

承 认 书

Approval Sheet

客户 (Customer): /

客户料号 (Cus .P/N): /

华联威料号 (HLW P/N): ST21-0340-G618

品名规格 (PronameSpec): SATA 7+15 夹板1.6

送样日期 (Delivery Date): 2022/06/09

承认日期 (Acknowledge Date): 2022/06/9

| | | | |
|---|------------------|---------------------------|--------------------|
| Approved No: | | 客 户 Customer | |
| 采 购 部 Purchasing Dept | 品 质 部 QC Dept | 工 程 部 Engineering Dept | 确 认 Approved By |
| | | | |
| 深 圳 市 华 联 威 电 子 科 技 有 限 公 司 SHEN ZHEN SHI HUA LIAN WEI ELECTRONICS TECHNOLOGY CO; LTD. | | | |
| 业 务 部 Sales Dept | 品 管 部 QC Dept | 工 程 部 Engineering Dept | 核 准 Checked By |
| 陈少萍 | 欠必锋 | 魏红 | 唐竹君 |

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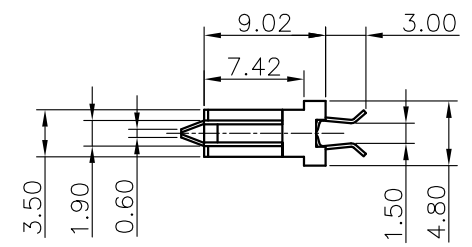
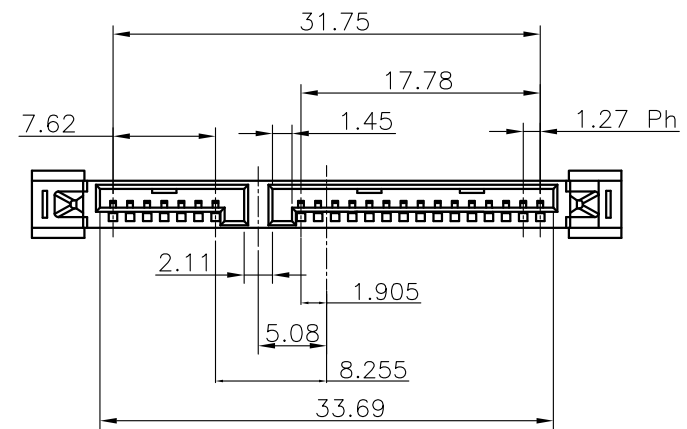
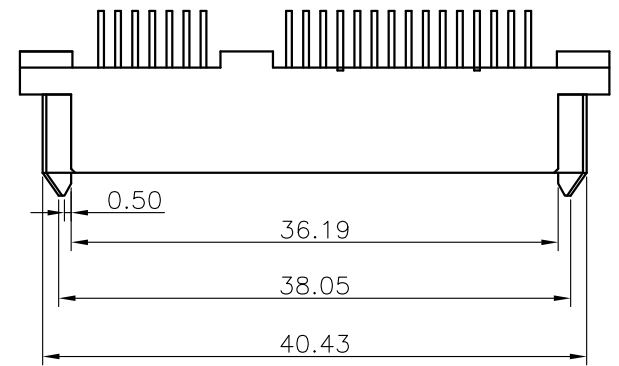
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| REV. | ECN.NO. | APPD. |
|------|---------|-------|
| A | / | / |

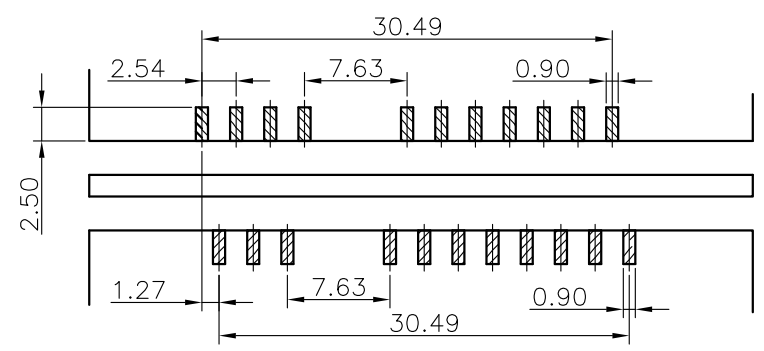


NOTE:

- MATERIAL:
HOUSING: LCP WITH 30% GF, UL 94V-0, BLACK COLOR.
CONTACTS: PHOSPHOR BRONZE.
- FINISH:
CONTACTS: GOLD FLASH PLATED ON CONTACT AREA, [100μ"] MIN..
BRIGHT-TIN ON SOLDER TAIL, WITH ENTIRE CONTACT UNDERPLATED [50μ"] MIN.. NICKEL.
- PART NUMBER DESCRIPTION :

ST21-0340-G618

G: 半金G/Fu"
1: 黑色
6: LCP



RECOMMEND PCB LAYOUT (T=1.6)
PCB TOLERANCE: ±0.05

| | | | | | | | | | | |
|--------------------------------------|-----------|---|---------|-------------|----------|----------|------------|------------------------------|-------|---|
| TOLERANCE UNLESS OTHERWISE SPECIFIED | | FLW 深圳市华联威电子科技有限公司 | | | | | | | | |
| | | HUA LIAN WEI TECHNOLOGY ELECTRONICS CO;LTD. | | | | | | | | |
| .XXX ±0.10 | .XX ±0.20 | .X ±0.30 | .X' ±3' | .XX' ±2' | APPROVED | | PART NAME: | SATA 7+15P 夹板1.6 PC=3.0无凸鱼叉脚 | | |
| CHECKED | | DRAWN | | DATE | | PART No: | | ST21-0340-G618 | | C |
| weihong | | 2021.9.23 | | PROJECTION: | | UNIT: | SCALE: | SHEET: | REV.: | A |
| | | | | mm | | 1:1 | | 10F1 | | A |

SATA系列產品SPEC

| TEST ITEM | | REQUIREMENT | PROCEDURE |
|-------------------------------|--|--|--|
| 1 | Examination of Product | Meets requirements of product drawing. No physical damage. | Visual inspection. |
| 2 | Operating Temperature | -55°C to +125 °C | |
| 3 | Storage Temperature | -25°C to 85 °C | |
| ELECTRICAL REQUIREMENT | | | |
| 4 | Rating Voltage | 30 V RMS max | |
| 5 | Contact current rating (Power segment) | 1.5A per pin minimum The temperature rise above ambient shall not exceed 30°C at any point in the connector when contact positions are powered. The ambient condition is still air at 25°C. | Mount connector to a test PCB Wire three adjacent pins in parallel for supply (or the minimum number required by the connector type) Wire three adjacent pins in parallel for return (or the minimum number required by the connector type) Apply a DC current rating per contact to the supply pins returning through the return pins Record temperature rise when thermal equilibrium is reached |
| 6 | Contact Resistance | 30 mΩ (initially) maximum, Δ15mΩ max after stress when measured at 20 mV maximum open circuit at 100 mA. Mated test contacts must be in a connector housing. | EIA 364-23 The object of this test is to detail a standard method to measure the electrical resistance across a pair of mated contacts such that the insulating films, if present, will not be broken or asperity melting will not occur. |
| 7 | Dielectric withstanding Voltage | The dielectric shall withstand 500VAC for 1 minute at sea level. | EIA 364-20 Method B Test between adjacent contacts of mated and unmated connector assemblies. |

| | | | |
|-------------------------------|--------------------------|--|---|
| 8 | Insulation Resistance | 1000 M Ω minimum | EIA 364-21 After 500 VDC for 1 minute measure the insulation resistance between the adjacent contacts of mated and unmated connector assemblies. |
| 9 | Temperature Rising | 30°C Max. Under loaded rating current | Contact series-wired, apply test current of loaded rating current to the circuit, and measure the temperature rising by probing on soldered areas of contacts, after the temperature becomes stabilized deduct ambient temperature from the measured value. |
| Mechanical Requirement | | | |
| 10 | Connector Mating Force | 45 N Max | EIA-364-13 Measure the force necessary to mated the connector assemblies at a max.rate of 12.5 mm per minute. |
| 11 | Connector Unmating Force | 10 N Min.through 50cycles | EIA-364-13 Measure the force necessary to mate the connector assemblies at a max.rate of 12.5 mm per minute. |
| 12 | Durability | No physical damage. Meet requirements of additional tests as specified in the test sequence. | EIA-364-09 50 cycles for intemal cabled application; 500cycles for backplane/blindmate application. Test done at a maximum rate of 200 cycles per hour. |

