

Amicc 欧密格光电

客户 (Customer) : _____

承认书

Approval Sheet

谨致执事者：兹提供敝公司之有关详细规格及图面数据，敬请给予办理试认定手续。
同时敬请送返一份附有贵公司签认之测试认定后之样品承认书。

We are pleased in sending you herewith on specification and drawings for your approval.
Please return to us one copy "Approval sheet" with your approved signature.

型号 (Model No.) : A-SP153PT1B-A01-2T

发文日期 (Issue Date) : 2018/09/18 承认日期 (Approved Date) : _____

Checking signature of Amicc

Designer	Checker	Approver
Yuqi		

Approval signature of customer

Designer	Checker	Approver

江苏欧密格光电科技股份有限公司

Jiangsu Amicc Opto-Electronics Technology Co.,Ltd.

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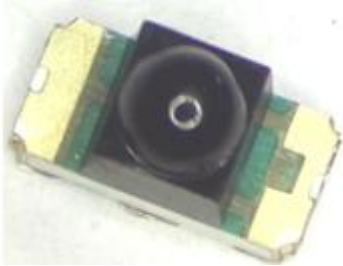
Add: 98.Wu Nan Road, Wujin, Changzhou city, Jiangsu Province

TEL:0086-519-89806973

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Photo Transistor ■ Top view 1206 Package

A-SP153PT1B-A01-2T



Features

- 1206 package
- Fast response time
- Top view LED
- Pb-free
- RoHS compliant

Description

The Amicc 153 package has high efficacy, high power consumption, wide viewing angle and a compact form factor. These features make this package an ideal LED for all lighting applications.

Applications

- Miniature switch
- Counters and sorter
- Infrared applied system
- Position sensor

