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DATA SHEET

PART NO.: L-T2835IR4CT-30-JH

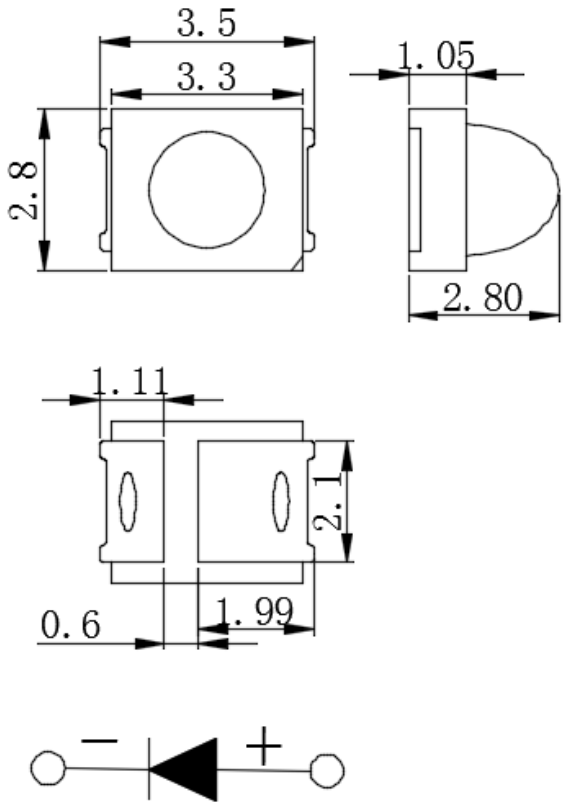
REV: A / 0

CUSTOMER'S APPROVAL : _____ DCC : _____

Features

- Colorless transparent .
- Long service life
- Can be used for a variety of infrared remote control systems, all kinds of sensors infrared light
- Lighting
- The ideal light source for surveillance cameras
- Headlights

Dimension Drawing



Notes:

1. All dimensions are in millimeters.
2. Tolerance is 0.10mm (.004") unless otherwise noted.

● Absolute Maximum Ratings(Ta=25)

Items	Symbol	Absolute maximum Rating	Unit
Maximum Current	I_F	250	mA
Pulse Current	I_{FP}	200	mA
Reverse Voltage	V_R	5	V
Power Dissipation	P_D	300	mW
Operation Temperature	T_{opr}	-40 ~ + 100	°C
Storage Temperature	T_{stg}	-40 ~ + 100	°C
Junction temperature	Tj	120	°C
Soldering temperature	T_{sol}	260	°C
Manual soldering time at 260°C(max)	---	5	sec

Notes:

1. Proper current rating must be observed to maintain junction temperature below the maximum at all time.
2. IFM condition: 0.1 ms pulse width, Duty Cycle=0.25.
3. All above test condition: Mounted on PC Board FR 4(pad size>=16mm^2)
4. LED lamps are not designed to be driven in reverse bias.

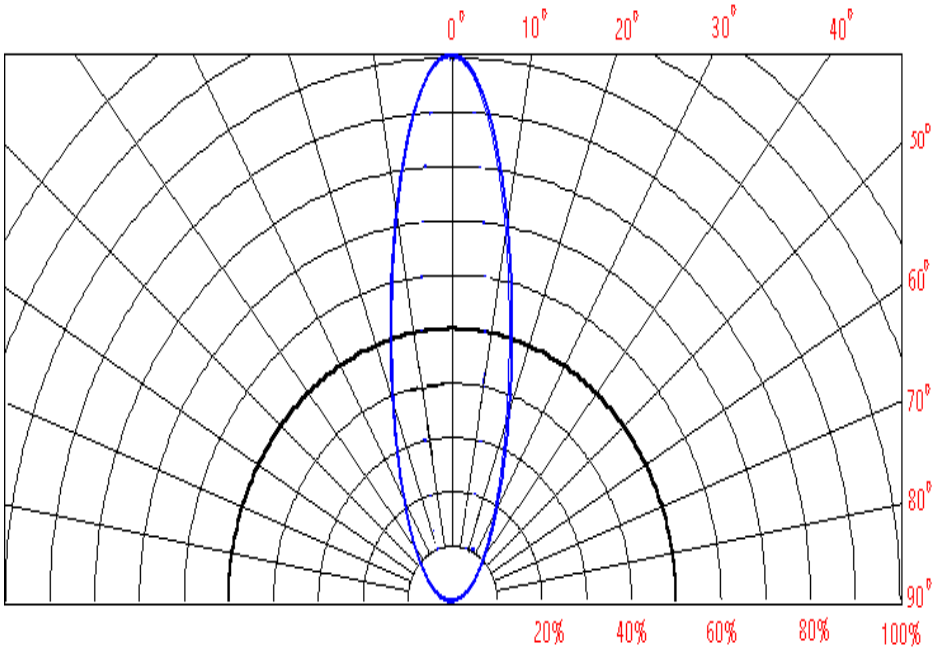
● Typical Electrical & Optical Characteristics (Ta = 25°C)

