

Company Name	Date	PI/PO No.	Item No.	Failure Quantity	Production Code (printed on the jacket of light)
科利尔企业 (勿动)	2022-10-24 14:54:43		C-FR-F22	2	C-FR-F22

1. Defects Description

1.1 What was the problem?	1.2 Could you describe more about the failure phenomena and send us some pictures or videos?
Partial malfunction	this is a nother test
1.3 When did the problem/error occur after installation?	1.4 Did you light up to test the products before operation or installation?
Within 1 week	是

2. Installation Environment

2.1 City of installation	2.2 The min. and max. environment temperature	2.3 Indoor or outdoor installation	2.4 Installation place
中国	30		

3. Product Information

3.1 What connector (s) was (were) used?	3.2 Who assembled the connectors?	3.3 What mounting profile was used?	3.4 What installation way (s) is (are) taken?
Snap connector	Your company	Self-lock aluminum profile Ver 1.0	Horizontal installation
Other connector, please describe here			Other installation, please describe here

4. Additional Comments

The following is filled by CLEAR

I Emergent Group Forms Owner & Due Date : Brook

Emergency Team Leader: 储安琪
Emergency Team Members: 储安琪,程鹏

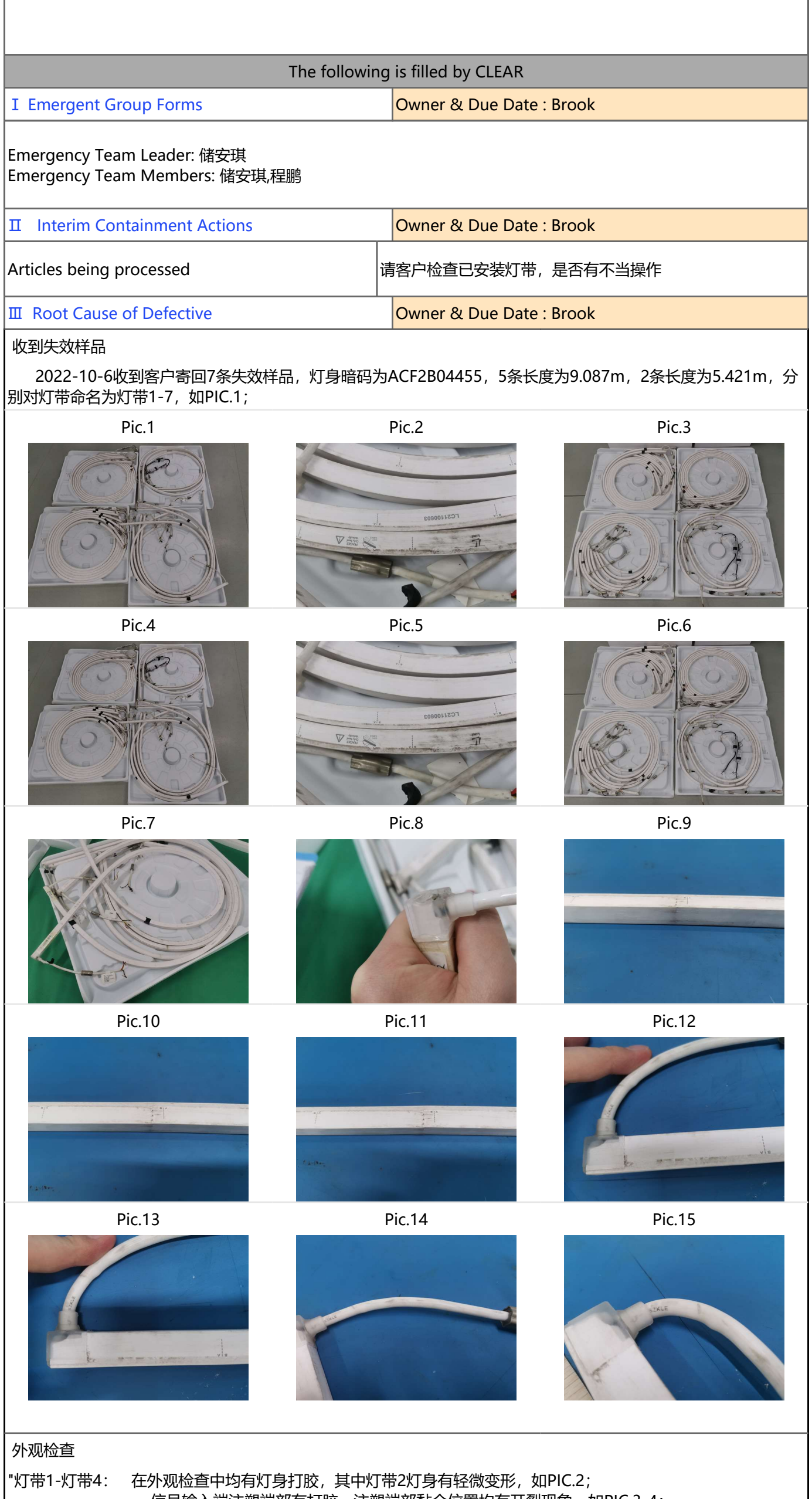
II Interim Containment Actions Owner & Due Date : Brook

