20	30	mA
VR	Reverse Voltage	5	5	V
Topr	Operating Temperature Range	-20 ~ +80		
Tstg	Storage Temperature Range	-30 ~ +100		

Note A:

HBM: Human Body Model. Seller gives no other assurances regarding the ability of to withstand ESD

### ● Electro-Optical Characteristics(Ta=25 )

SYMBOL		PARAMETER	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
VF	White	Forward Voltage	IF = 5mA		2.75	3.15	V
	Orange				2.0	2.4	
IV	White	Luminous Intensity	IF = 5mA	45		180	mcd
	Orange			11.2		71	
X	White	CIE Chromaticity	IF = 5mA		0.3		
Y	White	CIE Chromaticity	IF = 5mA		0.3		
2θ1/2		Half Intensity Angle	IF = 5mA		130		deg
λD	Orange	Dominant Wavelength	IF = 5mA		605		nm
λp	Orange	Peak Emission Wavelength	IF = 5mA		611		nm
Δλ	Orange	Spectral Line Half-Width	IF = 5mA		20		nm
IR	White	Reverse Current	VR = 5V			10	μA
	Orange					100	



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### Bin Code List

VF Spec. Table( White)

VF Bin	Forward Voltage (V) at IF = 5mA	
	Min.	Max.
A	2.55	2.75
B	2.75	2.95
C	2.95	3.15

Tolerance on each Forward Voltage bin is +/-0.1 volt

IV Spec. Table( White)

IV Bin	Luminous Intensity (mcd) at IF = 5mA	
	Min.	Max.
P	45.0	71.0
Q	71.0	112.0
R	112.0	180.0

Tolerance on each Luminous Intensity bin is +/- 15%.

IV Spec. Table( Orange)

IV Bin	Luminous Intensity (mcd) at IF = 5mA	
	Min.	Max.
L	11.2	18.0
M	18.0	28.0
N	28.0	45.0
P	45.0	71.0

Tolerance on each Luminous Intensity bin is +/- 15%.



SURFACE MOUNT DEVICE LED

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● White Typical Electro-Optical Characteristics Curves(White)

(25 Ambient Temperature Unless Otherwise Noted)