Items	Symbol	Condition	Min	Typ	Max	Unit
Forward Voltage	V_F	I_F =150mA	1.2	---	1.7	V
Reverse Current	I_R	V_R = 3V	---	---	3	μA
Light power	Φv	I_F =150mA	80	--	140	Mw/sr
peak wavelength	WP	I_F =150mA	---	850	---	NM
Power (Avg)	P	I_F =150mA	---	120	---	mw
Light Angle	2θ1/2	IF=150mA	--	30	--	deg

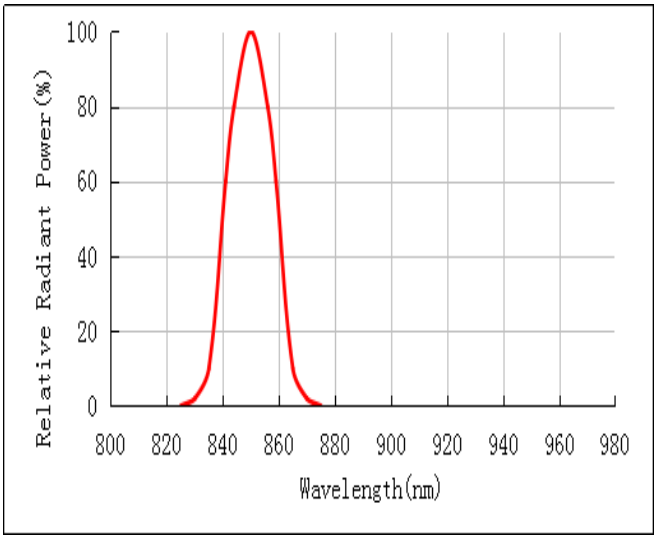
Notes:

1) Tolerance of measurement of the Color Coordinates is ±0.01.
2) Tolerance of measurement of Vf is ±0.05.
3) Luminous Flux is measured with the accuracy of ±10%.