Articles being processed 请客户检查已安装灯带, 是否有不当操作

III Root Cause of Defective Owner & Due Date : Brook

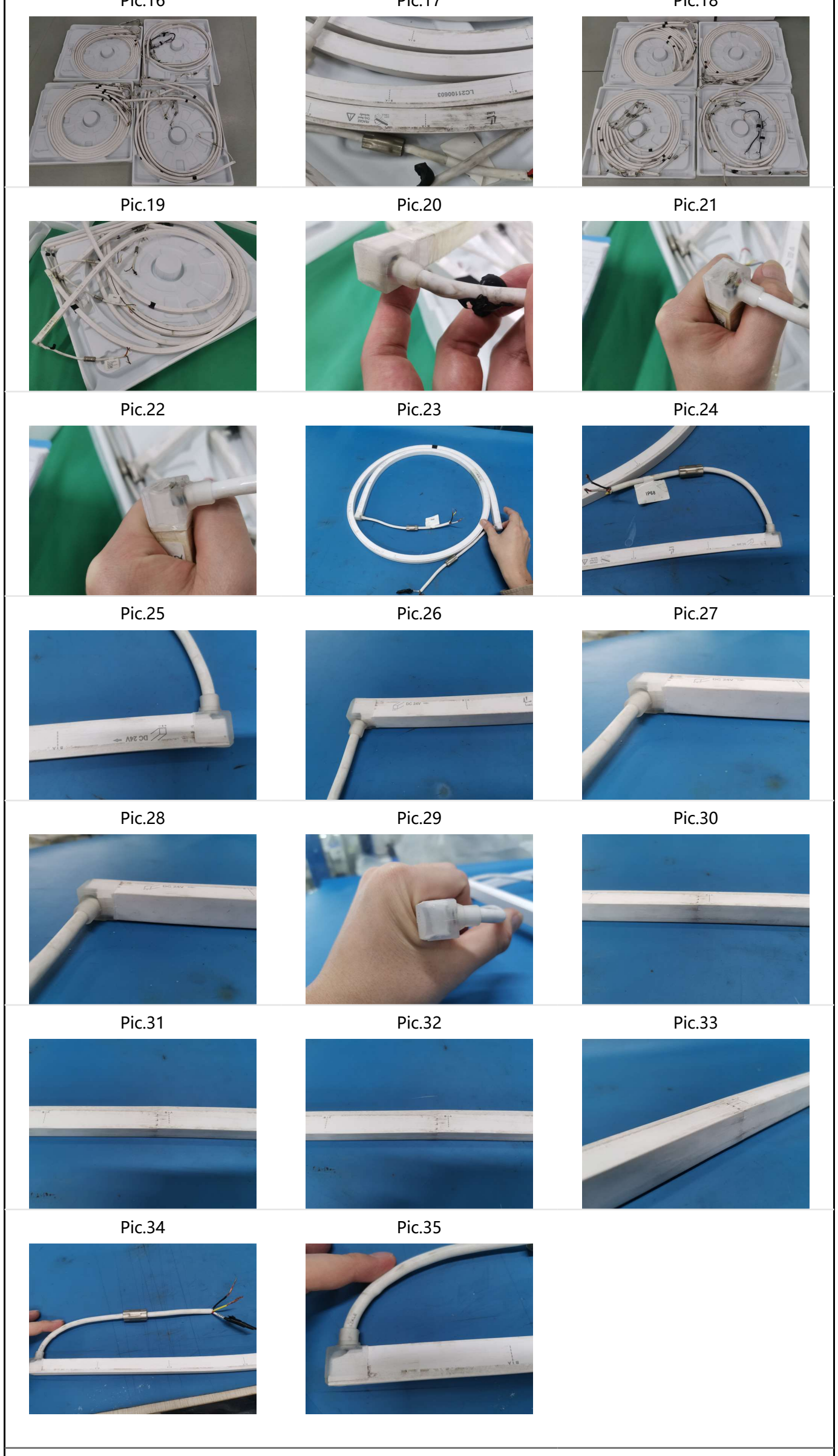
收到失效样品

2022-10-6收到客户寄回7条失效样品, 灯身暗码为ACF2B04455, 5条长度为9.087m, 2条长度为5.421m, 分别对灯带命名为灯带1-7, 如PIC.1;



