Technical Data Sheet –Power Top View LED

67-31A/RSC-AV1W2B9Z5/2T/AM

Features

- Pb-free.
- Inner reflector.
- White package.
- Optical indicator.
- P-LCC-3 package.
- Wide viewing angle.
- Colorless clear resin.
- Precondition：Base on JEDEC Level-2.
- ESD：Up to 2KV. (Base JESD22-A114-B)
- The product itself will remain within RoHS compliant version.
- Suitable for vapor-phase reflow, infrared reflow and wave solder processes.

Descriptions

- The 67-31A series is available for orange, green, blue and yellow or other color due to the different raw material.
- Base on the package design, the device result in wide view angle.

Applications

- Automotive backlighting or indicator：Dashboard, switch, audio and video equipments…etc.
- Backlight：LCD, switches, symbol, mobile phone and illuminated advertising.
- Display for indoor and outdoor application：Traffic…etc.
- Ideal for coupling into light guides.
- Substitution of traditional light
- Optical indicator
- General applications.

Device Selection Guide

Chip		Resin Color
Material	Emitted Color	
AlGaInP	Brilliant Red	Water Clear

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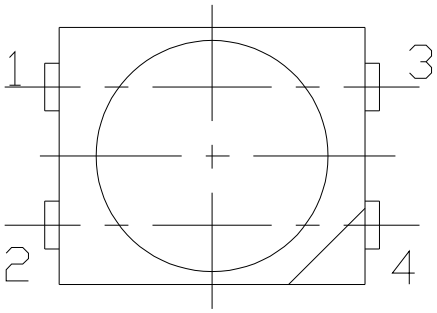
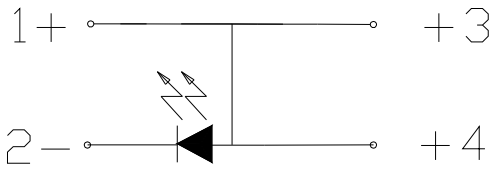
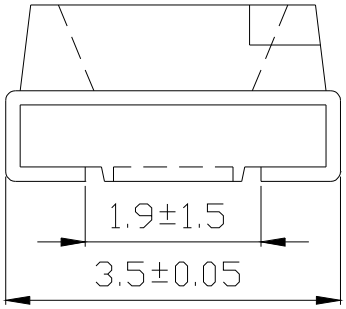
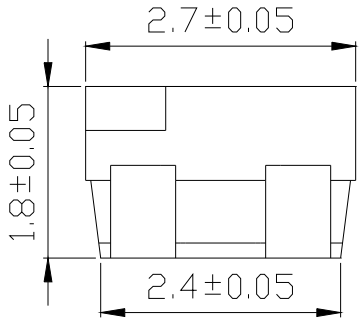
Package Dimensions





Polarity





Note：Tolerances unless dimension ±0.1mm. Unit = mm

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Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Rating	Unit
Reverse Voltage	V_R	12	V
Forward Current	I_F	70	mA
Peak Forward Current (Duty 1/10 @1KHz)	I_{FP}	200	mA
Power Dissipation	Pd	200	mW
Junction Temperature	Tj	115	℃
Operating Temperature	Topr	-40 ~ +100	℃
Storage Temperature	Tstg	-40 ~ +110	℃
Soldering Temperature	Tsol	Reflow Soldering : 260 ℃ for 10 sec. Hand Soldering : 350 ℃ for 3 sec.	

Electro-Optical Characteristics (Ta=25℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	Iv	715	-----	1800	mcd	I_F=50mA
Viewing Angle	2θ1/2	-----	120	-----	deg	I_F=50mA
Peak Wavelength	λp	-----	632	-----	nm	I_F=50mA
Dominant Wavelength	λd	617.5	------	633.5	nm	I_F=50mA
Spectrum Radiation Bandwidth	Δλ	-----	20	-----	nm	I_F=50mA
Forward Voltage	V_F	2.15	-----	2.75	V	I_F=50mA
Reverse Current	I_R	-----	-----	10	μA	V_R=12V

