



# 检测报告 TEST REPORT

编号 (No.) : UTS17050115R03

报告日期 (Report Date) : 2017/05/19

委托单位/Client : 苏州凡创电子科技有限公司  
Fan Chuang Electronic Technology Co.Led  
地址/Address : 苏州市工业园区九江路2号  
No. 2 Jiujiang Road, Suzhou Industrial Park, china

以下测试样品由申请人提供及确认:

The following sample(s) was/were submitted and identified on behalf of the client as:

样品名称/Sample Name : 光纤槽道及配件  
样品信息/Sample Information : 规格/Spec.: 宽/Wide\*高/High  
(50\*50 mm  
100\*100 mm  
120\*100 mm  
150\*100 mm  
240\*100 mm  
300\*100 mm  
340\*100 mm  
360\*100 mm)  
样品材质/Material: PC(80%)+ABS(20%)工程塑料  
测试数量/Test Quantity : 1 PC  
接收日期/Receiving Date : 2017/05/05  
检测周期/Test Period : 2017/05/05-2017/05/18  
检测要求/Test Request : 参见下一页/Please refer to next page(s).  
检测方法/Test Method(s) : 参见下一页/Please refer to next page(s).  
检测结果/Test Result(s) : 参见下一页/Please refer to next page(s).



Approved by

刘贵宁

授权签字人

Reviewed by

肖利

肖利

Tested by

陈林

陈林

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### 检测环境/Test Environment:

环境温度/Ambient Temperature: (23±2)°C

环境湿度/Ambient Humidity: (55±10)%RH

### 检测设备/Test Equipment:

| 设备名称<br>Name of Test Equipment                             | 设备编号<br>Equipment No. | 校准/Calibration |               |
|--|-----------------------|----------------|---------------|
|  |                       | 上次校准/Last Cal. | 预计校准/Due Cal. |
| 汽车内饰件燃烧试验机/Car Inner Decoration Combustion Testing Machine | F-1-006               | 2017/02/24     | 2018/02/23    |
| 恒温恒湿试验箱<br>/Temperature & humidity test chamber            | R-1-039               | 2017/01/12     | 2018/01/11    |
| 恒温恒湿试验箱<br>/Temperature & humidity test chamber            | R-1-088               | 2017/02/20     | 2018/02/19    |
| 高温老化试验箱<br>/Burn-in Chamber                                | R-1-017               | 2017/02/20     | 2018/02/19    |
| 绝缘电阻测试仪<br>/Insulation resistance tester                   | R-1-043               | 2017/02/20     | 2018/02/19    |
| 振动试验系统<br>/Vibration testing system                        | R-1-068               | 2017/02/20     | 2018/02/19    |
| 数显卡尺<br>/Digital Caliper                                   | M-1-027               | 2017/02/20     | 2018/02/19    |

### 检测结果/Test Result(s):

#### 1. 外观/Appearance

检测方法/Test Method: Q/320507 TDB01-2011 4.3

| 客户要求<br>/Customer Requirement   | 检测结果<br>/Test Results   | 结论<br>/Conclusion |
|---|---|-------------------|
| <p>样品表面应平整、光滑、洁净、无明显凹凸现象，无飞边、暗泡、收缩、凹陷或机械损伤等缺陷；<math>\Delta E &lt; 2</math>。</p> <p>/The surface of the sample should be flat, smooth, clean, no obvious bump phenomenon, no flash, dark bubble, shrink, sag or mechanical damage and other defects.</p> | <p>样品表面应平整、光滑、洁净、无明显凹凸现象，无飞边、暗泡、收缩、凹陷或机械损伤等缺陷。/The surface of the sample should be flat, smooth, clean, no obvious bump phenomenon, no flash, dark bubble, shrink, sag or mechanical damage and other defects.</p> <p>L=75.01; a=14.83; b=78.95</p> | 符合/PASS           |



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### 2. 尺寸/Size

检测方法/Test Method: Q/320507 TDB01-2011 4.4

| 客户要求<br>/Customer Requirement |                    | 检测结果<br>/Test Results | 结论<br>/Conclusion |
|-------------------------------|--------------------|-----------------------|-------------------|
| 壁厚/Walk<br>thickness          | 3(1±5%)mm          | 2.8 mm                | 符合/PASS           |
| 长度/Length                     | 380(1±0.15%)<br>mm | 378 mm                | 符合/PASS           |
| 曲率半径/Radius<br>of curvature   | ≥ 40 mm            | 40 mm                 | 符合/PASS           |

