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## DATA SHEET

PART NO. : LT2835WDT-CW1-DG-0.5W

REV : A / 0

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

**SMD product description**

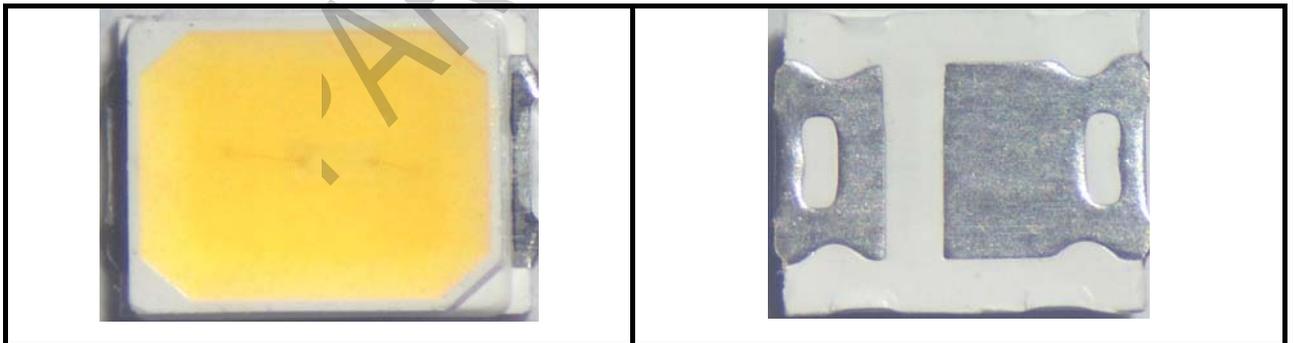
LED SMD 2835 is suitable for harsh working environment, High brightness makes the product can be used in many fields;

**Characteristic Description:**

- A. Green light source, environmental protection and energy saving, in line with ROHS standard
- B. High lumen, high luminous efficiency and high color rendering number
- C. Strong and durable, strong controllability and long service life
- D. Forward conduction and reverse cut-off
- E. The luminous angle can reach 120 degrees

**Application range:**

- A. Application of indoor and outdoor lighting
- B. Hard and soft light strip lighting
- C. Night view engineering lighting
- D. Advertising words, advertising light box
- E. Urban lighting engineering lighting

**Physical appearance:**

**Absolute Maximum Ratings (Ta=25°C)**

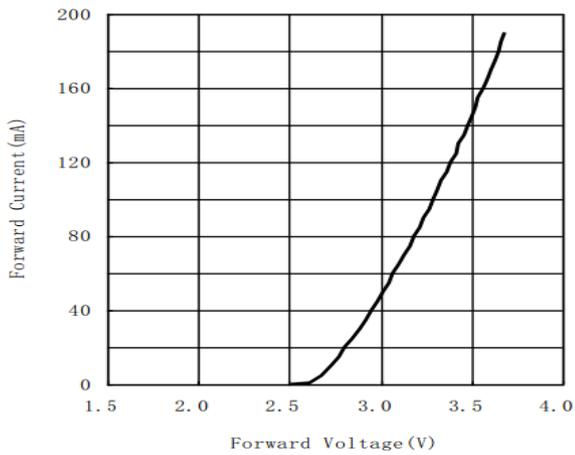
Parameter	Symbol	Rating	Unit
DC Forward Current	IF	150	mA
Recommended operating current	IF	145	mA
Pulse peak current	IFP	280	mA
Backward Voltage	VR	5	V
Power Dissipation	PD	0.5	W
Storage Temperature Range	Tstg	-40 ~ +100	°C
Electrostatic Discharge	ESD	Class1	