Notes：

1. **Tolerance of Luminous Intensity：±11%**
2. **Tolerance of Dominant Wavelength：±1nm**
3. **Tolerance of Forward Voltage：±0.1V**

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Bin Range of Dominant Wavelengths

Group	Bin Code	Min.	Max.	Unit	Condition
A	E4	617.5	621.5	nm	I_F=50mA
	E5	621.5	625.5		
	E6	625.5	629.5		
	E7	629.5	633.5		

Bin Range of Luminous Intensity

Bin	Min	Max	Unit	Condition
V1	715	900	mcd	I_F=50mA
V2	900	1120		
W1	1120	1420		
W2	1420	1800		

Bin Range of Forward Voltage

Group	Bin	Min	Max	Unit	Condition
B9	2	2.15	2.35	V	I_F=50mA
	3	2.35	2.55		
	4	2.55	2.75		

Notes：

1. **Tolerance of Luminous Intensity：±11%**
2. **Tolerance of Dominant Wavelength：±1nm**
3. **Tolerance of Forward Voltage：±0.1V**

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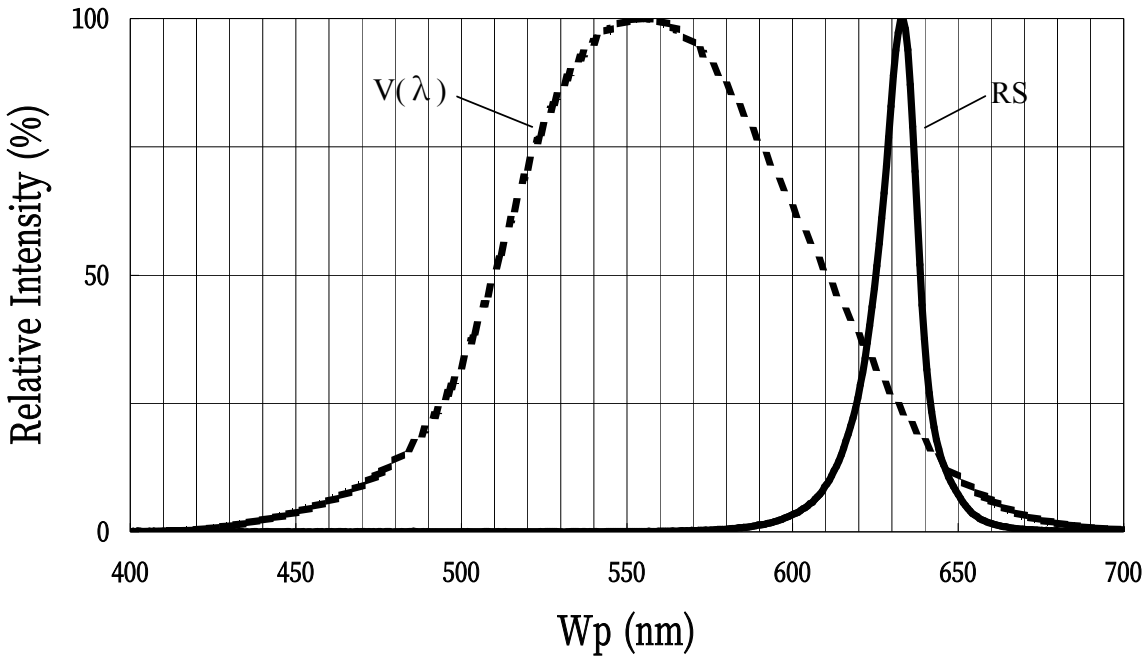
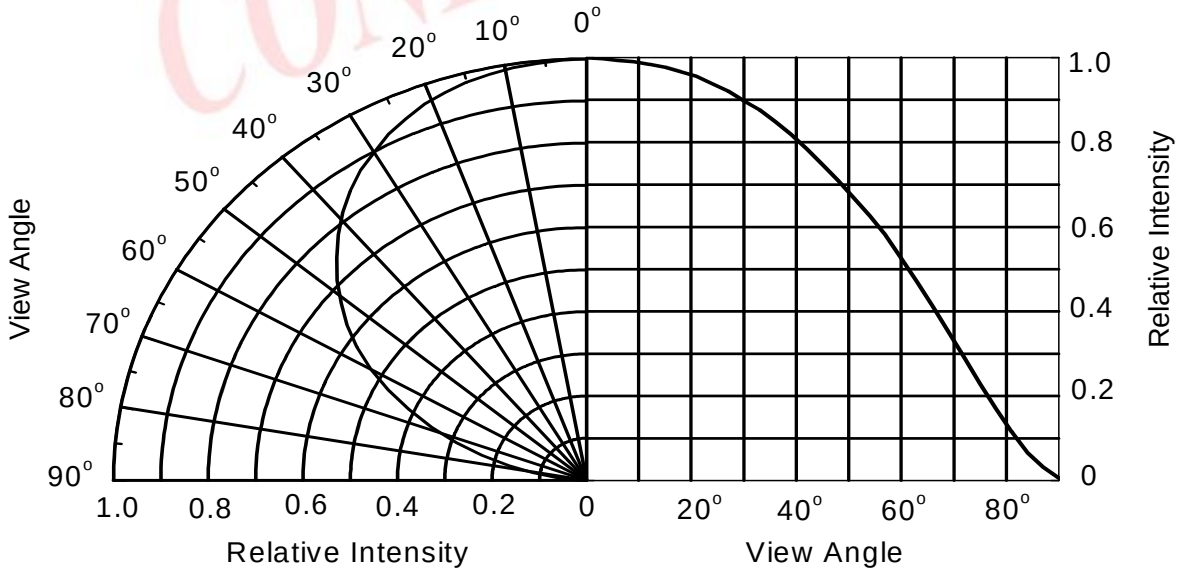
Typical Electro-Optical Characteristics Curves