| | | | |
|-----------------------------------|---------------------------|--|---|
| 13 | Vibration | No discontinuities of 1 us longer duration. | EIA364-28 Condition V Test letter A Subject mated connectors to 5.35 g's RMS. 30minutes in each of three mutually perpendicular planes. See NOTE 2. |
| 14 | Mechanical Shock | No discontinuities of 1 us or longer duration. No physical damage. | EIA 364-27 Condition H Subject mated connectors to 30 g's half-sine shock pulses of 11 ms duration applied along three mutually perpendicular planes for a total of 18 shocks. See NOTE 2. |
| 15 | Solder ability | contact solder tails must pass 95% coverage after one hour steam aging as specified. | 1)Temperature of fused solder: 260+5°C. 2)Dipping time:5+0.5s EIA 364-52 |
| Environmental Requirements | | | |
| 16 | Resistance to Solder Heat | Forming resin shall not be distorted, and terminations shall not be separated. | 1) Depth of dipping termination: the distance between the mounting surface and solder surface shall be 1 mm to 2mm. 2)Temperature:260±5°C. 3) Dipping time: 10±1s Socket EIA 364-56 |
| 17 | Thermal Shock | See NOTE . | EIA 364-32 Test Condition 1. Subject mated connectors to 10 cycles between -55°C and +85°C. |
| 18 | Humidity | See NOTE . | EIA 364-31 Method II Test Condition A Subject mated connectors to 96 hours at 40°C with 90% to 95% RH. |
| 19 | Temperature Life | See NOTE. | EIA 364-17 Test Condition III Method A. Subject mated connectors to temperature life at +85°C for 500 hours. |

| | | | |
|----|------------|--|--|
| 20 | Salt Spray | Visual Inspection-No physical damageLLCR-50 mΩ max per contact | Mated connector expose to 5% salt concentration for 12 hours at temperature 35+2°C.After the test specimens shall be washed with running water and dried |
|----|------------|--|--|

NOTE:

1. Shall meet EIA 364-18 Visual Examination requirements, show no physical damage, and shall meet requirements of additional tests as specified in the sequence.
- 2.Shock and vibration test fixture is to be determined by each user with connector vendors.

| Test or Examination | Test Group | | | | | | | | | |
|-------------------------|------------------------------|-----|-------|-----|-----|------|------|------|------|---|
| | A | B | C | D | E | F | G | H | I | J |
| | Test Sequence (a) | | | | | | | | | |
| Examination of Product | 1,5 | 1,9 | 1,7 | 1,8 | 1,5 | 1, 5 | 1, 3 | 1, 3 | 1, 3 | |
| Contact Resistance | 2,4 | 3,7 | 2,4,6 | | 3,4 | 2, 4 | | | | |
| Insulation Resistance | | | | 2,6 | | | | | | |
| Dielectric withstanding | | | | 3,7 | | | | | | |
| Mating Force | | 2 | | | | | | | | |
| Unmating Force | | 8 | | | | | | | | |
| Durability | 3 | 4 | | | 2 | | | | | |
| Mechanical Shock | | 6 | | | | | | | | |
| Vibration | | 5 | | | | | | | | |
| Humidity Temperature | | | | 5 | | | | | | |
| Temperature Life | | | 3 | | | | | | | |
| Thermal Shock | | | 5 | 4 | | | | | | |
| Temperature Rising | | | | | | | 2 | | | |
| Solderability | | | | | | | | | 2 | |
| Resistance to Soldering | | | | | | | | 2 | | |
| Salt Spray | | | | | | 3 | 3 | | | |
| 備注 | 無客戶指定增加測試項目外，依照此標準進行產品可靠性評估。 | | | | | | | | | |