Device Selection Guide

Chip Materials	Resin Color
Silicon	Black

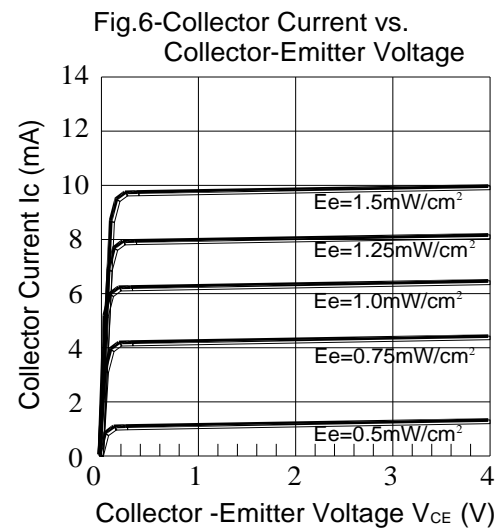
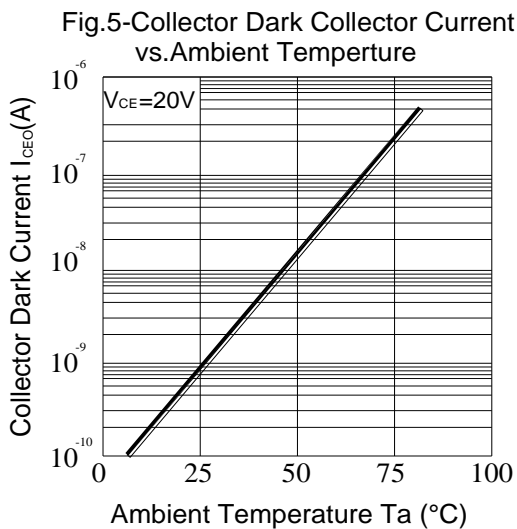
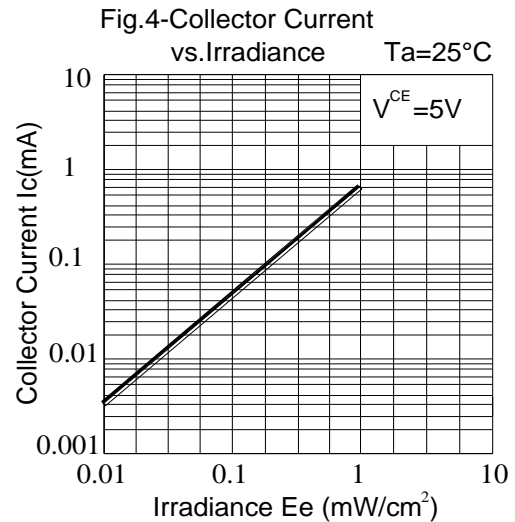
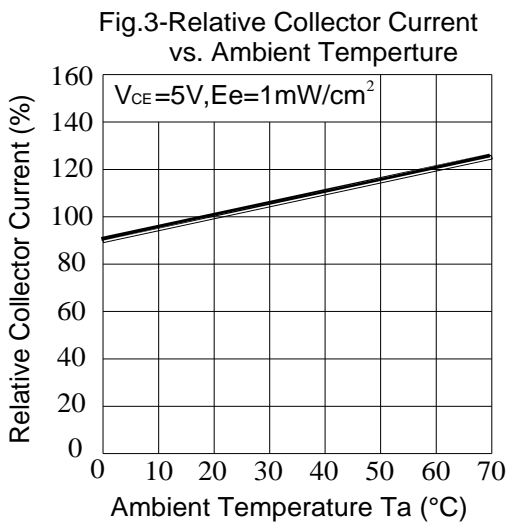
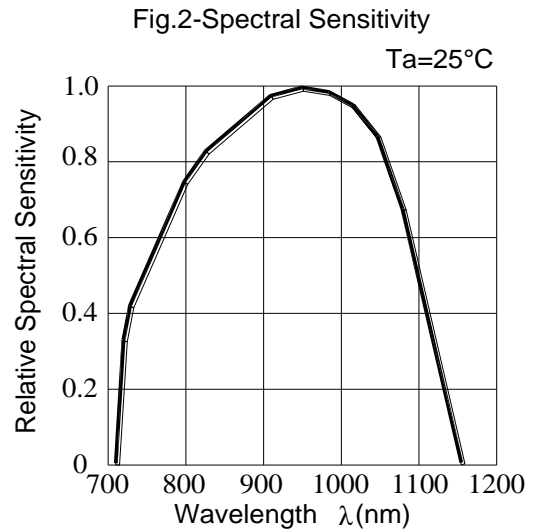
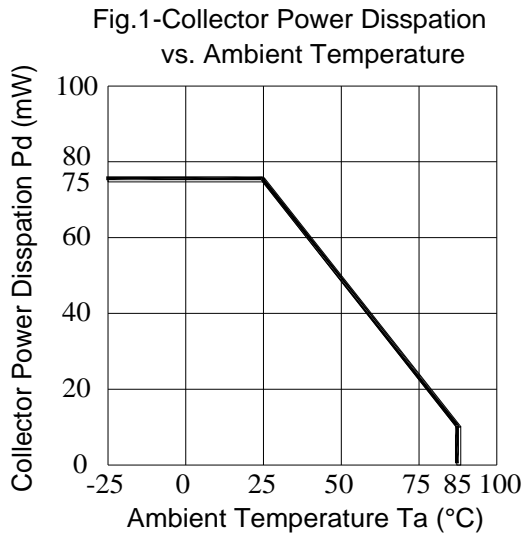
Absolute Maximum Ratings ($T_{\text{Soldering}}=25^{\circ}\text{C}$)

Parameter	Symbol	Rating	Unit
Collector-Emitter Voltage	V_{CEO}	30	V
Emitter-Collector-Voltage	V_{ECO}	5	V
Collector Current	I_{C}	20	mA
Operating Temperature	T_{opr}	-25 ~ +85	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-40 ~ +85	$^{\circ}\text{C}$
Soldering Temperature	T_{sol}	260	$^{\circ}\text{C}$
Power Dissipation at(or below) 25 $^{\circ}\text{C}$ Free Air Temperature	P_{c}	75	mW