**Electrical Optical Characteristics (Ta=25°C)**

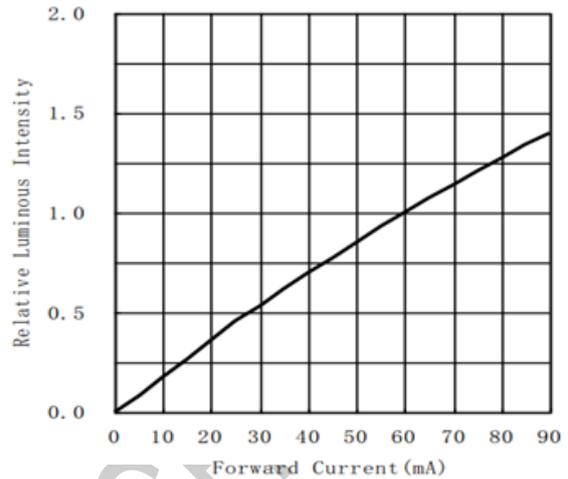
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Forward Voltage	VF	IF =150mA	3.0	/	3.6	V
Reverse current	IR	VR = 5V	/	/	5	μA
Luminous flux	φ	IF =150mA	45	/	60	LM
Color Temperature	CCT	IF =150mA	2700	/	6500	K
Viewing Angle	2θ1/2	IF =150mA	/	120	/	deg
Color rendering index	CRI	IF =150mA	80	/	90	/
	R9	F =150mA	0	/	/	/
Color tolerance	SDCM	IF =150mA	0	/	5	/