核准：唐竹君

制作人：魏红

| | | | | | | | | | | | |
|---|-----------------------------|---|---|-----------------------|------|------|------|------|------|---|--|
| 3 | Cold test | Temperature: -25 ±3°C Duration:168H | PROGRAM CONTROLLED TEMP. & HUMIDTY CHAMBER | No physical damage | Pass | Pass | Pass | Pass | Pass | P | |
| 4 | Temperature cycling test | Temperature:85 ~-25°C Duration:5 cycle | PROGRAM CONTROLLED TEMP. & HUMIDTY CHAMBER | No physical damage | Pass | Pass | Pass | Pass | Pass | P | |

四.物理測試 PHYSICAL TEST

| 序 號 NO. | 測試項目 Testing Item | 測試條件 Testing Conditions | 測試設備 Testing Equipment | 規格 SPEC | 測試記錄 Testing Result | | | | | 判定 Judge | |
|---------------|---|---|---|------------------------|---------------------|------|------|------|------|----------|------|
| | | | | | 1 | 2 | 3 | 4 | 5 | Pass | Fail |
| 1 | Salt spray test | Temperature: 35±2°C Concentration:5±1 %Duration:12H | SALT SPRAY TESTER | No Oxidation | Pass | Pass | Pass | Pass | Pass | P | |
| 2 | Resistance to soldering heat test | Temperature: 260±5°C Duration:10±1sec | OVEN | No physical damage | Pass | Pass | Pass | Pass | Pass | P | |
| 3 | Solder ability test | Temperature: 260±5°C Duration:5±0.5 sec | CONTROLLED CONSTANT-TEMP SOLDER POT | Soldering area ≥95□ | Pass | Pass | Pass | Pass | Pass | P | |
| 判定 Result | | <input checked="" type="checkbox"/> 合格 (ACCEPT) <input type="checkbox"/> 不合格 (REJECT) | | | | | | | | | |

核准(Approver): 欠必峰

測試(Tester): 但芬

檢驗報告

首件檢驗
 入庫檢驗
 出貨檢驗
 客退檢驗
 退料檢驗
 其他

2022年06月08日 版次:A1

| 料號 | ST21-0340-G618 | 制令單號 | / | | | | | 送檢單位 | 工程部 | 首件製作者 | 裝配 | | |
|---|------------------|---|---------|-------|------------|-------|-----------------|---------|-----------------|----------|----------|-----|----|
| 品名 | SATA 7+15P 夾板1.6 | 客戶代號 | / | | | | | 批 量 | / | 送檢時間 | / | | |
| | | | | | | | | 數 量 | 5PCS | 確認時間 | / | | |
| 抽樣標準 | | <input checked="" type="checkbox"/> 單次 <input type="checkbox"/> 雙次 | | | | | 抽樣數 (5PCS) | AQL | CRI:0 | MAJ:0.40 | MIN:0.65 | | |
| MIL-STD-105E(II) | | <input checked="" type="checkbox"/> 正常 <input type="checkbox"/> 加嚴 <input type="checkbox"/> 減量 | | | | | | ACC/REJ | 0 | / | / | | |
| 不良數: CRI (/) MAJ (/) MIN (/) | | | | | | | | 不良率(%) | | / | | | |
| NO. | 檢驗項目 單位:MM/G | 檢測 儀器 | 檢 驗 記 錄 | | | | | 品管判定 | | CRI | MAJ | MIN | 備注 |
| | | | 1 | 2 | 3 | 4 | 5 | AC | RE | | | | |
| 尺 寸 測 量 | 40.43±0.20 | D | 40.46 | 40.43 | 40.44 | 40.42 | 40.45 | ✓ | | | | | |
| | 36.19±0.20 | D | 36.20 | 36.21 | 36.23 | 36.22 | 36.23 | ✓ | | | | | |
| | 31.75±0.20 | D | 31.74 | 31.72 | 31.71 | 31.72 | 31.74 | ✓ | | | | | |
| | 1.27±0.20 | D | 1.25 | 1.22 | 1.23 | 1.24 | 1.23 | ✓ | | | | | |
| | 9.02±0.20 | D | 9.05 | 9.03 | 9.04 | 9.05 | 9.02 | ✓ | | | | | |
| | 3.00±0.20 | D | 3.03 | 3.05 | 3.04 | 3.03 | 3.04 | ✓ | | | | | |
| | 4.80±0.20 | D | 4.82 | 4.85 | 4.83 | 4.84 | 4.85 | ✓ | | | | | |
| | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 檢驗依據: <input checked="" type="checkbox"/> 《工程圖紙》 <input type="checkbox"/> 《檢驗規範》 <input type="checkbox"/> 《承認書》 <input type="checkbox"/> 樣品 <input type="checkbox"/> 其它 | | | | | | | | | | | | | |
| 檢測儀器:A游標卡尺 B千分尺 C厚薄儀 D投影鏡 E放大鏡 F顯微鏡 G錫爐 H插拔力器 I問位尺 J其它 | | | | | | | | | | | | | |
| 品管判定: | | <input checked="" type="checkbox"/> 合格Accept <input type="checkbox"/> 退貨Reject <input type="checkbox"/> 特采Waive <input type="checkbox"/> 挑選Sort | | | | | | | | | | | |
| 核 准 APP | | 欠必鋒 | | | 審 核 CHK | | / | | 檢 驗 員 INSPBY | | 但 芬 | | |