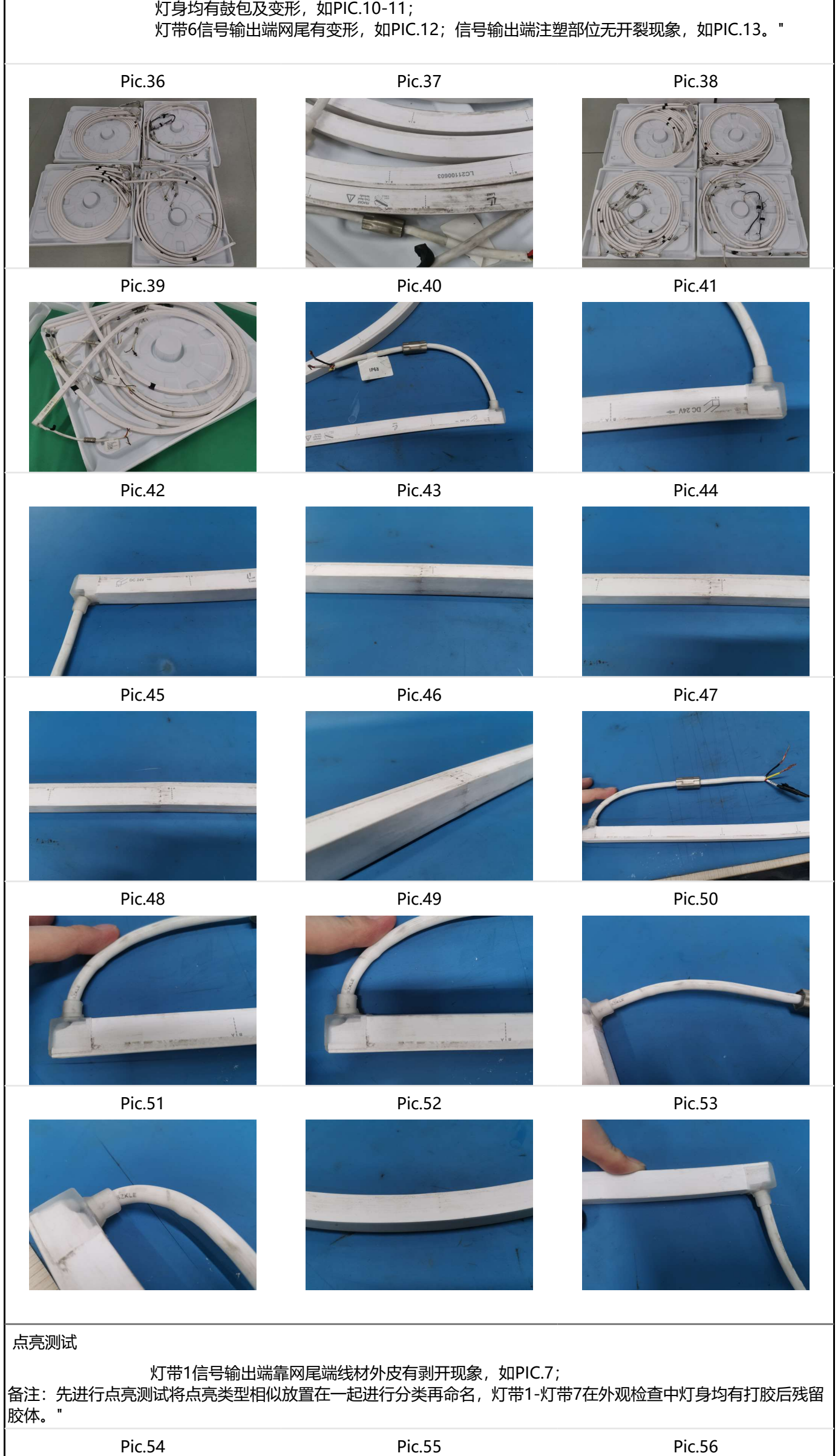
外观检查

*灯带1-灯带4: 在外观检查中均有灯身打胶, 其中灯带2灯身有轻微变形, 如PIC.2; 信号输入端注塑端部有打胶, 注塑端部黏合位置均有开裂现象, 如PIC.3-4; 灯身有不同程度的鼓包及朝侧面翘起现象, 如PIC.5-6;