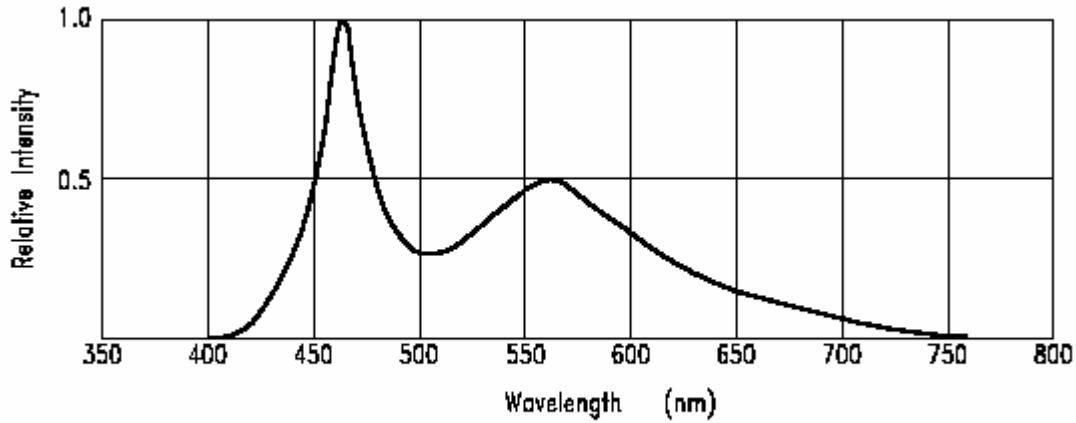


Fig.1 RELATIVE INTENSITY VS. WAVELENGTH

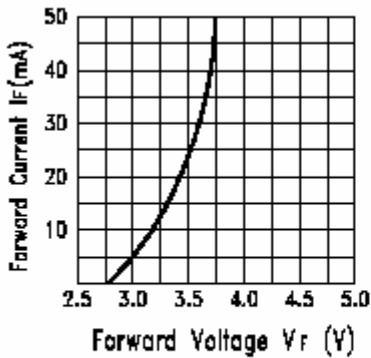


Fig.2 Forward Current vs. Forward Voltage

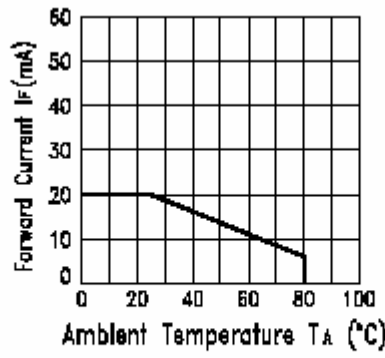


Fig.3 Forward Current Derating Curve

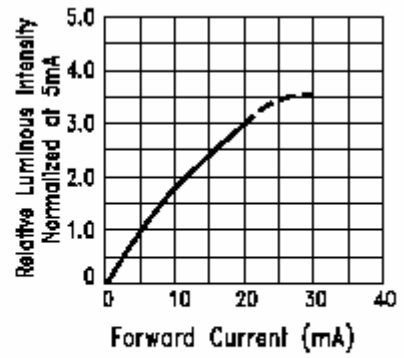


Fig.4 Relative Luminous Intensity vs. Forward Current

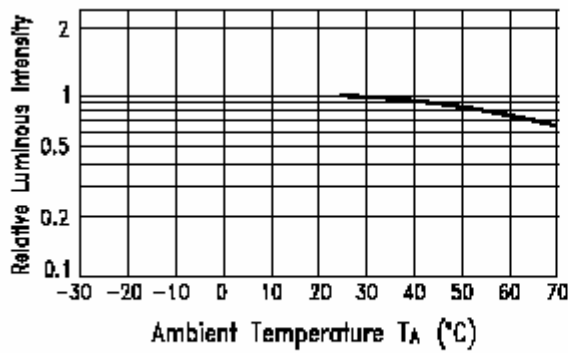


Fig.5 Luminous Intensity vs. Ambient Temperature

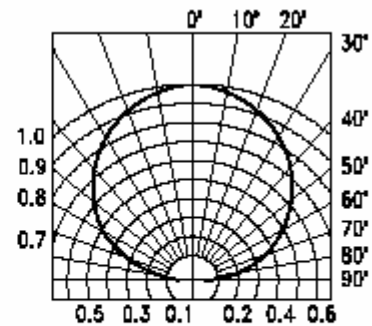


Fig.5 Spatial Distribution



# SURFACE MOUNT DEVICE LED

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## ● Super Amber Typical Electro-Optical Characteristics Curves(Orange)

(25 Ambient Temperature Unless Otherwise Noted)