**Typical Electrical-Optical Characteristics Curves**

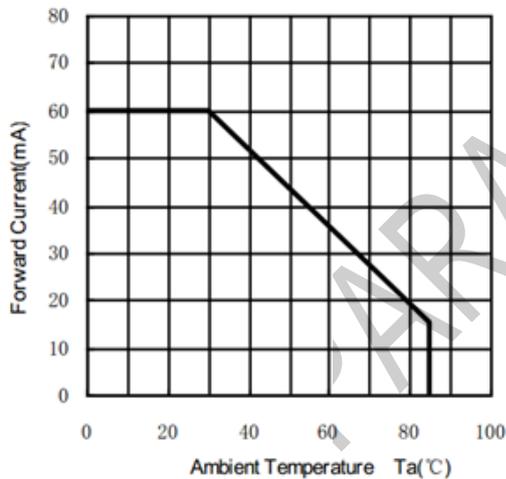
Forward Voltage VS. Forward Current



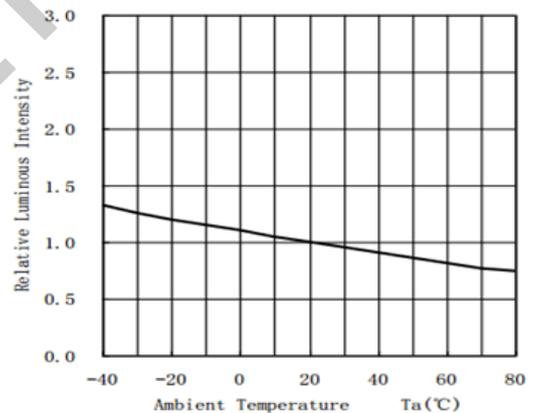
Forward Current VS. Relative Intensity



Ambient Temperature vs. Forward Current

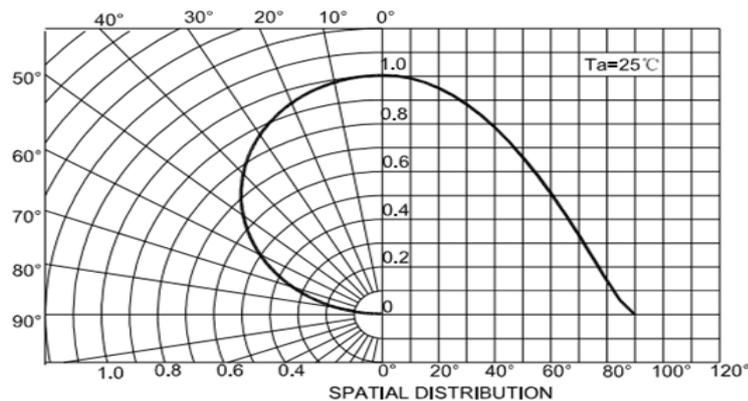


Ambient Temperature VS. Relative Intensity



Radiation diagram

Radiation diagram



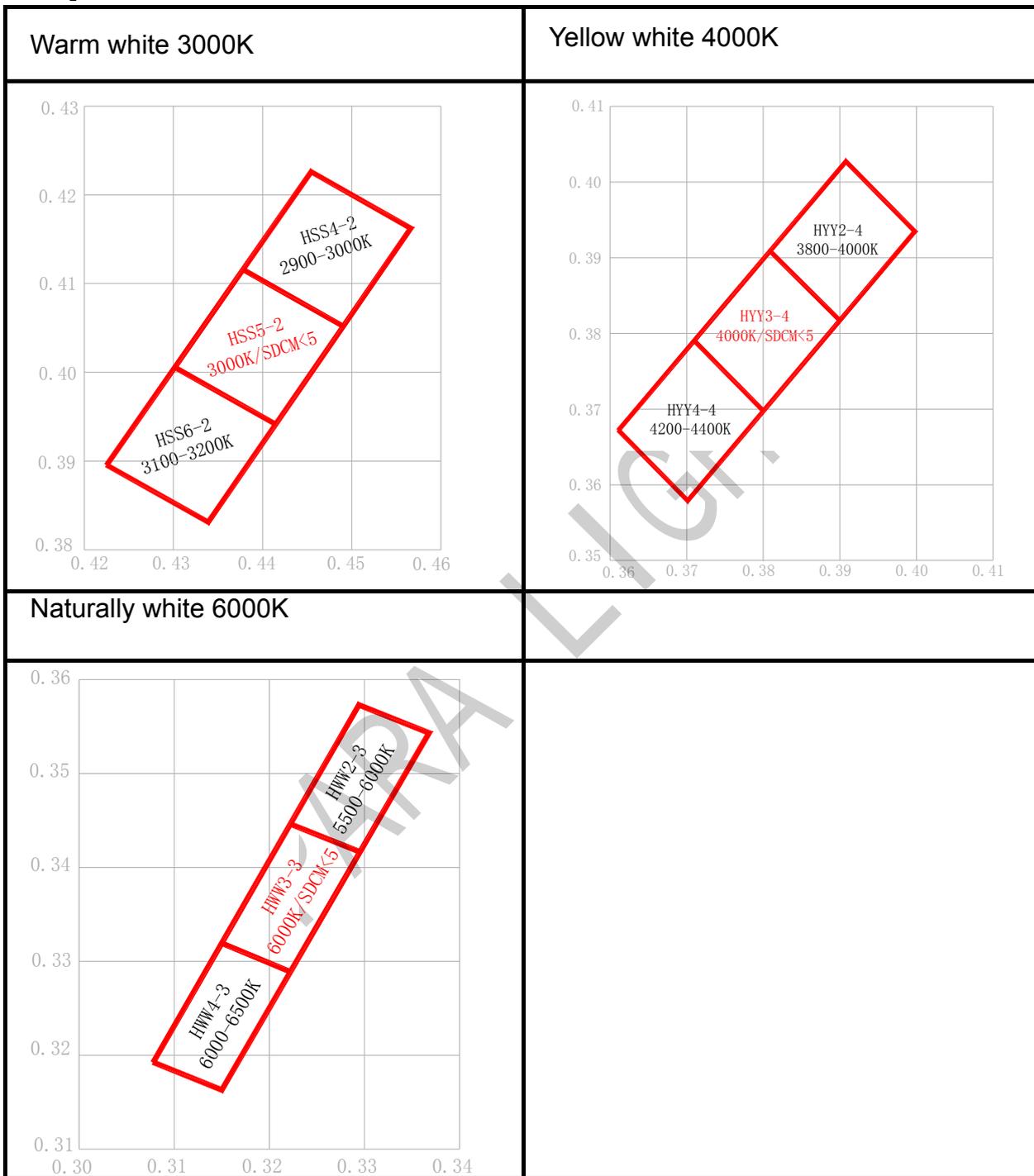
**Spectroscopic, chromatic and shooting diagram**