### 3. 挠度的最大变形量/Maximum amount of deformation of the deflection

检测方法/Test Method: Q/320507 TDB01-2011 4.6

支持跨距/Span: 1.5 m; 额定载荷/Rated load: 350 N.

| 客户要求<br>/Customer Requirement | 检测结果<br>/Test Results | 结论<br>/Conclusion |
|-------------------------------|-----------------------|-------------------|
| ≤ 10 mm                       | 7 mm                  | 符合/PASS           |

### 4. 撞击/Impact

检测方法/Test Method: Q/320507 TDB01-2011 4.7

光纤槽经 1 kg 重物, 从 1000 mm 高度垂直跌落撞击。/Fiber groove withstand 1 kg weights, from 1000 mm high degree of vertical drop impact.

| 客户要求<br>/Customer Requirement  | 检测结果<br>/Test Results  | 结论<br>/Conclusion |
|--|--|-------------------|
| 无裂痕或脆断现象。<br>/No cracks or brittle fracture<br>phenomenon emerged on the<br>surface of sample. | 试验后, 无裂痕或脆断现象。<br>/After the test, no cracks or brittle fracture<br>phenomenon emerged on the surface of sample. | 符合/PASS           |



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### 5. 承重试验/Bearing Test

检测方法/Test Method: Q/320507 TDB01-2011 4.8

| 客户要求<br>/Customer Requirement  | 检测结果<br>/Test Results   | 结论<br>/Conclusion |
|--|---|-------------------|
| 光纤槽应能承受 800 N 的静载荷, 无裂痕或脆断现象。/The fiber groove should be able to withstand 800 N of static load, no cracks or brittle fracture phenomenon. | 承受 800 N 静载荷, 无裂痕或脆断现象。<br>/Under 800 N loading, no cracks or brittle fracture phenomenon emerged on the surface of sample. | 符合/PASS           |

### 6. 电气性能/Electrical Performance

检测方法/Test Method: Q/320507 TDB01-2011 4.9

#### 6.1 抗电强度/Dielectric Strength

| 客户要求<br>/Customer Requirement   | 检测结果<br>/Test Results  | 结论<br>/Conclusion |
|---|--|-------------------|
| 恒定湿热试验前: AC4200V、50 Hz, 1 min 无闪烁或击穿现象。/Before damp heat test: AC4200V, 50 Hz, 1 min no flicker or breakdown. | 恒定湿热试验前: AC4200V、50Hz 1min 无闪烁或击穿现象。/Before damp heat test: AC4200V、50Hz 1min no flicker or breakdown. | 符合/PASS           |
| 恒定湿热试验后: AC4200V、50 Hz, 1 min 无闪烁或击穿现象。/After damp heat test: AC4200V, 50 Hz, 1 min no flicker or breakdown.  | 恒定湿热试验后: AC4200V、50Hz 1min 无闪烁或击穿现象。/after damp heat test: AC4200V、50Hz 1min no flicker or breakdown.  | 符合/PASS           |

#### 6.2 绝缘电阻/Insulation Resistance

| 客户要求<br>/Customer Requirement                            | 检测结果<br>/Test Results  | 结论<br>/Conclusion |
|--|--|-------------------|
| 恒定湿热试验前/Before damp heat test: $\geq 20 \text{ M}\Omega$ | 恒定湿热试验前: $\geq 20 \text{ M}\Omega$<br>/ Before damp heat test: $\geq 20 \text{ M}\Omega$ | 符合/PASS           |
| 恒定湿热试验后/After damp heat test: $\geq 5 \text{ M}\Omega$   | 恒定湿热试验后: $\geq 5 \text{ M}\Omega$<br>/after damp heat test: $\geq 5 \text{ M}\Omega$     | 符合/PASS           |



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### 7. 燃烧试验/Flame Test

#### 样品处理/Conditioning:

23±2°C, 50±5%RH的环境中处理48h。 / 23±2°C and 50±5 %, RH for 48 hours.

**检测方法/Test Method:** GB/T 2408-2008 《塑料 燃烧性能的测定 水平法和垂直法》 /Plastics - Determination of burning characteristics - Horizontal and vertical test

#### 试验方法/Procedure:

将灯焰移到样品的底部10±1 mm处, 停留10±0.5s, 然后将灯焰移开, 在移开试验火焰后, 测量任一样品上火焰燃烧的持续时间 $t_1$ 。 /Apply the flame centrally to the middle point of the bottom edge of the specimen so that the top of the burner is 10±1 mm below that point of the lower end of the specimen, and maintain it at that distance for 10±0.5 seconds, immediately withdraw the burner and simultaneously commence measurement of the after flame time  $t_1$ .