外观检查

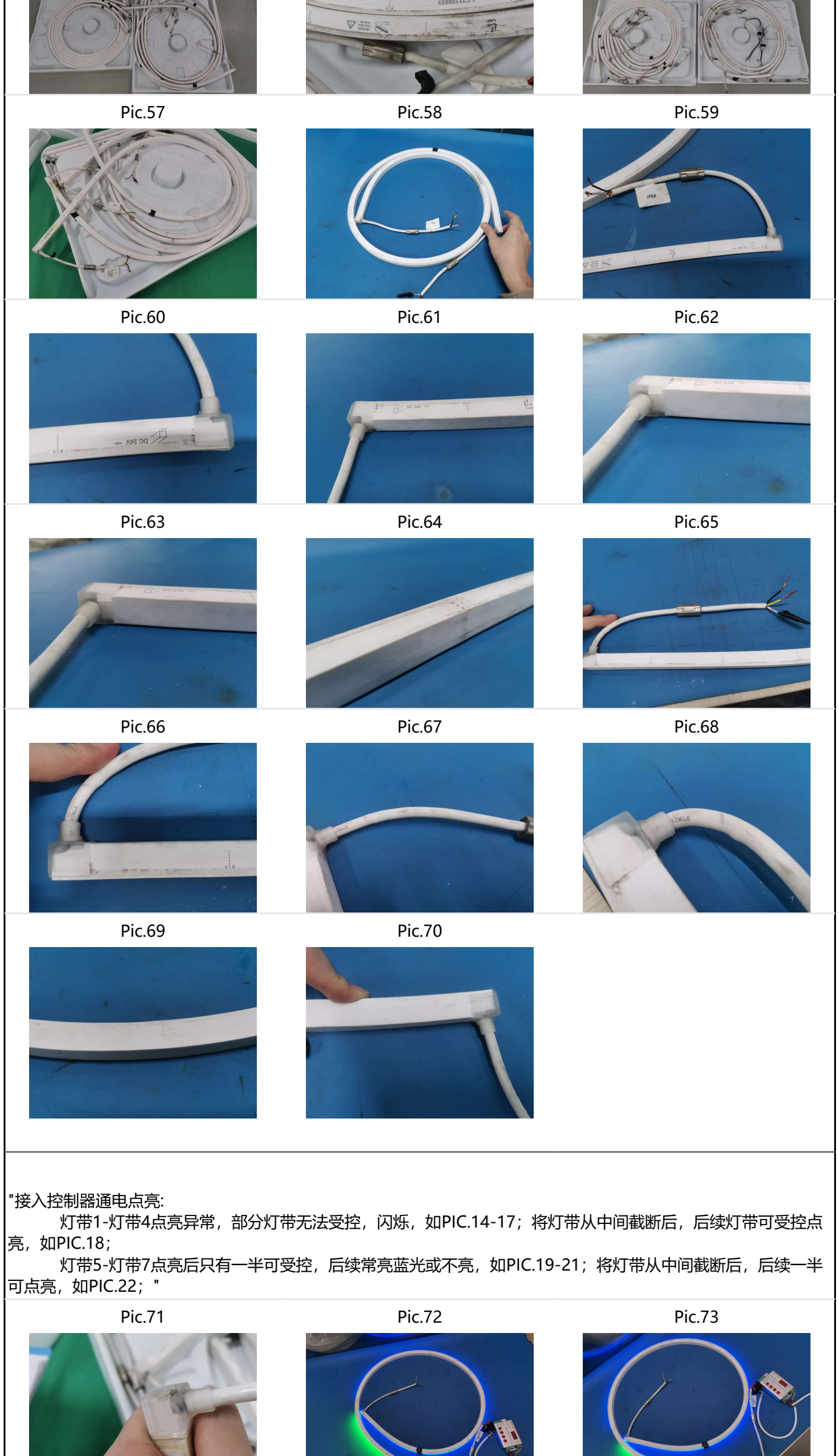
*灯带5-灯带7: 灯带5及灯带7信号输入端朝侧面翘起, 如PIC.8-9; 灯身均有鼓包及变形, 如PIC.10-11; 灯带6信号输出端网尾有变形, 如PIC.12; 信号输出端注塑部位无开裂现象, 如PIC.13. *



点亮测试

灯带1信号输出端靠网尾端线材外皮有剥开现象, 如PIC.7;