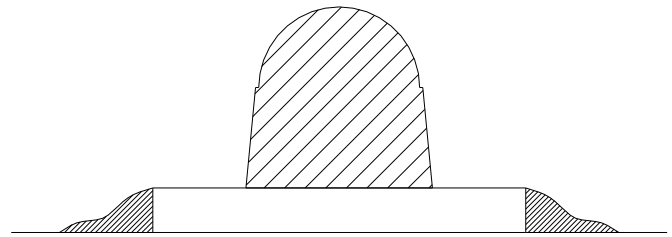
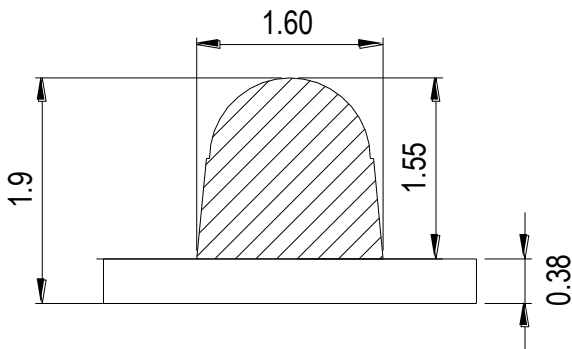
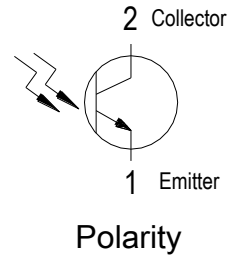
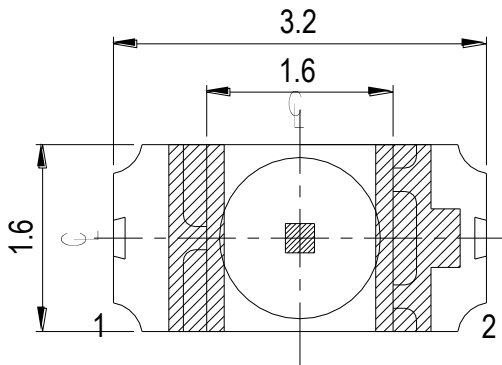
Electro-Optical Characteristics ($T_{\text{Soldering}}=25^{\circ}\text{C}$)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Rang Of Spectral Band width	$\lambda_{0.5}$	730	---	1100	nm	---
Wavelength Of Peak Sensitivity	λ_{P}	---	940	---	nm	---
Collector-Emitter Breakdown Voltage	BV_{CEO}	60	---	---	V	$I_{\text{C}}=500\mu\text{A}$ $E_{\text{e}}=0\text{mW}/\text{cm}^2$
Emitter-Collector Breakdown Voltage	BV_{ECO}	7	---	---	V	$I_{\text{E}}=50\mu\text{A}$ $E_{\text{e}}=0\text{mW}/\text{cm}^2$
Collector-Emitter Saturation Voltage	$V_{\text{CE(sat)}}$	---	---	0.4	V	$I_{\text{C}}=5\text{mA}$ $E_{\text{e}}=1\text{m W}/\text{cm}^2$
Collector Dark Current	I_{CEO}	---	---	150	nA	$V_{\text{CE}}=70\text{V}$ $E_{\text{e}}=0\text{mW}/\text{cm}^2$
On State Collector Current	$I_{\text{C(ON)}}$	3	---	---	mA	$V_{\text{CE}}=5\text{V}$ $E_{\text{e}}=1\text{mW}/\text{cm}^2$
Rise Time	t_{r}	---	15	---	μS	$V_{\text{CE}}=5\text{V}$
Fall Time	t_{f}	---	15	---		$I_{\text{C}}=1\text{mA}$ $R_{\text{L}}=1000\Omega$

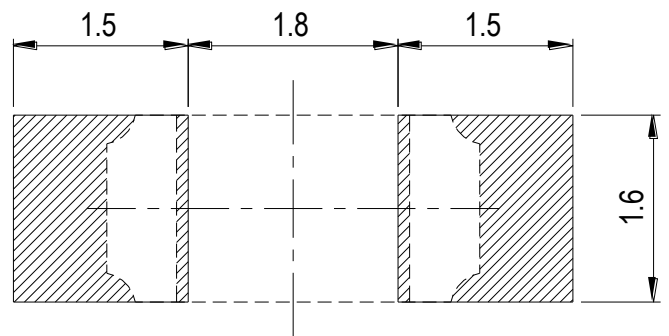
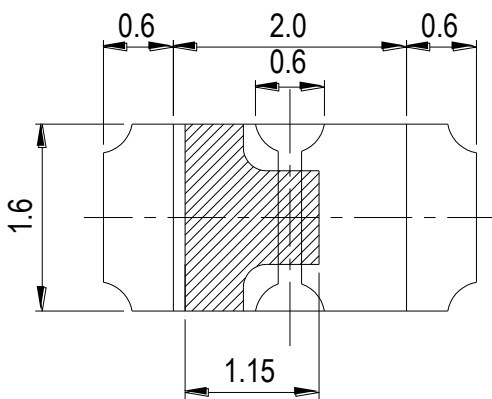
Typical Electro-Optical Characteristics Curves