• **Typical curve of spectral distribution：**

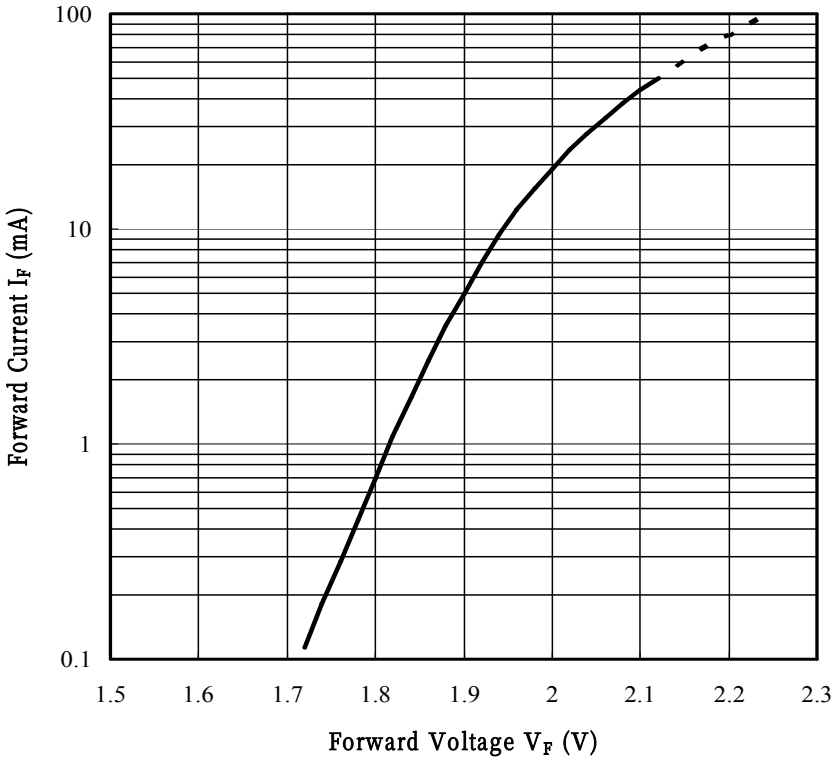


Note：V(λ)=Standard eye response curve

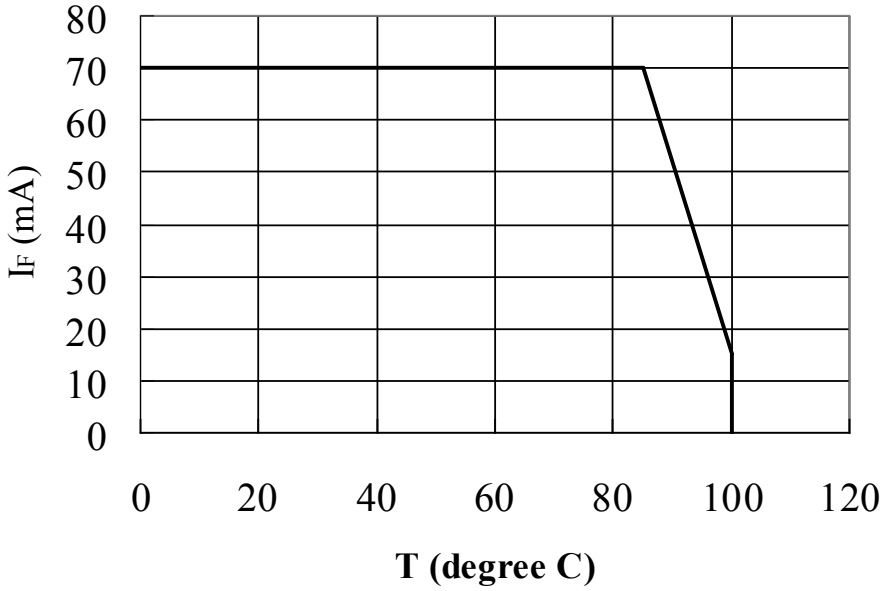
Diagram characteristics of radiation