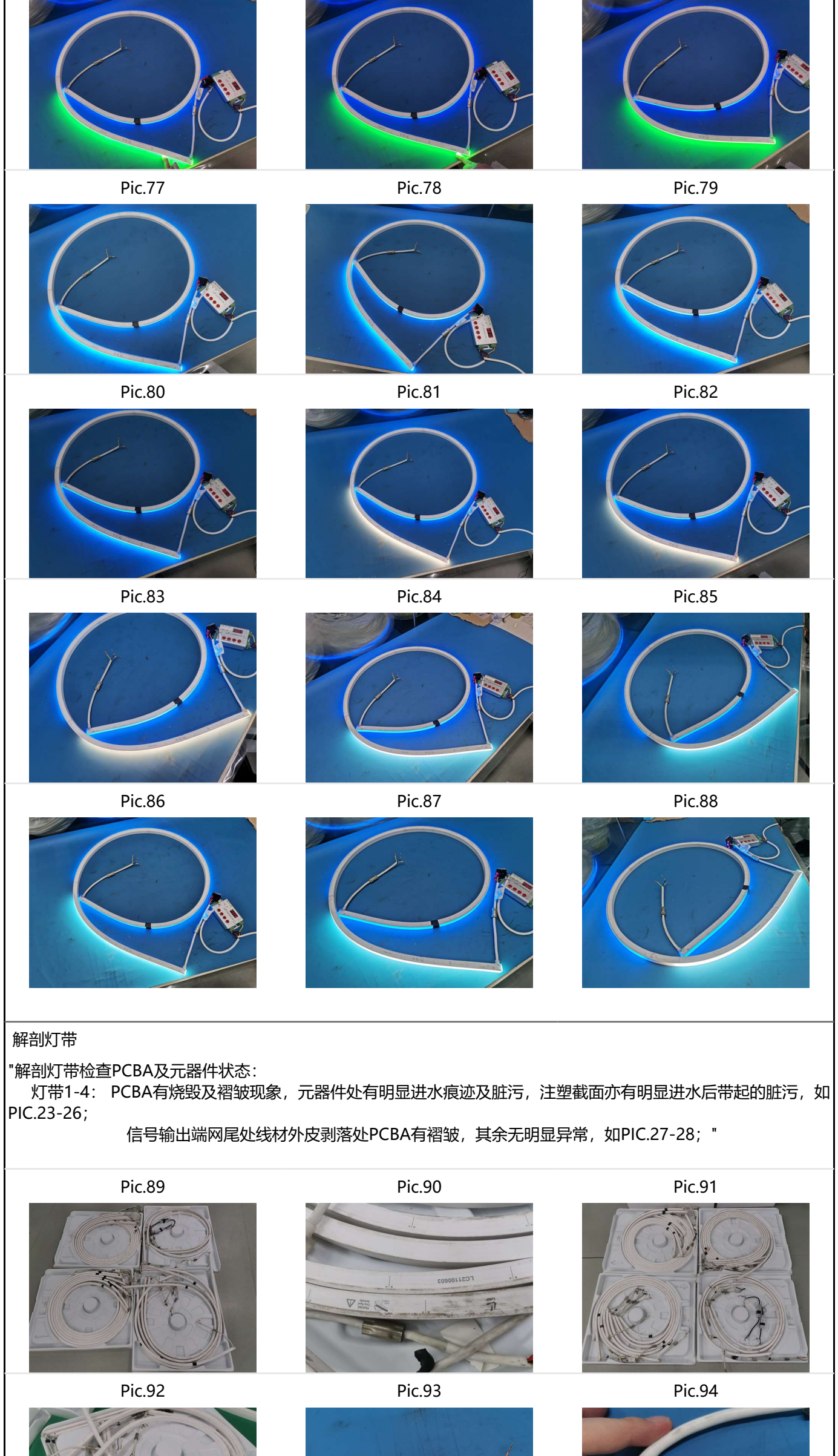
备注: 先进行点亮测试将点亮类型相似放置在一起进行分类再命名, 灯带1-灯带7在外观检查中灯身均有打胶后残留胶体. *



*接入控制器通电点亮:

灯带1-灯带4点亮异常, 部分灯带无法受控, 闪烁, 如PIC.14-17; 将灯带从中间截断后, 后续灯带可受控点亮, 如PIC.18;

灯带5-灯带7点亮后只有一半可受控, 后续常亮蓝光或不亮, 如PIC.19-21; 将灯带从中间截断后, 后续一半可点亮, 如PIC.22; *

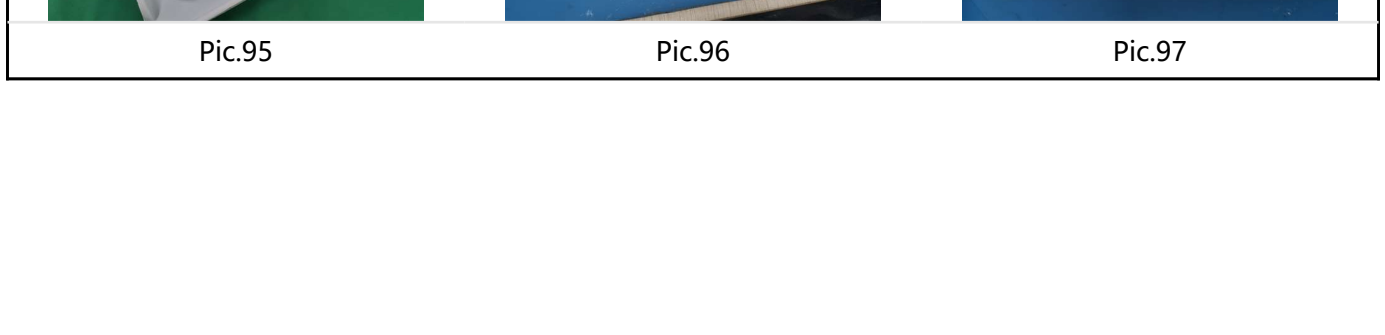


解剖灯带

*解剖灯带检查PCBA及元器件状态:

灯带1-4: PCBA有烧毁及褶皱现象, 元器件处有明显进水痕迹及脏污, 注塑截面亦有明显进水后带起的脏污, 如PIC.23-26;