Package Dimension

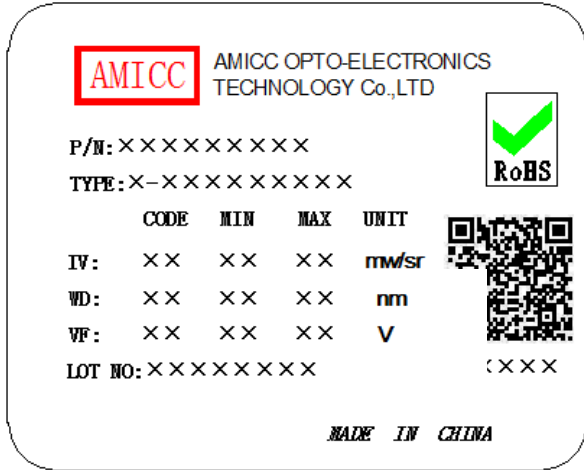


Recommended Solder Pad



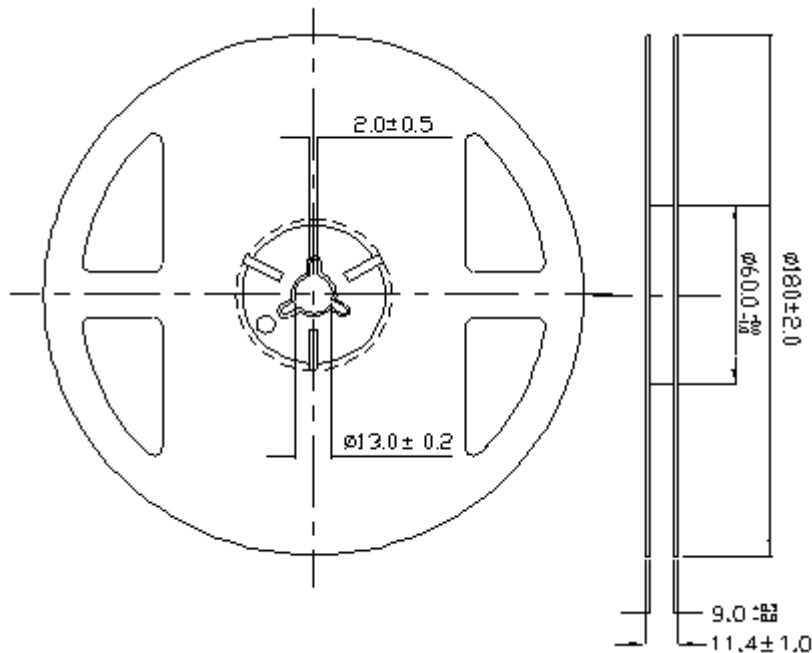
Note:
Tolerance unless mentioned is ± 0.1 mm, Unit = mm.

