

Dr. Licht GmbH

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SWIR 2835 LED

380 nm

460 nm

540 nm

620 nm

700 nm

780 nm

Features

- One Chip 470nm LED power the NIR fluoreszenz between **460nm to 1850nm.**
- Fluoreszenz light without thermal radiation shift ideal for spectral anaytic
- Qualified according to JEITA moisture sensitivity level
- Long operating life

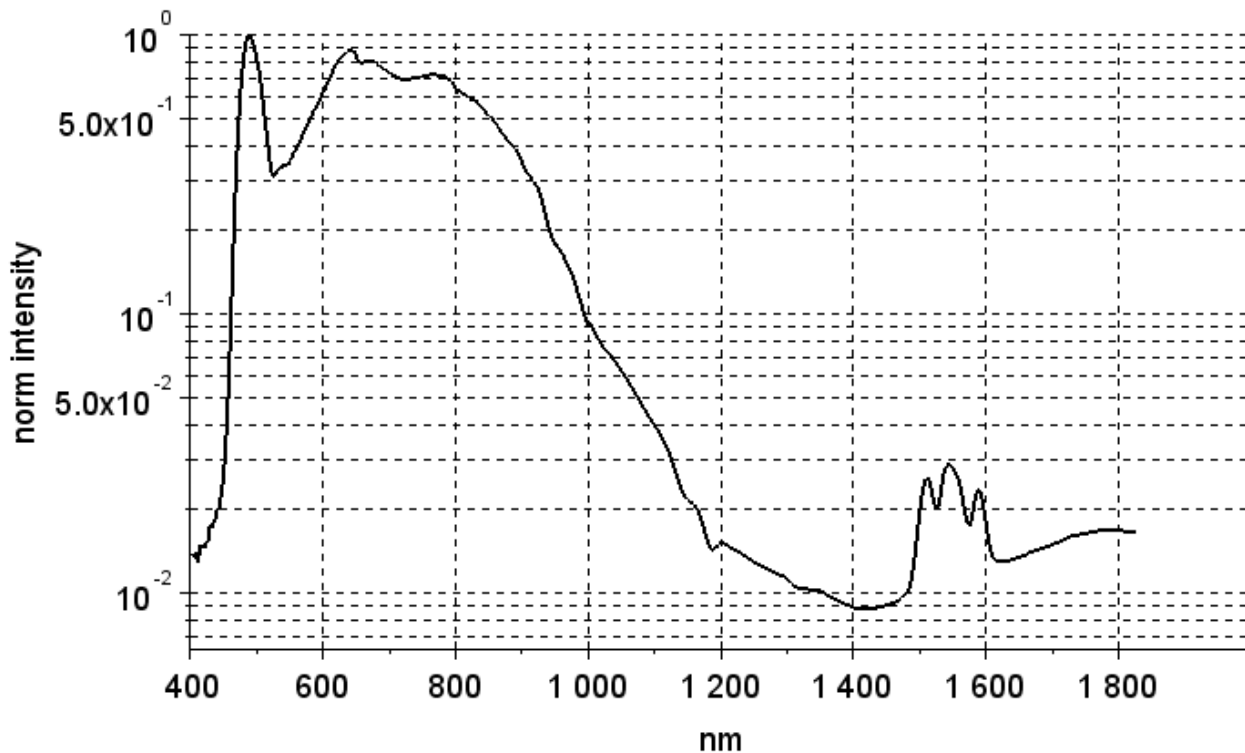


Figure. 1 Spectrum of the SWIR 2835 LED according with spegg © UVVIS29 up to 1000nm and spegg © NIR22

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Absolute Maximum Ratings at Ta=25°C		
Parameter	Value	Unit
Forward Current	100	mA
Peak Forward Current at 3,2V	150	mA
Reverse Voltage	5	V
Operating Temperature	from -40 to +85	°C
Storage Temperature	from -40 to +100	°C