信号输出端网尾处线材外皮剥落处PCBA有褶皱, 其余无明显异常, 如PIC.27-28; *

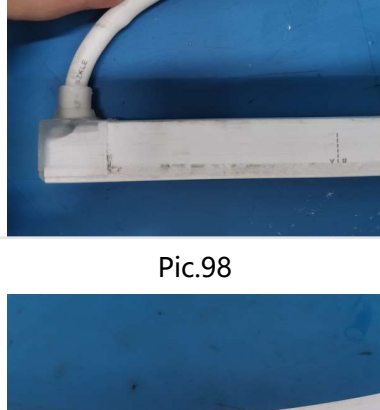


解剖灯带

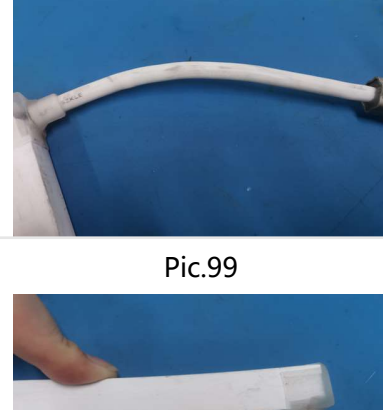
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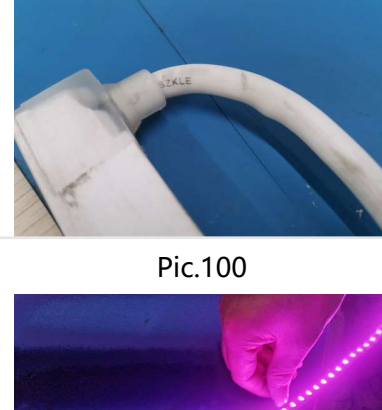
信号输出端网尾处线材外皮剥落后PCBA有褶皱, 其余无明显异常, 如PIC.27-28; *