**Moisture Resistant Packing Materials
 Label Explanation**



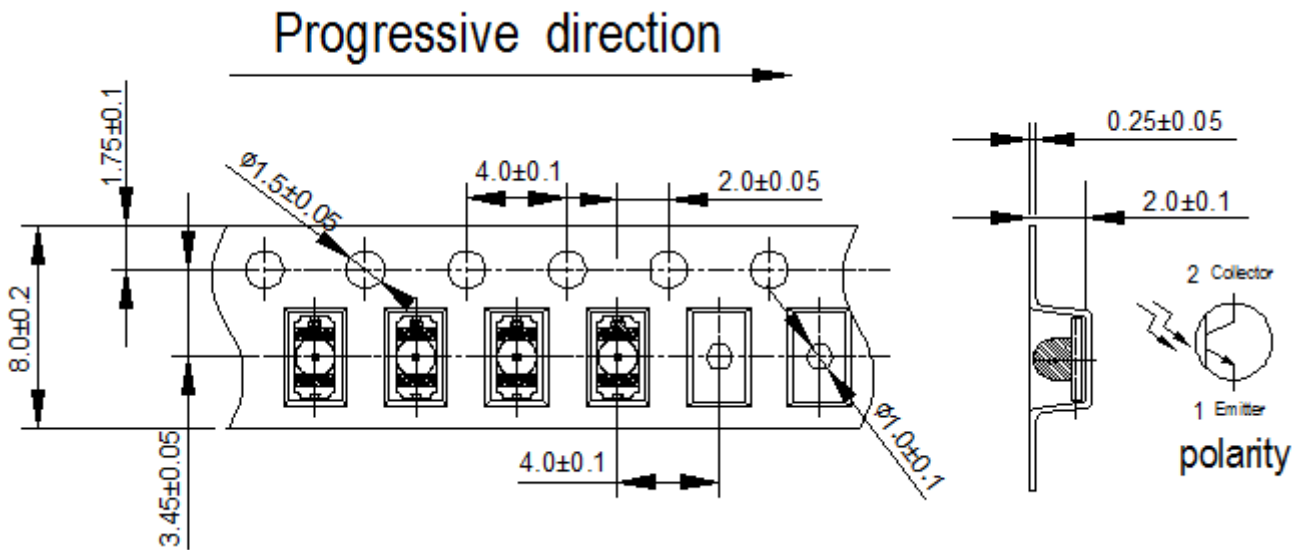
- CPN: Customer's Product Number
- P/N: Product Number
- TYPE :Part NO.
- IV: Bin Rank
- WD: Peak Wavelength
- VF: -----
- LOT NO.: Lot Number
- QTY: Packing Quantity

Reel Dimensions



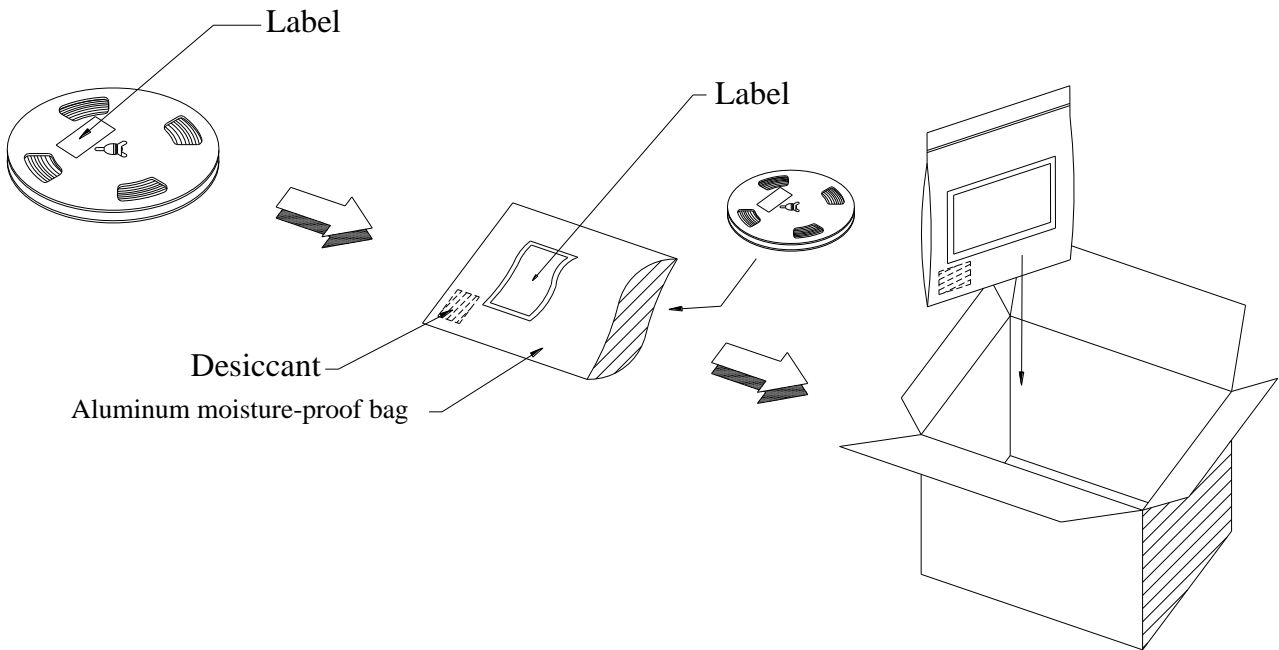
Note:
 Tolerances unless mentioned $\pm 0.1\text{mm}$, Unit = mm