Photoelectric characteristics

Output luminous flux (LM)			Forward voltage (V)		
Gear	MIN	MAX	Gear	MIN	MAX
1	55	60	1	3.0	3.2
2			2	3.2	3.4
3			3	3.4	3.6
Remarks	Luminous flux tolerance: $\pm 0.5\text{lm}$ . Voltage tolerance: $\pm 0.05\text{v}$				

Color temperature range (K)			Color rendering index (RA)		
Color temperature	MIN	MAX	Gear	MIN	MAX
Warm white	2700	3300	1	80	85
Yellow white	3800	4500	2	85	90
Naturally white	5000	6500			

Color map

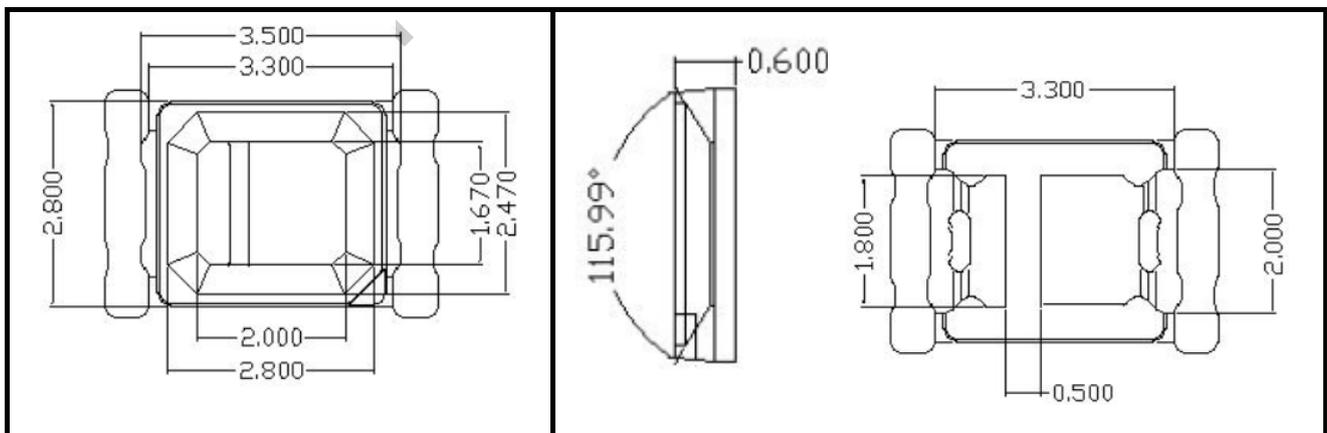


**Reliability testing**

NO	Test items	Test conditions	Test cycle	Test result
1	Thermal Shock	-40 °C / 30 min ~ 100 °C / 30 min	300 rounds	0/100
2	High temperature and humidity storage	80 °C~90%RH	3000hours	0/100
3	High temperature storage	150 °C	3000hours	0/100
4	Low temperature storage	-40 °C	3000hours	0/100
5	Room temperature aging	Ta=25 °C 150mA	3000hours	0/100
6	High temperature aging	80 °C 150mA	3000hours	0/100
7	Low temperature aging	-40 °C 150mA	3000hours	0/100
8	Ultraviolet aging resistance	50 °C / 8h UV 4H spray	1000hours	0/100
9	Salt spray test	5% brine 25 °C	1000hours	0/100
10	Antistatic test	2KV	5times	0/100
11	Reflow soldering	280 °C / 6 min	3times	0/100