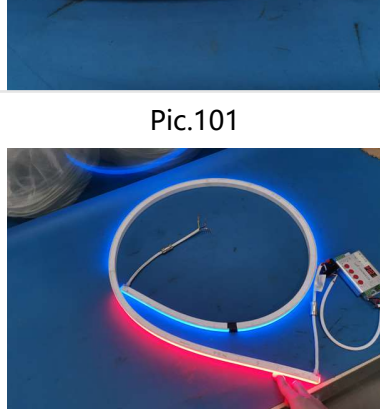
Pic.98



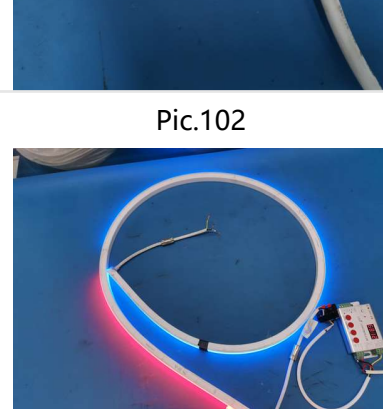
Pic.99



Pic.100



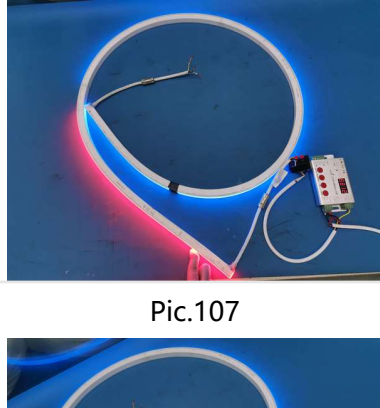
Pic.101



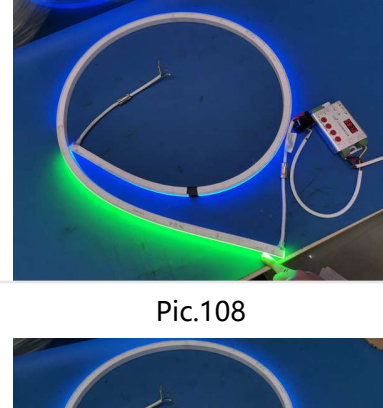
Pic.102



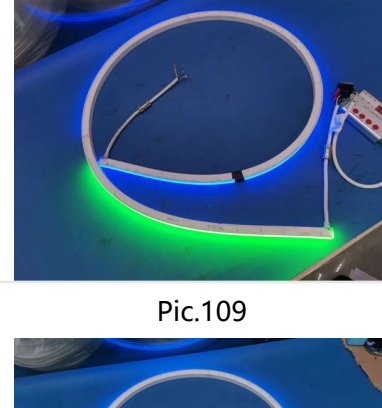
Pic.103



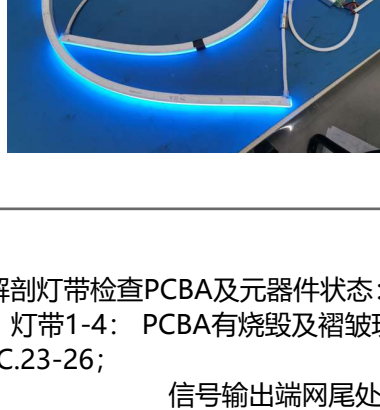
Pic.104



Pic.105



Pic.106



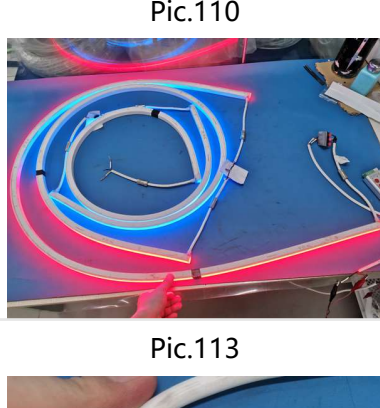
Pic.107



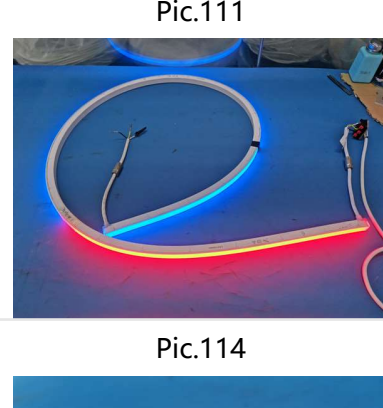
Pic.108



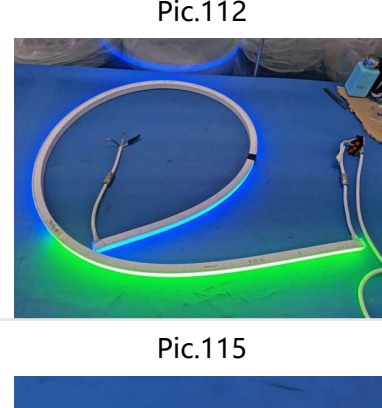
Pic.109



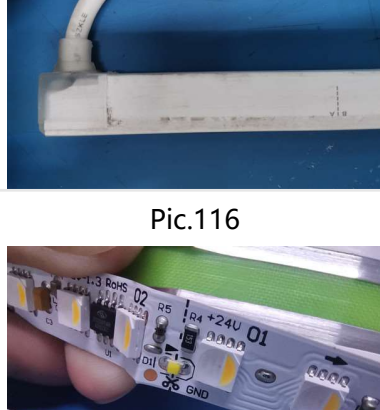
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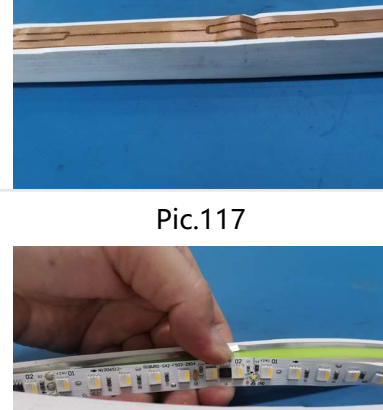
Pic.111



Pic.112



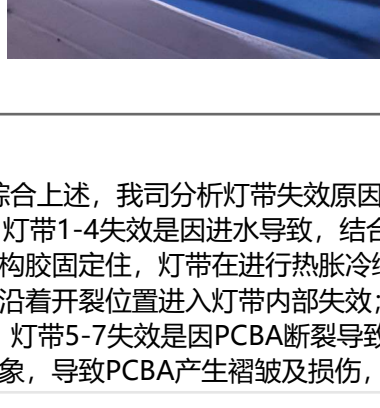
Pic.113



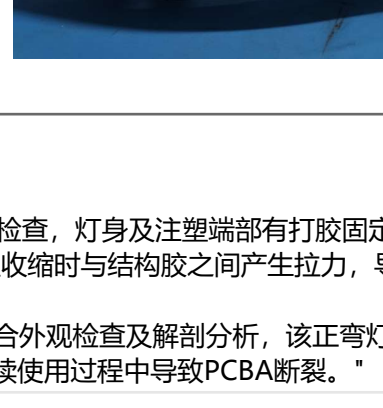
Pic.114



Pic.115



Pic.116



Pic.117

*综上所述, 我司分析灯带失效原因如下:

灯带1-4失效是因进水导致, 结合外观检查, 灯身及注塑端部有打胶固定, 结合过往经验及验证, 灯带注塑端部被结构胶固定住, 灯带在进行热胀冷缩机理收缩时与结构胶之间产生拉力, 导致注塑部位开裂, 使灯带防水等级降低, 水沿着开裂位置进入灯带内部失效;

灯带5-7失效是因PCBA断裂导致, 结合外观检查及解剖分析, 该正弯灯带在安装使用过程中有扭曲及朝两侧弯曲现象, 导致PCBA产生褶皱及损伤, 在后续使用过程中导致PCBA断裂。*