保存期限:三年

保存部門:品保部

QR-M-003

| | | | | | |
|--------------------------------|----------|---------|---------------|-----------|----------|
| 品名: SATA 7+15P 夹板1.6 (端子) | | | | 版次:A.0 | |
| 电镀规格:Ni30u", Sn100u", Au G/Fu" | | | 日期:2022-03-20 | | 页次:1/1 |
| 厂商:同华 | | | | | |
| 测试设备:CMI X-射线膜厚测试仪 | | | | | |
| 1、底层电镀测试 (Ni) | | | | | |
| 数据 | 测试标准 | 实测值 | 判定 | 测试日期 | 测试时间 |
| 1 | 30u"MIN | 50.5u" | OK | 2022/3/20 | 10:20:15 |
| 2 | 30u"MIN | 56.3u" | OK | 2022/3/20 | 10:20:17 |
| 3 | 30u"MIN | 67.5u" | OK | 2022/3/20 | 10:20:19 |
| 4 | 30u"MIN | 62.4u" | OK | 2022/3/20 | 10:20:21 |
| 2、表层电镀测试 (Sn) | | | | | |
| 数据 | 测试标准 | 实测值 | 判定 | 测试日期 | 测试时间 |
| 1 | 100u"MIN | 105.3u" | OK | 2022/3/20 | 10:25:10 |
| 2 | 100u"MIN | 104.7u" | OK | 2022/3/20 | 10:25:12 |
| 3 | 100u"MIN | 105.9u" | OK | 2022/3/20 | 10:25:14 |
| 4 | 100u"MIN | 107.4u" | OK | 2022/3/20 | 10:25:16 |
| 3、表层电镀测试 (Au) | | | | | |
| 数据 | 测试标准 | 实测值 | 判定 | 测试日期 | 测试时间 |
| 1 | 0.5u"MIN | 0.52u" | OK | 2022/3/20 | 10:30:32 |
| 2 | 0.5u"MIN | 0.55u" | OK | 2022/3/20 | 10:30:34 |
| 3 | 0.5u"MIN | 0.53u" | OK | 2022/3/20 | 10:30:36 |
| 4 | 0.5u"MIN | 0.54u" | OK | 2022/3/20 | 10:30:38 |

核准: 欠必锋

审核: 李娟

检验员: 但芬



电镀报告表

| | |
|---------------------------|--------|
| 品名: SATA 7+15P 夹板1.6 (卡脚) | 版次:A.0 |
|---------------------------|--------|

| | | |
|------------------|--------------|--------|
| 电镀规格:Ni:50u" min | 日期:2022/3/16 | 页次:1/1 |
|------------------|--------------|--------|