样品上的火焰燃烧一经停止后, 应立即在同一样品上施加火焰, 灯焰距离残余样品底部10±1 mm, 停留10±0.5s, 然后将灯焰移开, 在移开试验火焰后, 测量任一样品上火焰燃烧的持续时间 $t_2$ , 并在 $t_2$ 结束后测量余燃的持续时间 $t_3$ 。 / As soon as after flaming of the specimen ceases, place the burner again under the specimen and maintain the burner at a distance of 10±1 mm from the remaining major portion of the specimen for an additional 10±0.5 seconds, after this application of the flame to the specimen, immediately remove the burner and simultaneously commence measurement of the after flame time,  $t_2$ , and the afterglow time,  $t_3$ .

在每一组剩余的四个样品上应重复进行上述一系列规定的试验。 /Repeat the test to the remaining four specimens.

#### 试验数据/Test Data:

|                           | $t_1$ (s)       | $t_2$ (s) | $t_3$ (s) | $\Sigma(t_1+t_2)$ (s) | $t_2+t_3$ (s) | 燃烧至夹持处<br>Burnout up to the<br>holding clamp | 是否引燃脱脂棉<br>Ignite cotton or<br>not |
|---------------------------|-----------------|-----------|-----------|-----------------------|---------------|--|------------------------------------|
| 1#                        | 1               | 1         | 0         | 10                    | 1             | 否/No   | 否/No                               |
| 2#                        | 1               | 1         | 0         |                       | 1             | 否/No   | 否/No                               |
| 3#                        | 1               | 1         | 0         |                       | 1             | 否/No   | 否/No                               |
| 4#                        | 1               | 1         | 0         |                       | 1             | 否/No   | 否/No                               |
| 5#                        | 1               | 1         | 0         |                       | 1             | 否/No   | 否/No                               |
| 结果/Result                 | V-0 级/V-0 Grade |           |           |                       |               |  |                                    |
| 客户要求/Customer requirement | V-0 级/V-0 Grade |           |           |                       |               |  |                                    |
| 结论/Conclusion             | 符合/PASS         |           |           |                       |               |  |                                    |



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### 等级判据/Classifications:

| 标准/Criteria   | V-0        | V-1         | V-2         |
|---|------------|-------------|-------------|
| 每个独立的样品燃烧持续的时间, $t_1$ 或 $t_2$ / After flame time for each individual specimen $t_1$ or $t_2$ ,  | $\leq 10s$ | $\leq 30s$  | $\leq 30s$  |
| 对任意处理组的五个样品的总的燃烧持续时间, $\Sigma(t_1+t_2)$ / Total after flame time for any condition set, $\Sigma(t_1+t_2)$ ,   | $\leq 50s$ | $\leq 250s$ | $\leq 250s$ |
| 在第二次火焰施加后, 每个独立的样品燃烧持续时间和灼热燃烧时间, $t_2+t_3$ / After flame plus afterglow time for each individual specimen after the second flame application, $t_2+t_3$ , | $\leq 30s$ | $\leq 60s$  | $\leq 60s$  |
| 是否允许任一样品持续燃烧和灼热燃烧到夹持样品的夹持处? / After flame or afterglow of any specimen up to the holding clamp?   | 否/No       | 否/No        | 否/No        |
| 是否允许燃烧颗粒或滴落物引燃脱脂棉? / Cotton indicator ignited by flaming particles or drops?  | 否/No       | 否/No        | 是/Yes       |

### 8. 耐高温性能/High Temperature Performance

检测方法/Test Method: Q/320507 TDB01-2011 4.11.1

检测条件/Test Condition:  $(55\pm 2)^\circ\text{C}$ , 2 h.

| 客户要求<br>/Customer Requirement  | 检测结果<br>/Test Results   | 结论<br>/Conclusion |
|--|---|-------------------|
| 无明显的变形、变色等缺陷。/No obvious deformation, discoloration and other defects. | $(55\pm 2)^\circ\text{C}$ 、2h 耐高温性试验后, 试样无明显的变形、变色等缺陷。/ $(55 \pm 2)^\circ\text{C}$ , after 2 hours of high temperature test, sample not have a obvious deformation, discoloration, and other defects. | 符合/PASS           |

