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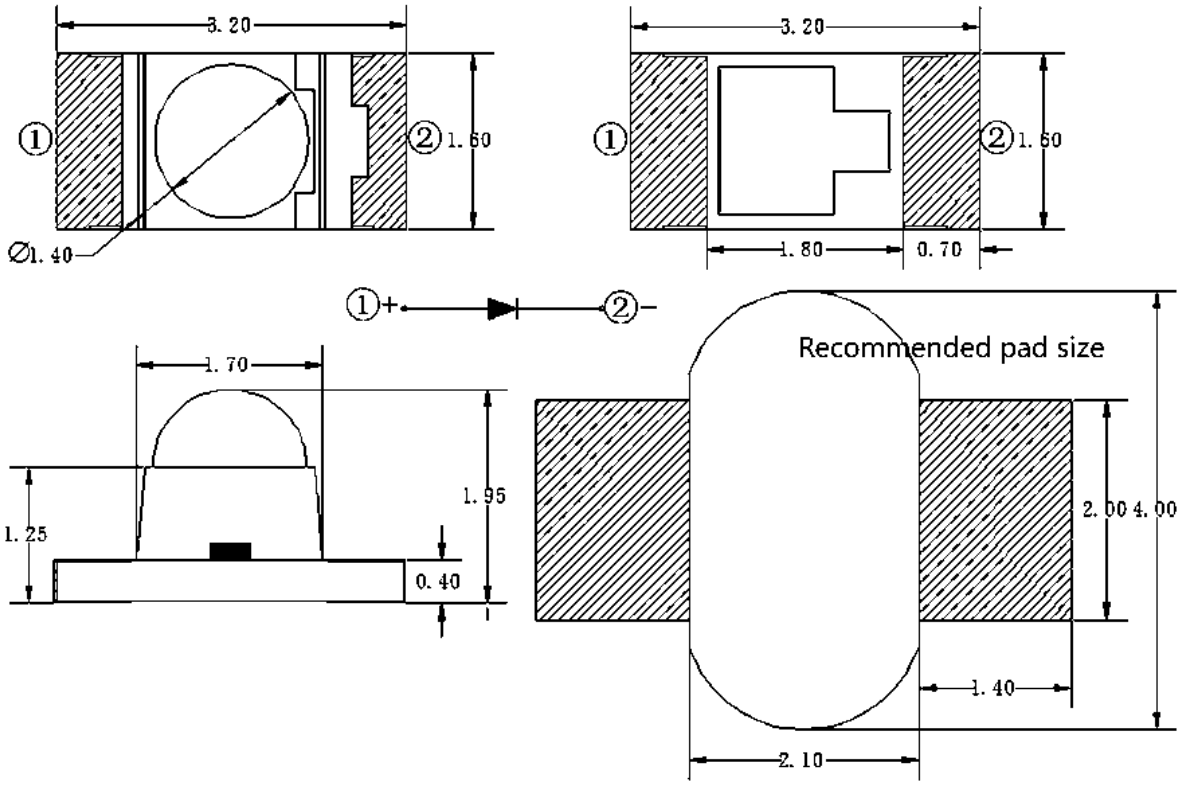
DATA SHEET

PART NO. : LC15DSRCT-RP-XG

REV : A / 0

CUSTOMER'S APPROVAL : _____ DCC : _____

PACKAGE DIMENSIONS



NOTES :

1.All dimensions are in millimeters
2.Tolerances are±0.15mm unless otherwise noted
3.The Specifications in the datasheet are subject to change without notice.

FEATURES

Dimension (L / w / h): 3.2 x 1.6 x 1.95 mm
Color: Red light
Colloid: Transparent colloid
EIA standard packaging
Environmental protection products meet ROHS requirements
Suitable for automatic placement machine
Suitable for infrared reflow soldering process

ABSOLUTE MAXIMUM RATING : (Ta = 25℃)

Symbol	Parameter	Rating	Unit
PD	Power consumption	70	mW
If	Forward Current	30	mA
Ifp	Maximum pulse current (1/10 duty cycle 0.1ms)	100	mA
VR	Reverse Voltage	5	V
ESD	Electrostatic discharge(HBM)	1500	V
Topr	Operating Temperature Range	-40℃ ~ + 85℃	℃
Tstg	Storage Temperature Range	-40℃ ~ + 85℃	℃
Tsol	Reflow soldering : 255°C ,10s, Hand soldering : 300°C ,3s		