Carrier Tape Dimensions: Loaded Quantity 2000 pcs Per Reel



- Notes:
1. Tolerance unless mentioned is ± 0.1 mm, Unit = mm.
 2. Minimum packing amount is 1000 pcs per reel.

Moisture Resistant Packing Process



Reliability Test Items and Conditions

The reliability of products shall be satisfied with items listed below.

Confidence level : 90%

LTPD : 10%

No.	Items	Test Condition	Test Hours/Cycles	Sample Size	Ac/Re
1	Reflow Soldering	Temp. : 260°C/10sec.	6 Min.	22 PCS.	0/1
2	Thermal Shock	H : +100°C 5min ∫ 10 sec L : -10°C 5min	300 Cycles	22 PCS.	0/1
3	Temperature Cycle	H : +100°C 15min ∫ 5 min L : -40°C 15min	300 Cycles	22 PCS.	0/1
4	High Temperature/Humidity Reverse Bias	Ta=85°C,85%RH	1000 Hrs.	22 PCS.	0/1
5	Low Temperature Storage	Ta=-40°C	1000 Hrs.	22 PCS.	0/1
6	High Temperature Storage	Ta=100°C	1000 Hrs.	22 PCS.	0/1
7	DC Operation Life	V _{CE} =5V	1000 Hrs.	22 PCS.	0/1

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 LEDs should be kept at 30°C or less and 90%RH or less.

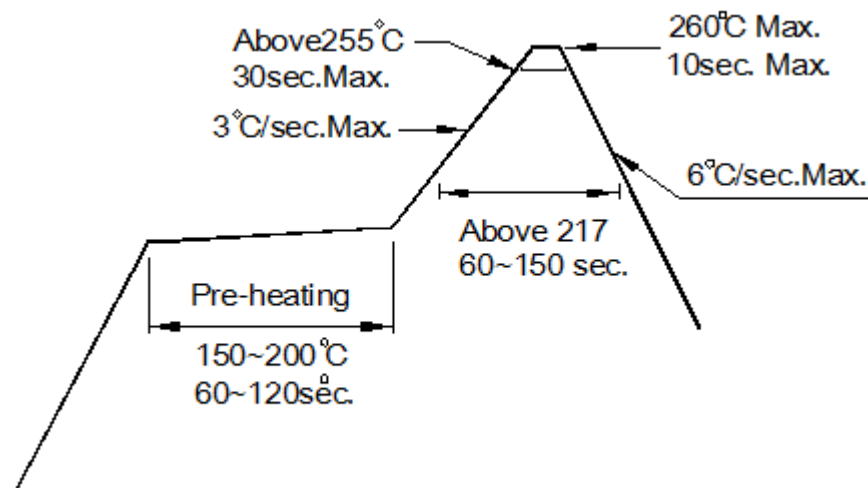
2.3 After opening the package: The LED's floor life is 1 year under 30°C or less and 60% RH or less. If unused LEDs remain, it should be stored in moisture proof packages.

2.4 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°C for 24 hours.

3. Soldering Condition

3.1 Pb-free solder temperature profile



3.2 Reflow soldering should not be done more than two times.

3.3 When soldering, do not put stress on the LEDs 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°C 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.

5. Repairing

Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as below figure). It should be confirmed beforehand whether the characteristics of the LEDs will or will not be damaged by repairing.

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