Forward Current vs. Forward Voltage (Ta=25℃)



Forward current vs. Ambient Temp.



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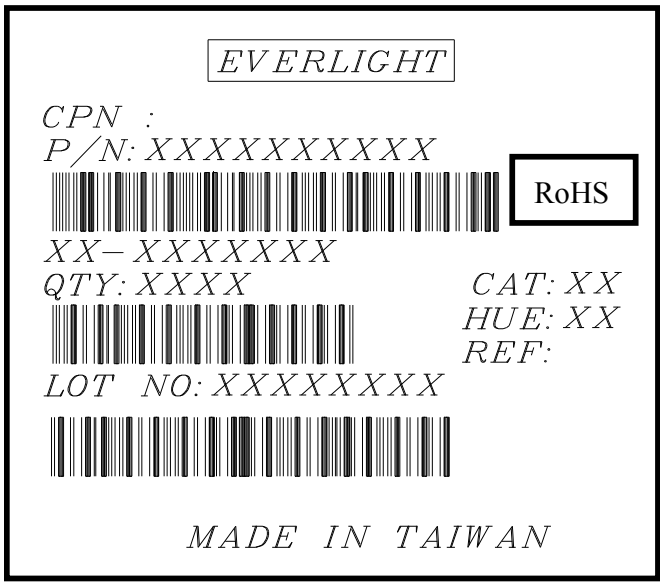
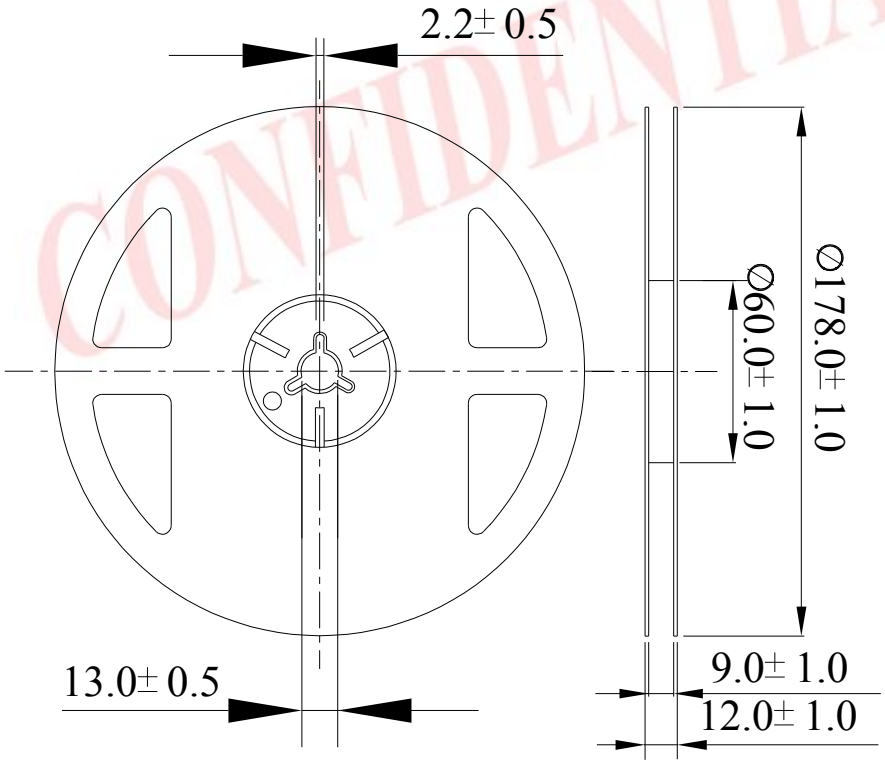
Label explanation