Light Angle



Graphs



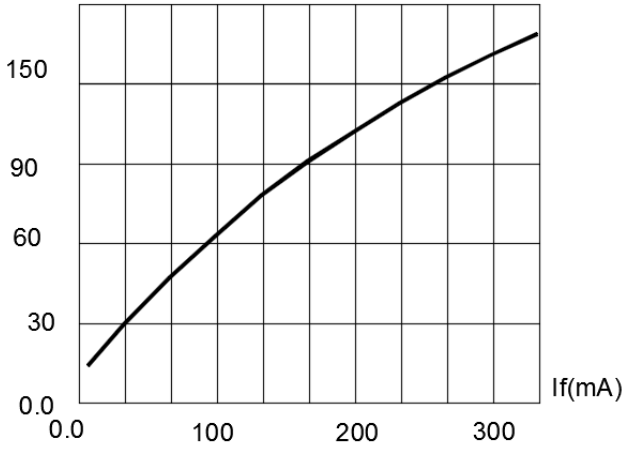


FIG.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

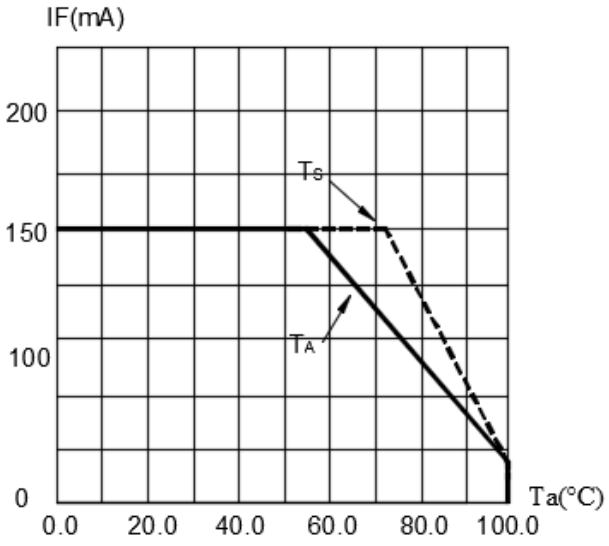


FIG.2 MAXIMUM FORWARD DC CURRENT VS AMBIENT TEMPERATURE(Tjmax=120 °C)
TA temp .ambient; Ts temp. solder piont.

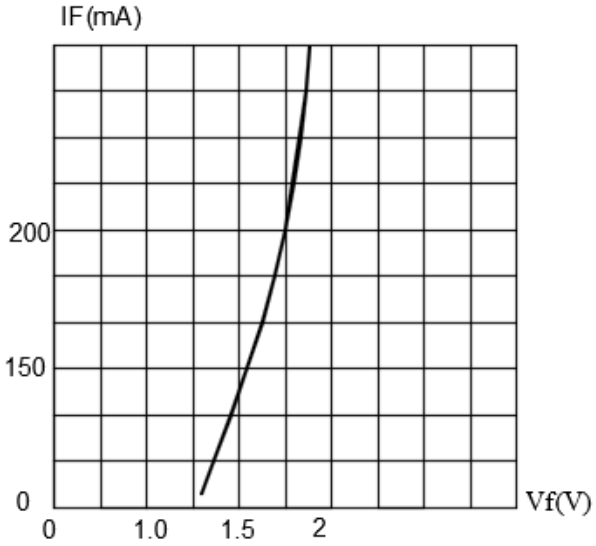
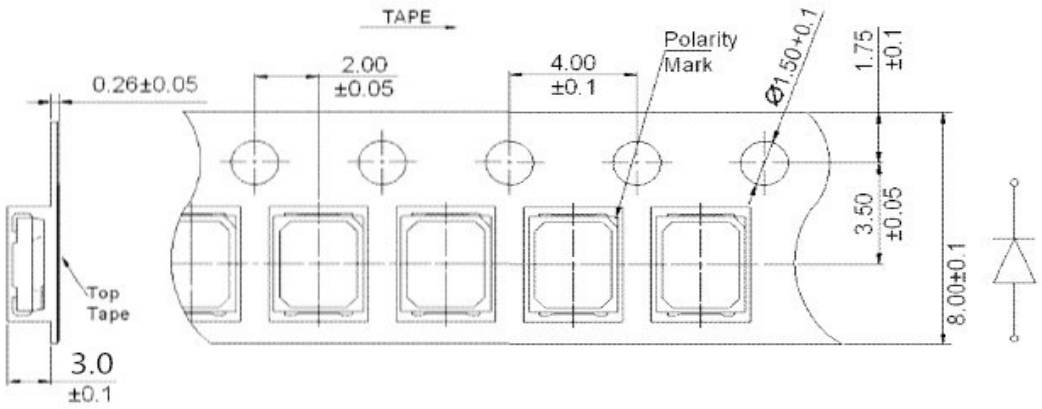