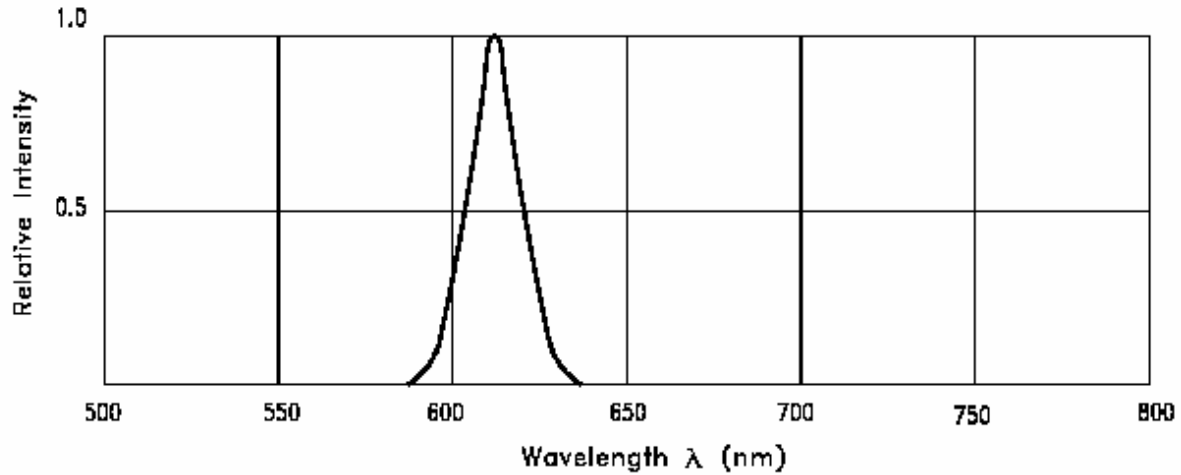


Fig.1 RELATIVE INTENSITY VS. WAVELENGTH

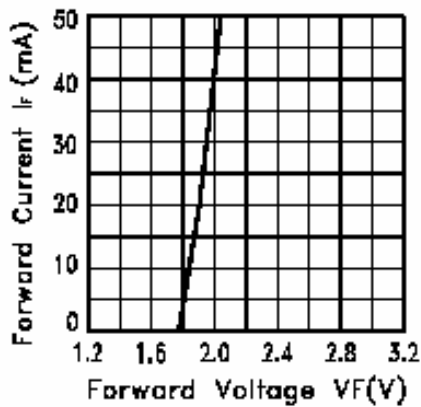


Fig.2 FORWARD CURRENT VS. FORWARD VOLTAGE

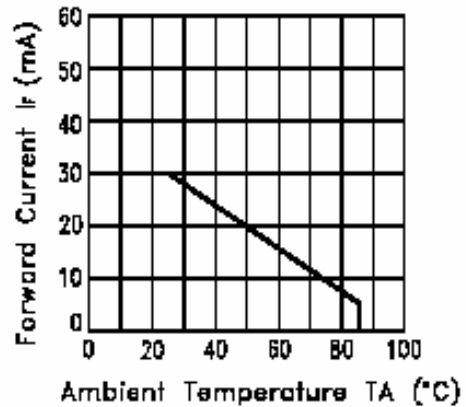


Fig.3 FORWARD CURRENT DERATING CURVE

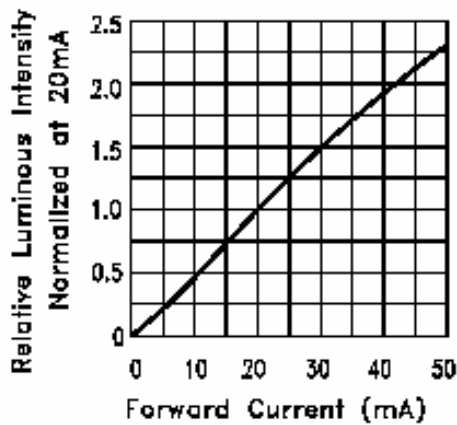


Fig.4 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

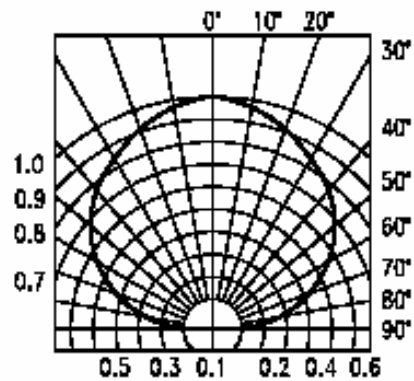


Fig.6 SPATIAL DISTRIBUTION



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Part No. :L-C195KFWDT-5A

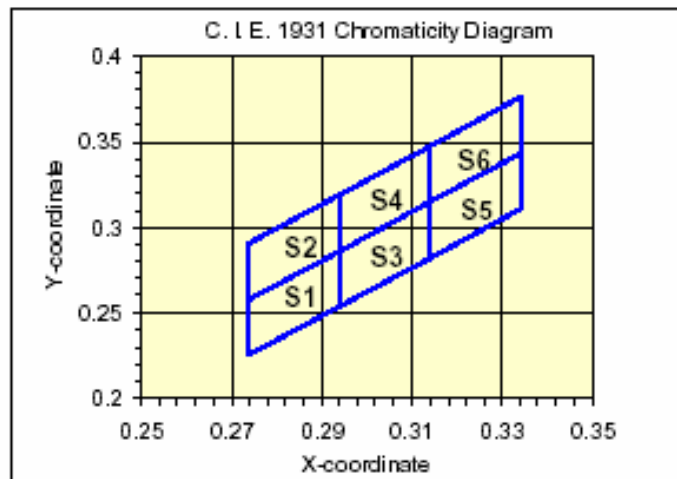
REV:A / 0

## Bin Code List

Hue Spec. Table

Hue Bin	Color bin limits at IF = 5mA				
	CIE 1931 Chromaticity coordinates				
S1	x	0.274	0.274	0.294	0.294
	y	0.226	0.258	0.286	0.254