- **CPN：Customer's Production Number**
- **P/N：Production Number**
- **QTY：Packing Quantity**
- **CAT：Luminous Intensity Rank**
- **HUE：Dom. Wavelength Rank**
- **REF：Forward Voltage Rank**
- **LOT No：Lot Number**



Reel Dimensions



Note：Tolerances unless dimension ±0.1mm. Unit = mm

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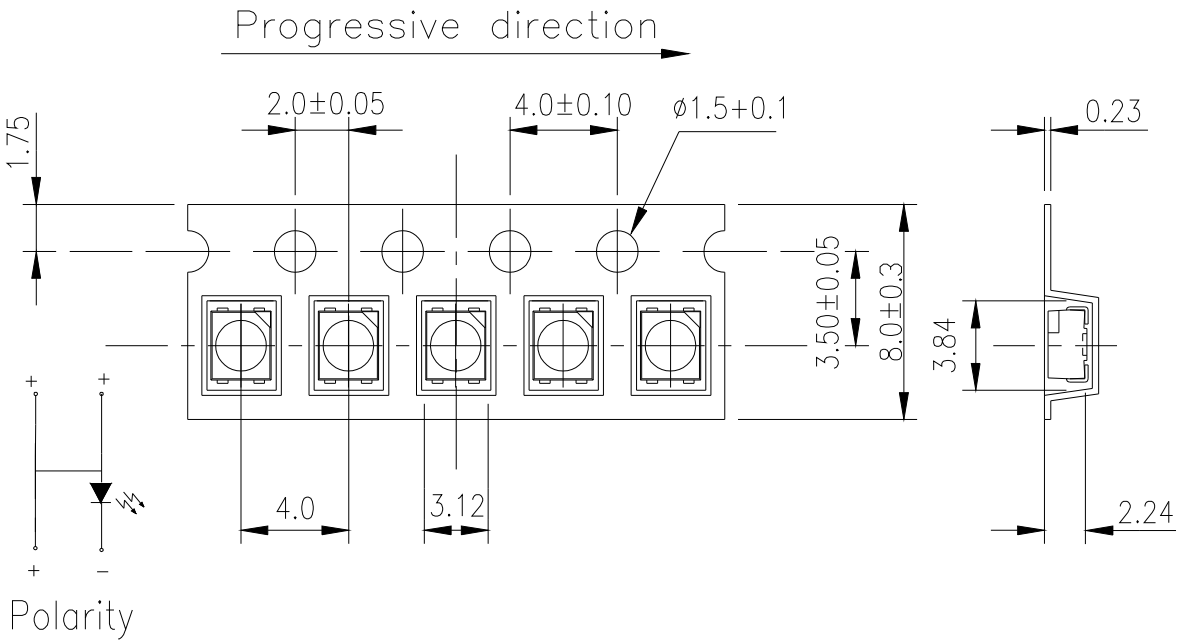
Carrier Tape Dimensions: Loaded quantity 2000 PCS per reel