IV Corrective Action

Owner & Due Date : Brook

1. 建议客户安装时请勿将注塑部位固定住, 避免灯带在进行热胀冷缩机理收缩时与结构胶之间产生拉力造成注塑部位开裂, 如需打胶固定, 请将灯带注塑部位的发光面也一起使用胶覆盖固定, 覆盖长度约10mm, 且需要注意所使用胶的材质。
--- 责任人: 营销

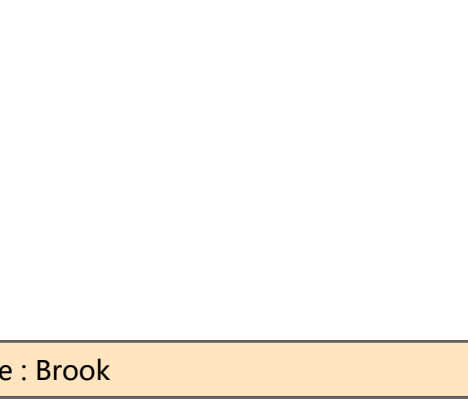
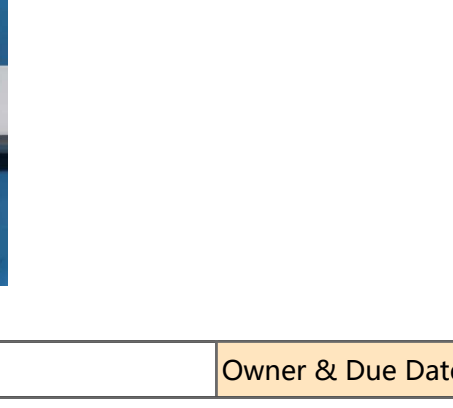
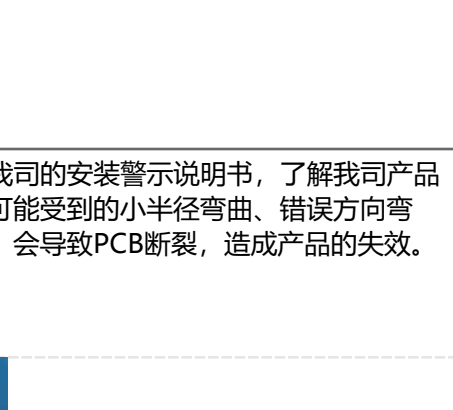
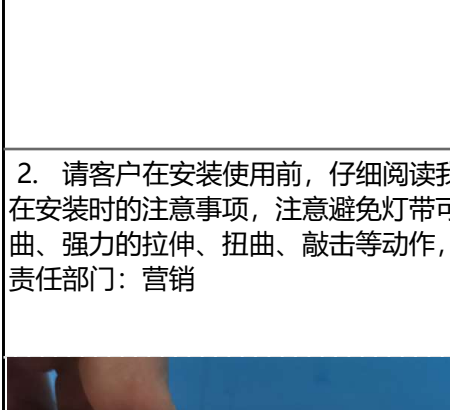
V Verification

Owner & Due Date : Brook

实验室测试

*灯带5-7: PCBA有大量褶皱及褶皱处多处断裂如PIC.29-31;

其中灯带5鼓包褶皱处IC引脚有脱焊, 如PIC.32-33; 信号输出端PCBA亦有大量褶皱, 褶皱位置亦有断裂, 如PIC.34。*



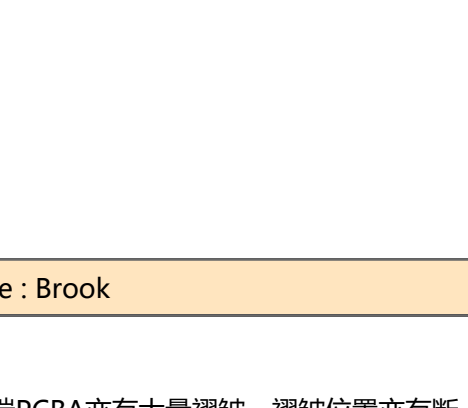
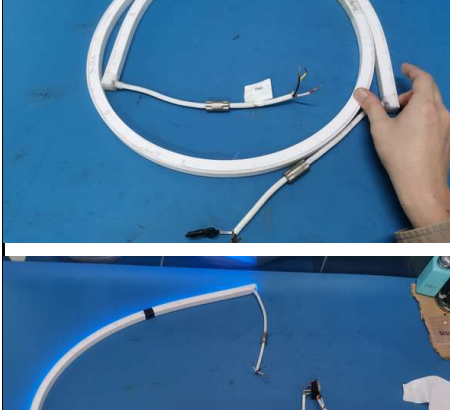
VI Preventive Action and standardize

Owner & Due Date : Brook

更改WI

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其中灯带5鼓包褶皱处IC引脚有脱焊, 如PIC.32-33; 信号输出端PCBA亦有大量褶皱, 褶皱位置亦有断裂, 如PIC.34。*



VII Communicate Results & Recognize Team

Owner & Due Date : Brook

Troy,Linda,Brook,Mavis

Close Date	Reviewed by	Approved By
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