Note: Pulse width ≤0.1ms,Duty≤1/10

ELECTRO-OPTICAL CHARACTERISTICS : (Ta = 25℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	Iv	850	---	1600	mcd	IF=20mA
Viewing Angle	2θ1/2	-	30	-	deg	IF=20mA
Dominant Wavelength	WD	617	---	626	nm	IF=20mA
Forward Voltage	VF	1.8	---	2.4	V	IF=20mA
Reverse Current	IR	-	-	5	μA	VR=5V

Bin Code List

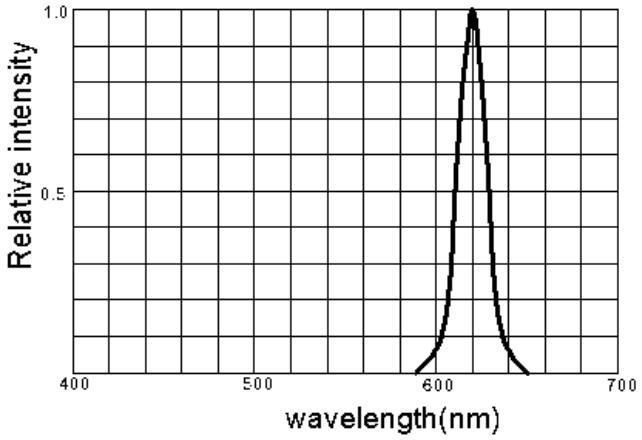
Parameter	Symbol	Min.	Max.	Unit	Test Condition
Luminous Intensity	R	850	1050	mcd	IF =20mA
	S	1050	1300		
	T	1300	1600		
Forward Voltage	1E	1.8	2.0		IF =20mA
	2A	2.0	2.2		
	2B	2.2	2.4		
Dominant Wavelength	R2	617	620	nm	IF =20mA
	R3	620	623		
	R4	623	626		

Label marking error:

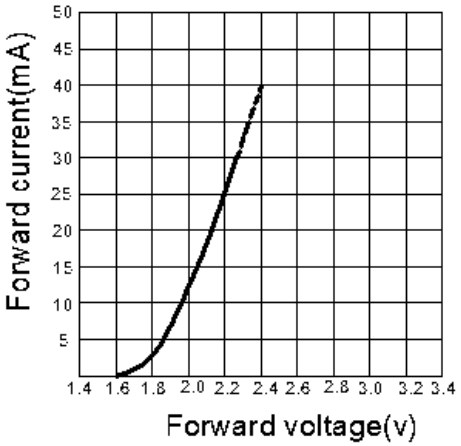
1. Tolerance of measurement of luminous intensity is ±20%.
2. Tolerance of measurement of dominant wavelength is ±2nm.
3. Tolerance of measurement of Vf is ±0.1 V.