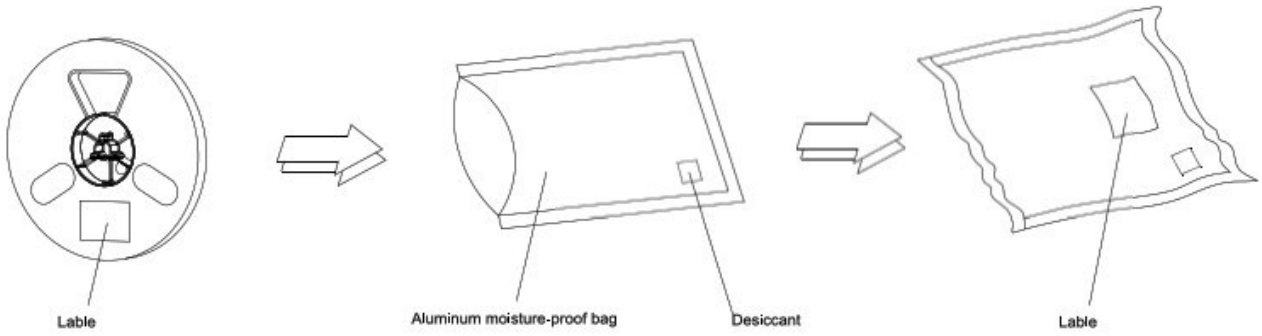
FIG.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

Packing

Tape Specifications (Units : mm)



Moisture Resistant Packaging



Notes:

1.All dimensions are in mm, tolerance is±2.0mm unless otherwise noted.

2.Specifications are not subject to change without notice.

Reliability Testing for SMD

Type	Test Item	REF. Standard	Test condition	Times	Sample count
Environments Sequence	Temperature Cycle	JESD22-A104-A	-40 25 100 25 30min,5min,30min,5min	100 cycles	100
	Thermal shock	JESD22-A106	-40 100 30min,30min	100 cycles	100
	Temperature Storage	JIS C 7021 (1977)B-11	Ta=60 RH=90%	1000Hrs	100
Operation Sequence	Life test	JESD22-A108-A	Ta=25 If: B=150mA	1000Hrs	100
	High humidity Heat life test	JESD22-A101	Ta =85 RH=85% If: B=150mA	1000Hrs	100
Destructive Sequence	Resistance to soldering Heat	JESD22-A113	IR soldering 245 /10sec	10Sec	20
ESD Test	ESD TEST	AEC(Q101-002)	Human body model 2000v	--	10
Physical Sequent	Physical Sequence	MIL-STD-883 Method 2007	20G min ,20 to 2000Hz 4 cycles,4min.Each,X,Y,Z	--	50

Application notes

The purpose of this document is to provide a clear understanding to the customers and users, on the ways how to use our LED lamps

appropriately.

Description

Generally, LED can be used the same way as other general-purpose semiconductors. When using VANTEX'S Lamps, the following

precautions must be taken to protect the LED.

1. Cleaning

✧ Don't use unspecified chemical liquids to clean the SMT-LED; the chemical could harm the SMT-LED. When washing is necessary, please immerse the SMT-LED in alcohol at normal room temperature for less than 1 minute and dry at normal room temperature for 15 minutes before use.The influence of ultrasonic cleaning on the SMT-LED depending on factors such as ultrasonic power and the way SMT-LED are mounted. Ultrasonic cleaning shall be pre-qualified to ensure this will not cause damage to the SMT-LED.

2. Moisture Proof Packing

In order to prevent moisture absorption into SMT-LED during the transportation and storage, SMT-LED is packed in a moisture barrier bag. Desiccants and a humidity indicator are packed together with SMT-LED as the secondary protection. The indication of humidity indicator card provides the information of humidity within SMD packing.

✧ Shelf life in original sealed bag at storage condition of <40ºC and <90%RH is 6 months. Baking is required whenever shelf life is expired

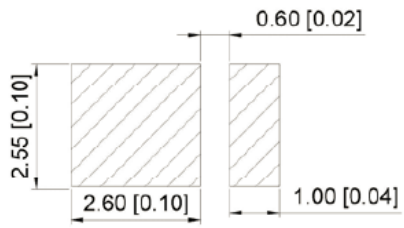
✧ After bag opening, the SMT-LED must be stored under the condition < 30ºC and < 60%RH. Under this condition, SMT-LED must be used (subject to reflow) within 8 hours after bag opening, and re-baking is required when exceeding 12 hours. For baking, place SMT-LED in oven at temperature 80±5ºC and relative humidity <=10%RH, for 12 hours.