S2	x	0.274	0.274	0.294	0.294
	y	0.258	0.291	0.319	0.286
S3	x	0.294	0.294	0.314	0.314
	y	0.254	0.286	0.315	0.282
S4	x	0.294	0.294	0.314	0.314
	y	0.286	0.319	0.347	0.315
S5	x	0.314	0.314	0.334	0.334
	y	0.282	0.315	0.343	0.311
S6	x	0.314	0.314	0.334	0.334
	y	0.315	0.347	0.376	0.343

Tolerance on each Hue (x, y) bin is +/- 0.01.



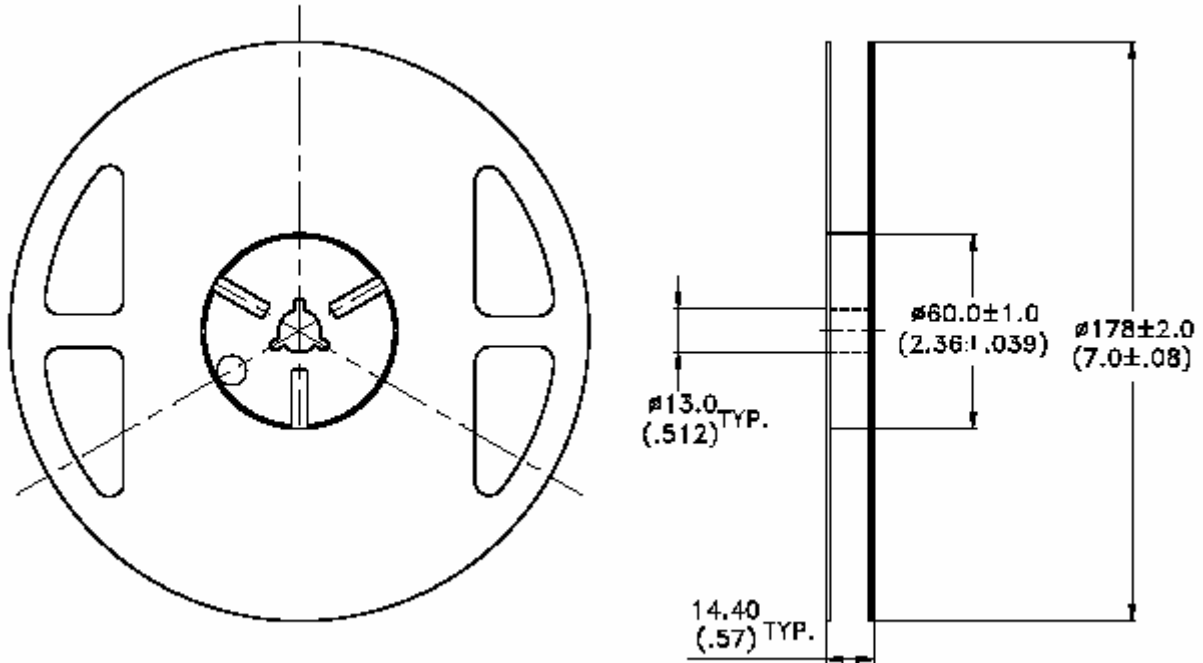


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Package Dimensions of Reel



Notes:

1. Empty component pockets sealed with top cover tape.
2. 7 inch reel-3000 pieces per reel.
3. Minimum packing quantity is 500 pieces for remainders.
4. The maximum number of consecutive missing lamps is two.
5. In accordance with ANSI/EIA 481-1-A-1994 specifications.