Typical Electro-Optical Characteristics Curves

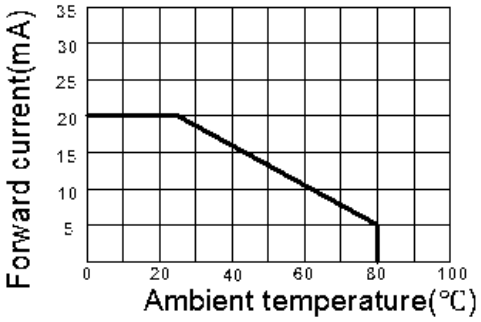
Relative intensity VS wavelength



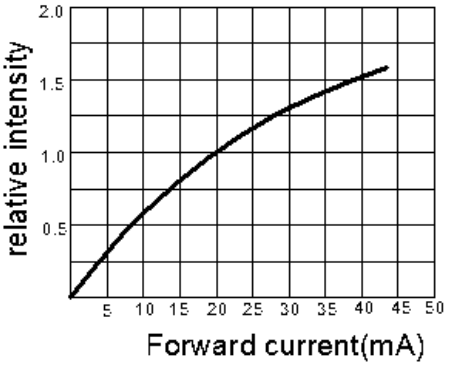
Voltage current relationship



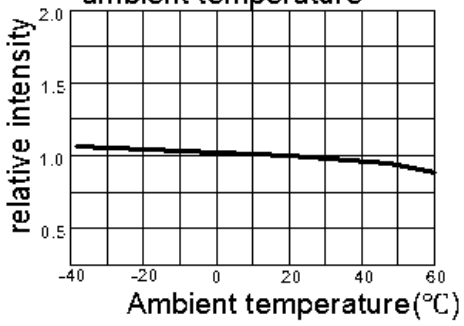
Current and a`mbient temperature



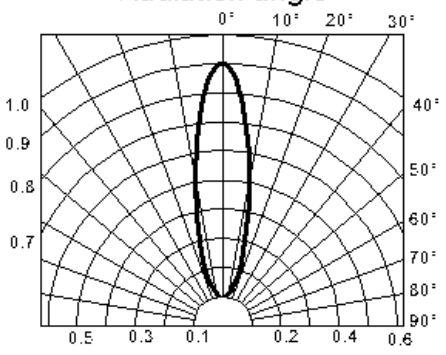
Relative light intensity vs current



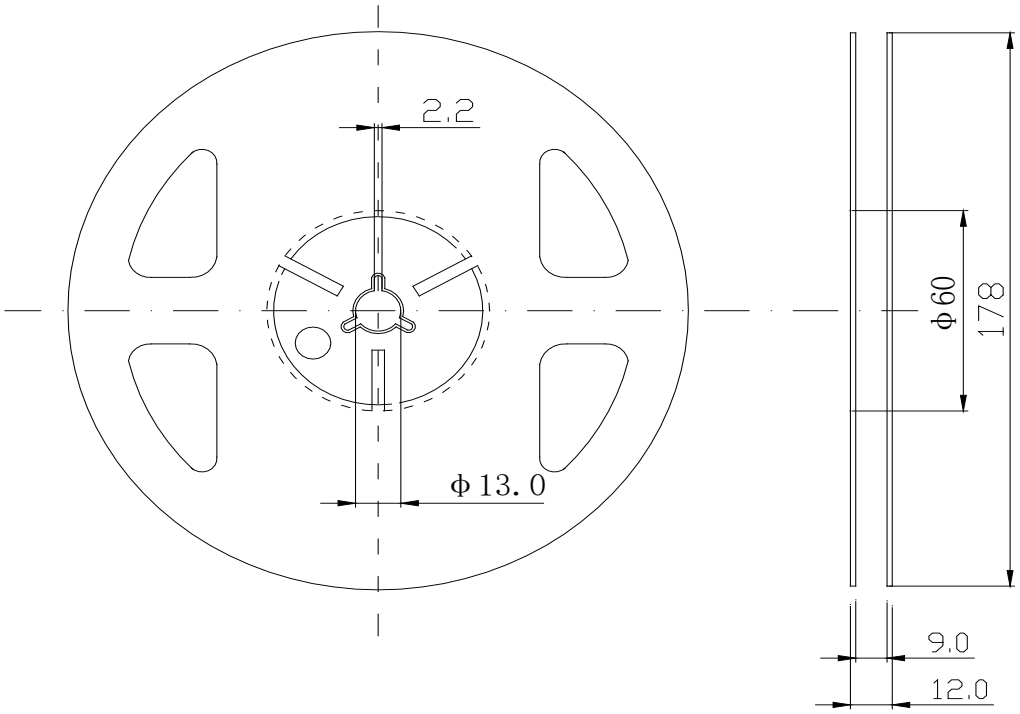
Relative light intensity vs ambient temperature