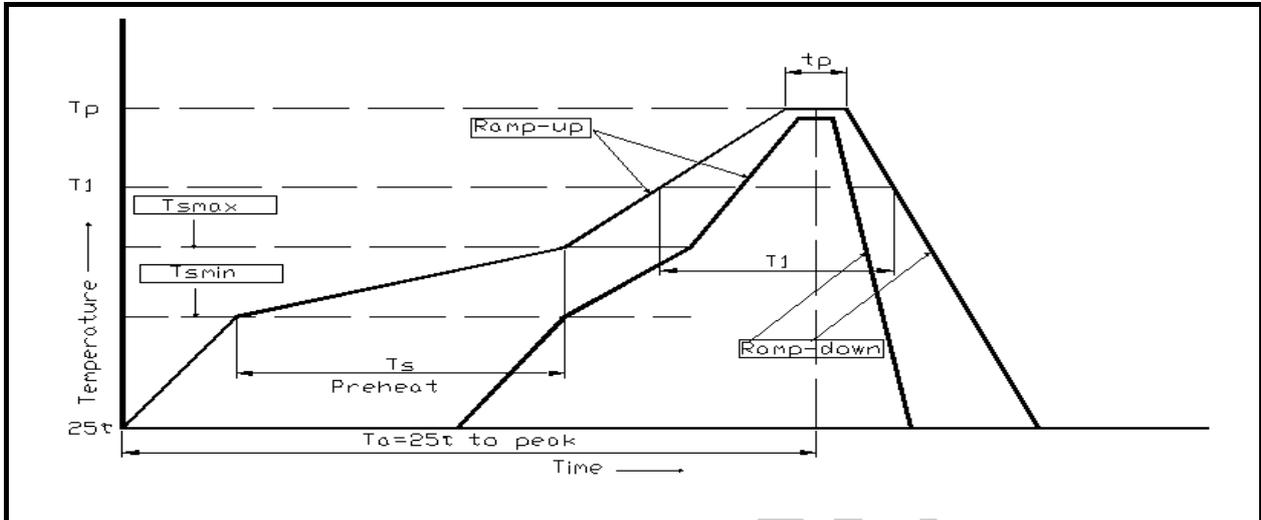
Note: the quantity of 0/100 test products is 100pcs, and 0 PCs. of defective products

**product and welding size**





**Reflow soldering and welding instructions**



Parameter requirements	Lead soldering	Lead free soldering
Average rising rate	Maximum 3 °C / sec	Maximum 3 °C / sec
Minimum preheating temperature	100°C	150°C
Maximum preheating temperature	150°C	200°C
Preheating time	60-120 seconds	60-80 seconds
Average temperature of temperature section	183°C	217°C
Average time of temperature section	60-150 seconds	60-150 seconds
Peak temperature	240°C	240°C
Peak temperature ( $\pm 5$ °C) time	10-30 seconds	3-5 seconds
Rate of descent	Maximum 6 °C / sec	Maximum 6 °C / sec
Time from 25 °C to peak temperature	Maximum 6 minutes	Maximum 6 minutes

**manual welding:**

It is recommended to use a soldering iron less than 30W, and the temperature of the iron shall not be higher than 300 °C, and the welding time shall not exceed 3 seconds. The soldering iron shall not contact any part of LED colloid during welding



2.8\*3.5\*0.6 mm PLCC LED

LT2835WDT-CW1-DG-0.5W

REV:A / 0

**precautions for use**

1 storage instructions:

1.1. Before opening the package

Under the conditions of - 35 °C ~ + 85 °C and humidity of 50% RH, the LED can be stored for one year. Adopt the packaging method of moisture-proof bag with desiccant.

1.2. After opening the package

LED should be stored in  $T_a = 25\text{ °C} - 50\%$  RH relative temperature and humidity. We suggest to open the package. After that, please put the LED in the 60 °C oven for 12 hours, and the whole process is within 8 hours. Done. If there are unused remaining led, we suggest to reuse the original moisture-proof bag. Please bake the LED in 60 °C oven for 12 hours, and need to re seal. The LED electrode and lead frame are made of copper alloy coated with silver on the surface, and the silver coating will be affected by the surrounding environment. LED electrode will be corroded, please keep away from the LED electrode. After corrosion, its welding ability and photoelectric parameters are reduced. Please avoid using led in the environment with rapid temperature change, especially in the high humidity environment where cold ice will occur.

2 anti static suggestions:

Static charge surge voltage will damage led. It is recommended to wear anti-static ring and anti-static gloves when touching led. All equipment, devices and machines must be grounded. It is recommended to take corresponding measures to prevent surge voltage from breaking down led