Reliability Test Items And Conditions

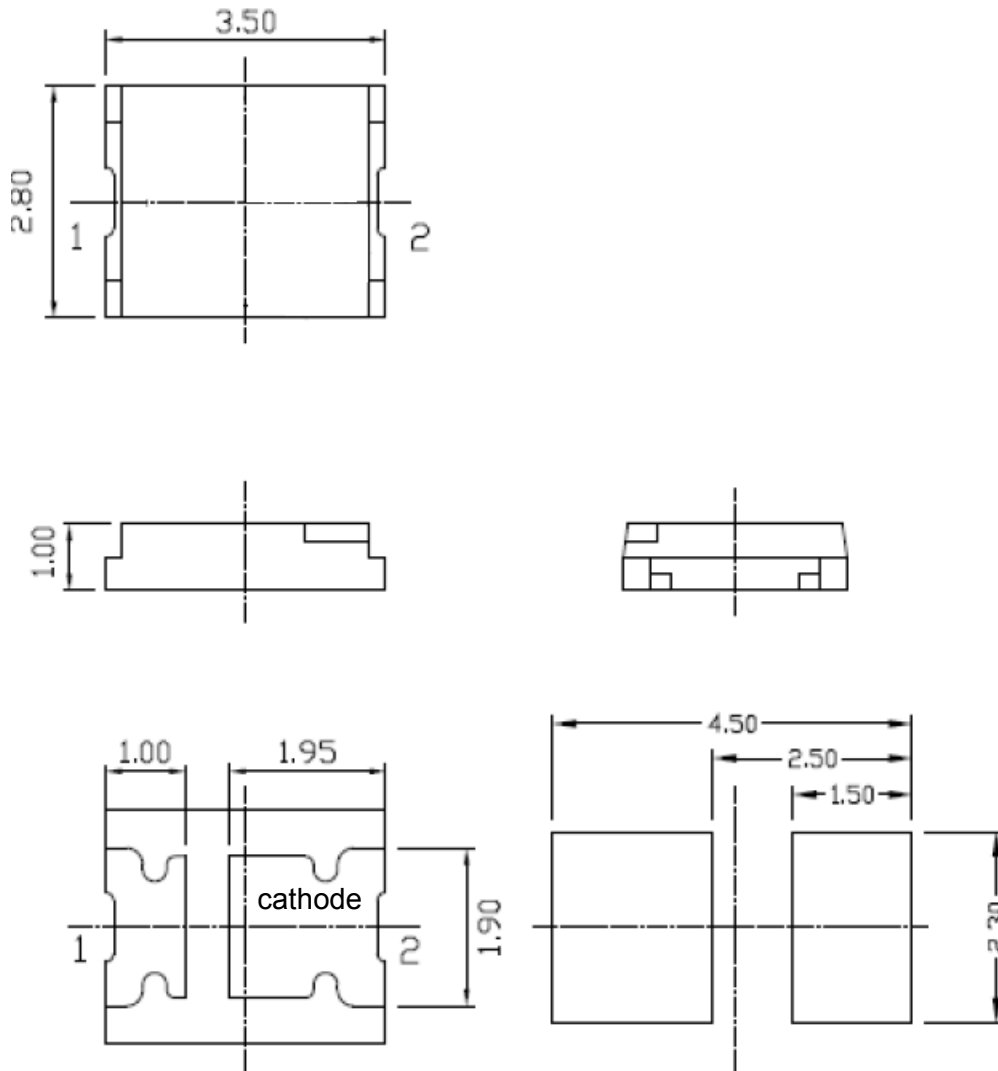
Test Items	Reference	Test Conditions	Time	Quantity	Criterion
Thermal Shock	MIL-STD-202G	-40°C(30min)100°C(30min)	100 cycles	22	0/22
Temperature and Humidity Cyclic	JEITA ED-4701 200 203	-10°C --65°C 0%90%RH 24hrs./1cycle	10 cycles	22	0/22
High Temperature Storage	JEITA ED-4701 200 201	Ta=100°C	1000h	22	0/22
Low Temperature Storage	JEITA ED-4701 200 202	Ta=-40°C	1000h	22	0/22
High Temperature High Humidity Storage	JEITA ED-4701 100 103	Ta=60°C , RH=90%	1000h	22	0/22
High Temperature Life Test	JESD22-A108D	Ta=80°C IF =60mA	1000h	22	0/22
Life Test	JESD22-A108D	Ta=25°C IF =60mA	1000h	22	0/22
Resistance to Soldering Heat	GB/T 4937,,2.2&2.3	Tsol*=(2405) 10secs.	2 times	22	0/22

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Precaution for Use

1. Static Electricity

- The LEDs are very sensitive to Static Electricity and surge voltage. So it is recommended that a wrist band or an anti-electrostatic glove be used when handling the LEDs.
- All devices, equipment and machinery must be grounded properly. It is recommended that precautions should be taken against surge voltage to the equipment that mounts the LEDs.