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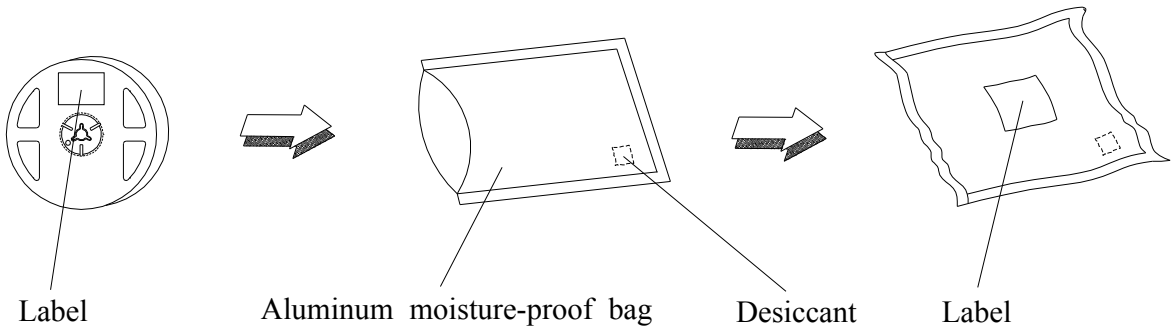
Moisture Resistant Packaging



Precautions for Use

1. Over-current-proof

   Customer must apply resistors for protection, otherwise slight voltage shift will cause big current change (Burn out will happen).

2. Storage

   2.1 Do not open moisture proof bag before the products are ready to use.

   2.2 Before opening the package: The LED should be kept at 30℃ or less and 90%RH or less.

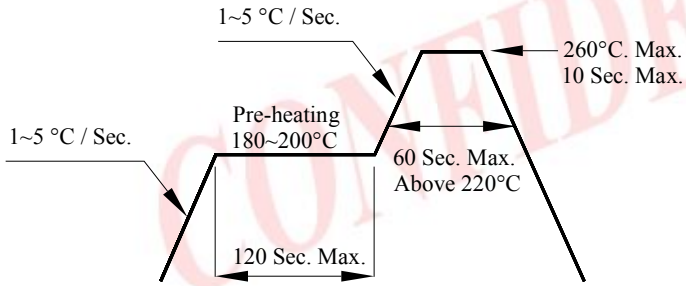
   2.3 After opening the package: The LED floor life is 1 year under 30℃ or less and 60% RH or less. If unused LED remain, it should be stored in moisture proof packages.

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

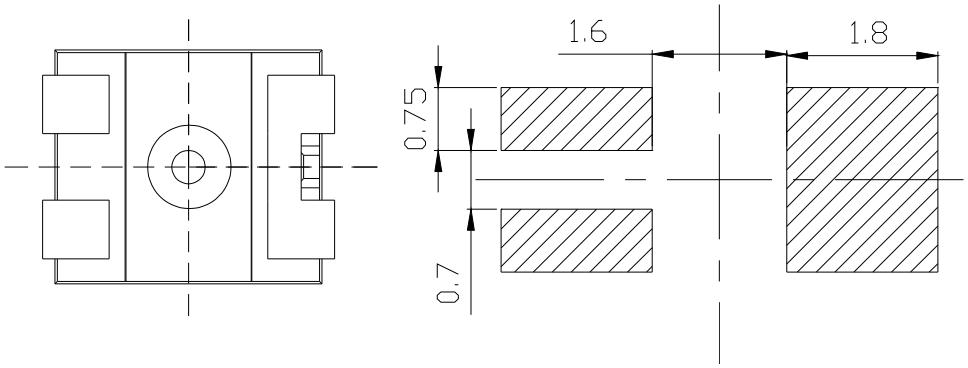
   Baking treatment : 60±5℃ for 24 hours.

3. Soldering Condition

   3.1 (A) Pb-free solder temperature profile



(B) Recommend soldering pad



3.3 When soldering, do not put stress on the LED during heating.

3.4 After soldering, do not warp the circuit board.

4.Soldering Iron

Each terminal is to go to the tip of soldering iron temperature less than 350℃ for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of the hand solder.