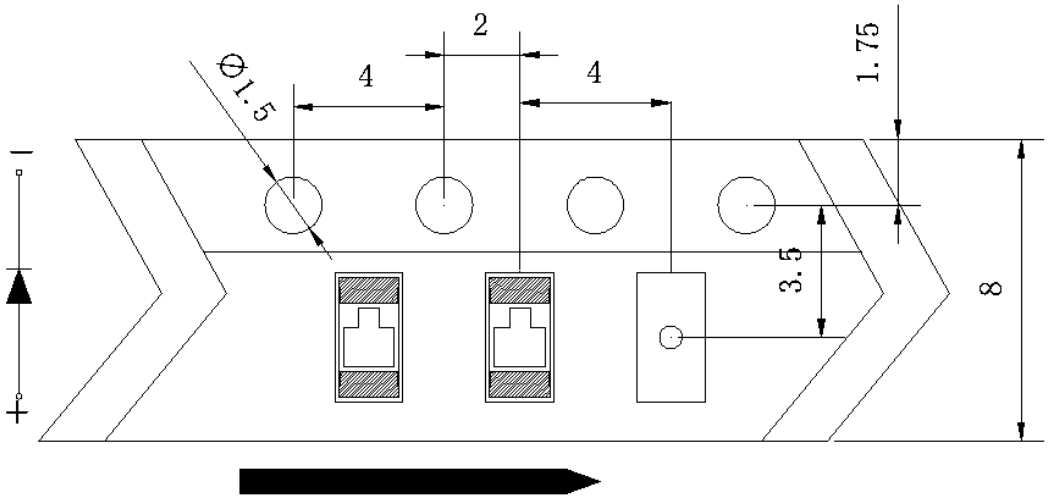
Radiation angle



Reel Dimensions

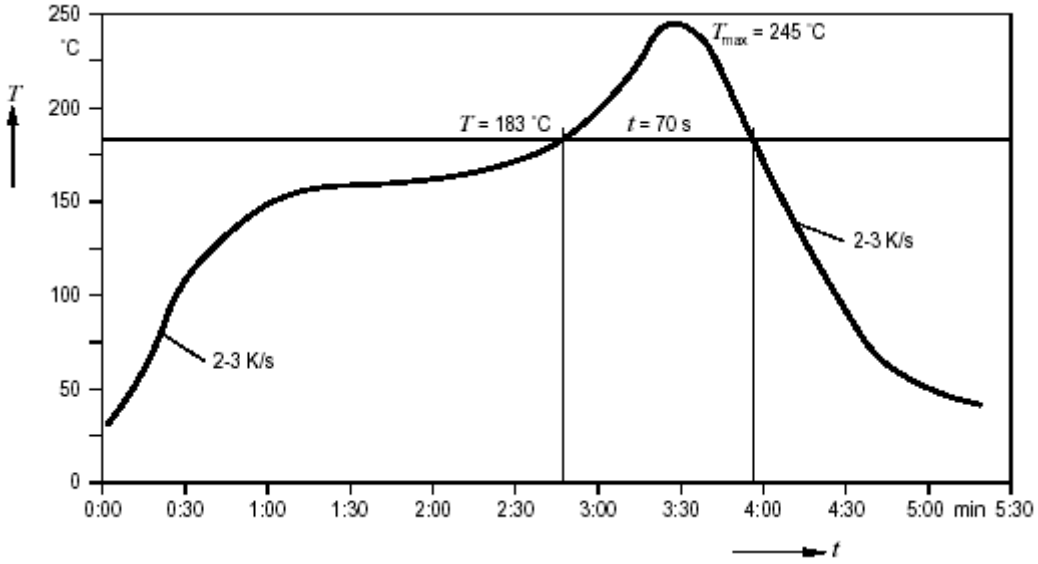


Package Dimensions Of Tape And Reel

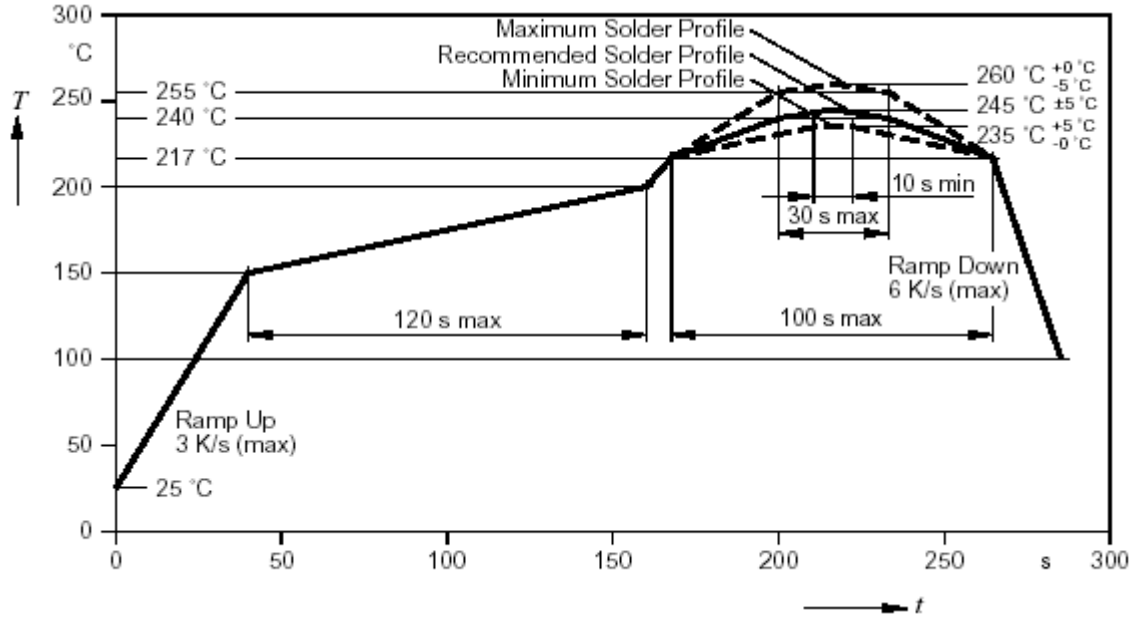


Notes:
1. Taping Quantity : 2000pcs
2. The tolerances unless mentioned is±0.15mm

Suggest Sn/Pb IR Reflow Soldering Profile Condition:



Suggest Pb-Free IR Reflow Soldering Profile Condition:



Cleaning

- ＊ If cleaning is required , use the following solutions for less than 1 minute and less than 40℃.
- ＊ Appropriate chemicals: Ethyl alcohol and isopropyl alcohol.
- ＊ Effect of ultrasonic cleaning on the LED resin body differs depending on such factors as the oscillator output, size of PCB and LED mounting method. The use of ultrasonic cleaning should be enforced at proper output after confirming there is no problem.

CAUTIONS

1.Application Limitation :

The LED's described here are intended to be used for ordinary electronic equipment (such as office equipment, communication equipment and household application).Consult PARA's sales in advance for information on application in which exceptional quality and reliability are required, particularly when the failure or malfunction of the LED's may directly jeopardize life or health (such as airplanes, automobiles, traffic control equipment, life support system and safety devices).

2.Storage :

If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions.

Baking treatment: 60±5℃ for 24 hours.

3.Soldering