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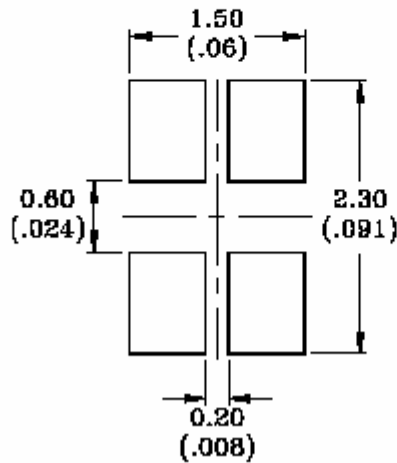
REV:A / 0

### Cleaning

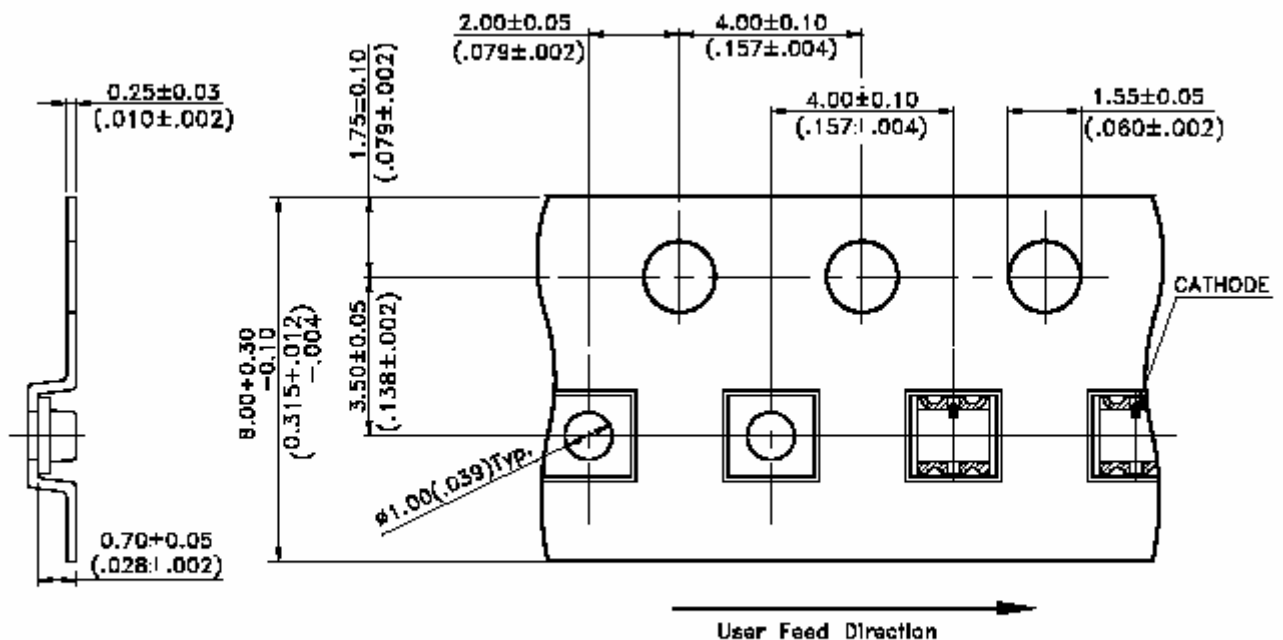
Do not use unspecified chemical liquid to clean LED they could harm the package.

If clean is necessary, immerse the LED in ethyl alcohol or in isopropyl alcohol at normal temperature for less one minute.

### Suggest Soldering Pad Dimensions



### Package Dimensions Of Tape And Reel



### Notes:

1. All dimensions are in millimeters (inches).