2. Heat Generation

- The powered LEDs generate heat. Heat dissipation should be considered in the application design to avoid the environmental conditions for operation in excess of the absolute maximum ratings.

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Surface Mount Condition

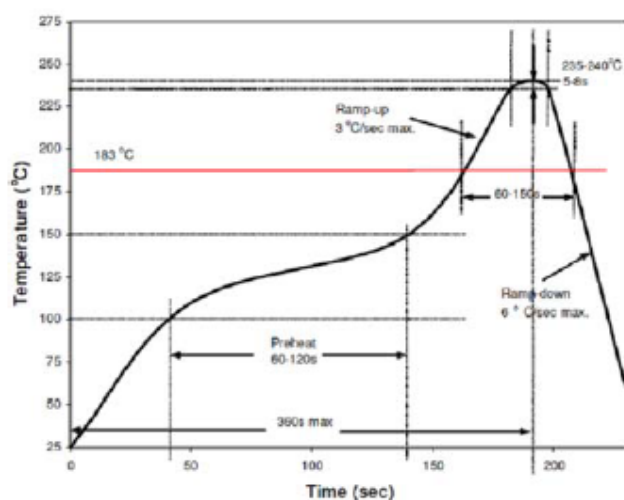
In automatic mounting of the SMD LEDs on printed circuit boards, any bending, expanding and pulling forces or shock against the SMD LEDs should be kept min. to prevent them from electrical failures and mechanical damages of the devices.

Soldering Reflow

1. Soldering of the SMD LEDs should conform to the soldering condition in the individual specifications.
2. SMD LEDs are designed for Reflow Soldering.
3. In the reflow soldering, too high temperature and too large temperature gradient such as rapid heating/cooling may cause electrical & optical failures and damages of the devices.
4. We cannot guarantee the LEDs after they have been assembled using the solder dipping method.
5. There is possibility that the brightness of LEDs is decreased, which is influenced by heat or ambient atmosphere during reflow. It is recommended to use the nitrogen reflow method.
6. After LEDs have been soldered, repairs should not be done. As repair is unavoidable, a double-head soldering iron should be used. It should be confirmed beforehand whether the characteristics of the LEDs will be damaged by repairing or not.
7. Reflow soldering should not be done more than two times.

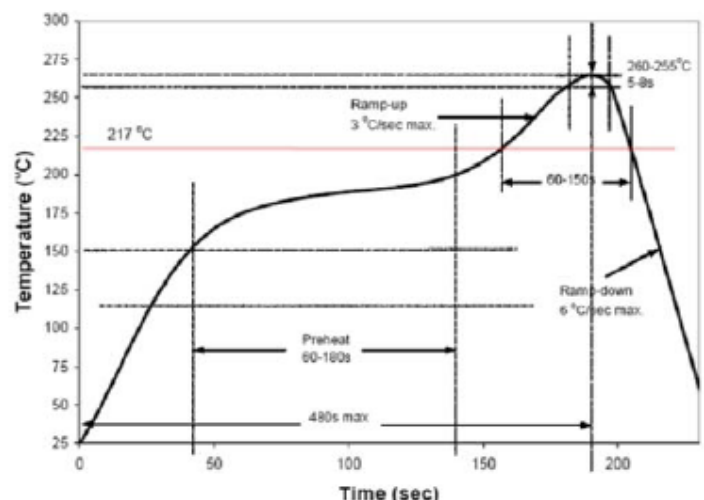
(1) Lead Solder

Classification Reflow Profile (JEDEC J-STD-020C)



(2) Lead-Free Solder

Classification Reflow Profile (JEDEC J-STD-020C)



(3) Manual Soldering Conditions

- a) Lead Solder: max. 300°C for max. 3sec., and only one time.
- b) Lead-Free Solder: max. 350°C for max. 3sec., and only one time.