Do not apply any stress to the lead frame during soldering while the LED is at high temperature.

Recommended soldering condition.

Reflow Soldering :

Pre-heat 120~150°C, 120sec. MAX., Peak temperature : 240°C Max. Soldering time : 10 sec Max.

Soldering Iron : (Not recommended)

Temperature 300°C Max., Soldering time : 3 sec. Max.(one time only), power dissipation of iron : 20W Max. use SN60 solder of solder with silver content and don't to touch LED lens when soldering.

Wave soldering :

Pre-heat 100°C Max, Pre-heat time 60 sec. Max, Solder wave 260°C Max, Soldering time 5 sec. Max. preformed consecutively cooling process is required between 1st and 2nd soldering processes.

4. Lead-Free Soldering

For Reflow Soldering :

1、Pre-Heat Temp:150-180℃,120sec.Max.

2、Soldering Temp:Temperature Of Soldering Pot Over 230℃,40sec.Max.

3、Peak Temperature:260℃，5sec.

4、Reflow Repetition:2 Times Max.

5、Suggest Solder Paste Formula 93.3 Sn/3.1 Ag/3.1 Bi /0.5 Cu

For Soldering Iron (Not Recommended) :

1、Iron Tip Temp:350℃ Max.

2、Soldering Iron:30w Max.

3、Soldering Time:3 Sec. Max. One Time.

For Dip Soldering :

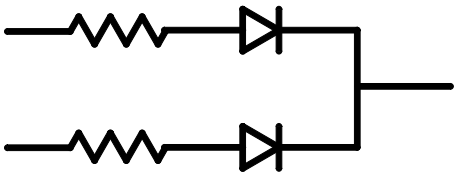
1、Pre-Heat Temp:150℃ Max. 120 Sec. Max.

2、Bath Temp:265℃ Max.

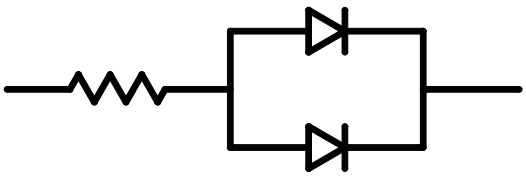
3、Dip Time:5 Sec. Max.

5. Drive Method

Circuit model A



Circuit model B



(A)Recommended circuit.

(B)The difference of brightness between LED`s could be found due to the Vf-If characteristics of LED.