### 9. 耐低温性能/Low Temperature Performance

检测方法/Test Method: Q/320507 TDB01-2011 4.11.2

检测条件/Test Condition:  $(-25\pm 2)^\circ\text{C}$ , 2 h.

| 客户要求<br>/Customer Requirement  | 检测结果<br>/Test Results  | 结论<br>/Conclusion |
|--|--|-------------------|
| 无明显的变形、变色等缺陷。/No obvious deformation, discoloration and other defects. | $(-25\pm 2)^\circ\text{C}$ 、2h 耐低温性试验后, 试样无明显的变形、变色、裂纹等缺陷。/ $(-25 \pm 2)^\circ\text{C}$ , after 2 hours of low temperature test sample no obvious deformation, discoloration, crack and other defects. | 符合/PASS           |



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### 10. 耐高温高湿性能/Temperature and Humidity Performance

检测方法/Test Method: Q/320507 TDB01-2011 4.11.3

检测条件/Test Condition: (30±2)°C, 85%RH, 48 h.

| 客户要求<br>/Customer Requirement  | 检测结果<br>/Test Results   | 结论<br>/Conclusion |
|--|---|-------------------|
| 样品外观不应出现异常, 其内外表面之间的绝缘电阻不小于 5 MΩ。/the appearance of samples should not be abnormal, the insulation resistance between its inner and outer surface is not less than 5 MΩ. | (30±2)°C、RH 85%、48h 湿热试验后, 试样外观没有出现异常, 其内外表面之间的绝缘电阻不小于 5MΩ。/(30±2)°C、RH 85% after 48 hours damp heat test. the appearance of the sample not be abnormal, the insulation resistance between its inner and outer surfaces is not less than 5MΩ. | 符合/PASS           |

### 11. 振动试验/Vibration Test

检测方法/Test Method: Q/320507 TDB01-2011 4.11.4

检测条件/Test Condition:

| 客户要求<br>/Customer Requirement  | 检测结果<br>/Test Results   | 结论<br>/Conclusion |
|--|---|-------------------|
| 样品完整、表面及零部件不应有机械性损伤, 紧固件不应松脱。/the sample should be complete, the surface and parts should not be mechanical injury, fasteners should not be loose. | 根据 GB/T 3873 中“A10 公路运输”的试验要求, 试验结束后: 产品完整、表面及零部件没有机械性损伤, 紧固件无松脱。/ According to the testing requirements of GB / T 3873 in the A10 road transport ", after the test: the sample complete, the surface and parts not be mechanical injury, fasteners not be loose. | 符合/PASS           |



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### 12. 老化/Aging

检测方法/Test Method: Q/320507 TDB01-2011 4.12

检测条件/Test Condition: (55±2)°C, 240 h; 室温/R.T., 4 h; (-25±2)°C, 2 h.

| 客户要求<br>/Customer Requirement  | 检测结果<br>/Test Results  | 结论<br>/Conclusion |
|--|--|-------------------|
| 无裂痕或脆断现象。<br>/No cracks or brittle fracture phenomenon emerged on the surface of sample. | 将试样置于高温箱内, 在(55±2)°C温度下保持 240h, 取出后, 在室温下冷却 4h, 然后再放入(-25±2)°C低温箱内保持 2h。取出后立即进行冲击试验, 无裂痕或脆断现象。/ The sample is placed in the high temperature chamber (55 ± 2)°C temperature for 240h, after removing cooled at room temperature for 4h, then put (-25 ± 2)°C low temperature inside to keep 2h. Removed immediately after the impact test, no cracks or brittle fracture phenomenon. | 符合/PASS           |

### 13. 材质分析/Material Composition

| 客户要求<br>/Customer Requirement       | 检测结果<br>/Test Results                | 结论<br>/Conclusion  |                                     |
|-------------------------------------|--------------------------------------|--------------------|-------------------------------------|
| 主含量为 PC<br>/The main content for PC | 聚碳酸酯(PC), 87%(匹配度)<br>/Polycarbonate | 符合/PASS            |                                     |
|                                     |                                      |                    |                                     |
| 库图号                                 | 匹配度                                  | 化合物名称              | 谱库名称                                |
| 1 229                               | 87.97                                | CD ROM (data side) | Common Materials                    |
| 2 43                                | 87.72                                | Polycarbonate      | HR Spectra Polymers and Plasticizer |





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样品照片/Sample Photo(s):



图 1 试验前

Fig.1 Before the test

.....报告结束/End of Report.....