3. Soldering . Manual soldering by soldering iron

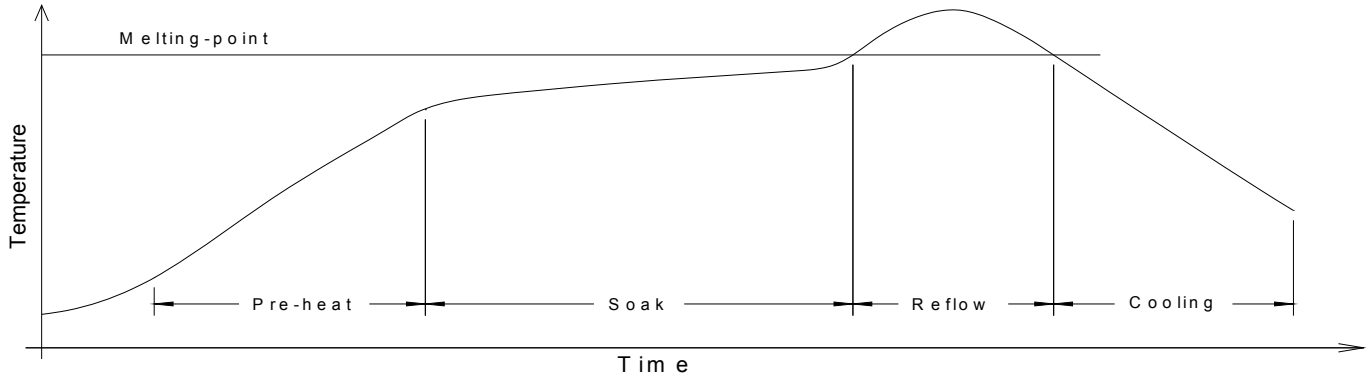
✧ The use of a soldering iron of less than 25W is recommended and the temperature of the iron must be kept at below 315ºC, with soldering time within 2 seconds.The silicone sealant of SMT-LED should not be in contact with tip of soldering iron.No mechanical stress should be exerted on the resin portion of SMT-LED during soldering.Handling of SMT-LED should be done when the package has been cooled down to below 40ºC or less. This is to prevent the SMT-LED failures due to thermal-mechanical stress during handling

. Reflow Soldering

✧ Recommended solder pad design for heat dissipation(Unite:mm)



✧ The temperature (Top surface of SMT-LED) profile is as below:



Solder = Sn63-Pb37	**Solder =Low Lead-free**
Average ramp-up rate = 4ºC/s max.	Average ramp-up rate = 3ºC/s max.
Preheat temperature = 100ºC ~150ºC	Preheat temperature = 130ºC ~170ºC
Preheat time = 100s max.	Preheat time = 120s max.
Ramp-down rate = 6ºC/s max.	Ramp-down rate = 6ºC/s max.
Peak temperature = 220ºC max.	Peak temperature = 240ºC max.
Time within 5ºC of actual Peak Temperature = 10s max.	Time within 3ºC of actual Peak Temperature = 25s max.
Duration above 180ºC is 80s max.	Duration above 200ºC is 40s max.

✧ Modification is not recommended on SMT-LED after soldering. If modification cannot be avoided, the modifications must be pre-qualified to avoid damaging SMT-LED.

✧ Reflow soldering should not be done more than one time.

✧ No stress should be exerted on the package during soldering.

✧ PCB should not be wrapped after soldering; this is to allow natural cooling of the PCB board and SMT-LED.

4. Electrostatic Discharge and Surge current

✧ Electrostatic discharge (ESD) or surge current (EOS) may damage SMT-LED. Precautions such as ESD wrist strap, ESD shoe strap or antistatic gloves must be worn whenever handling of SMT-LED.

✧ All devices, equipment and machinery must be properly grounded.

✧ It is recommended to perform electrical test to screen out ESD failures at final inspection.It is important to eliminate the possibility of surge current during circuitry design.

5. Heat Management

✧ Heat management of SMT-LED must be taken into consideration during the design stage of SMT-LED application. The current should be de-rated appropriately by referring to the de-rating curve attached on each product specification.