厂商:金和源

测试设备:CMI X-射线膜厚测试仪

1、表层电镀测试 (Ni)

| 数据 | 测试标准 | 实测值 | 判定 | 测试日期 | 测试时间 |
|----|---------|--------|----|-----------|----------|
| 1 | 50u"min | 56.3u" | OK | 2022/3/16 | 10:42:14 |
| 2 | 50u"min | 58.6u" | OK | 2022/3/16 | 10:42:16 |
| 3 | 50u"min | 55.4u" | OK | 2022/3/16 | 10:42:18 |
| 4 | 50u"min | 54.5u" | OK | 2022/3/16 | 10:42:20 |

核准: 欠必锋

审核: 李娟

检验员: 但芬



深圳市华联威电子科技有限公司

盐水喷雾实验报告

| | | | |
|--------|----------------------------------|--------|----------------------|
| 试验方法 | 盐水喷雾腐蚀试验法 | 参考资料 | MIL-STD-1345 |
| METHOD | NEUTRL SALT SPRAY CORROSION TEST | REF | |
| 客户 | | 试验起始日期 | 2022年06月08日 20:00 时起 |
| | | DATE | 2022年06月09日 08:00 时止 |
| 样品名称 | SATA 7+15P 夹板1.6 | 试验数量 | 5PCS |
| P/N | ST21-0340-G618 | QTY | |

试验条件 (TEST CONDITION)

- 1、盐水溶解 (SALT SOLUTION: 浓度 $50 \pm 10\text{g/L}$, PH值6.5-7.2).
- 2、试验室温度 (TEMP. IT THE SPRAY DHAMBR): $35 \pm 1^\circ\text{C}$.
- 3、盐水桶温度 (TEMP. OF SALE SOL' N TANK): $35 \pm 1^\circ\text{C}$.
- 4、压力桶温度 (TEMP. OF SAR SUPPLIERY): $47 \pm 1^\circ\text{C}$.
- 5、试验室相对湿度 (R. H IN THE CHAMBER) 85%.
- 6、压缩空气压力 (COMPRESSED AIR PRESSURE): $1.00 \pm 0.01\text{Kg/cm}^2$.
- 7、样品放置位置 (SPECIMEN SUPPORTED ANGLE): 尼龙绳吊挂 $70^\circ - 90^\circ$.
- 8、喷雾收集量 (COLLECT RATE OF SALT SOL' N) $1-2\text{mL}/(8 \text{ cm}^2\text{hr})$.
- 9、盐雾测试时间: 12小时 (H)

判定方法 (ADFUSGD METHOD)

试验后以20倍放大镜观察、无蓝、绿色腐蚀物之现象 (不包含折弯处), 即判定合格. (Inspext the ecimen at 20 xmagnification no blue or green corrosion products are acceptable)

| 样品序号 | 试验后现象 | 判定 |
|------|-----------------------|---------|
| | PHENOMENON AFTER TEST | COMMENT |
| 1 | 无蓝、绿色腐蚀物之现象 | OK |
| 2 | 无蓝、绿色腐蚀物之现象 | OK |
| 3 | 无蓝、绿色腐蚀物之现象 | OK |
| 4 | 无蓝、绿色腐蚀物之现象 | OK |
| 5 | 无蓝、绿色腐蚀物之现象 | OK |
| | | |
| | | |
| | | |

核准: 欠必锋

审核: 李娟

试验员: 但芬

鉅鼎銅材廠檢驗報告單

| | | | | | | | | | | |
|------------------------------|--------------------------|----------------------|--------------------------------|------------------------|-----------------------------------|-----------------------------|--------------------------------------|-----------------------|------|----|
| 公司名稱 Customer | 鉅鼎銅材廠檢驗報告單 | | | | 重量 Weight(kg) | 1078 | 出貨日期 Date | 2021/11/23 | | |
| 品名 Article | 標準 Standard No | | | | 尺寸 Dimension | | 狀態 Tenper | 銅卷編號 Coil No | | |
| C2680 | JISH3100:2017 | | | | 0.18*400 | | EH | 1021-C-08 | | |
| 化學成分Chemical Compositions(%) | | | | | | | | | | |
| 元素 Element | Cu % | Zn% | Pb% | Fe% | \ | \ | \ | \ | 化學成分 | 雜質 |
| 規範 Spec | 64.0-68.0 | 餘量 | <0.05 | <0.05 | \ | \ | \ | \ | 合格 | 合格 |
| 實測 Actual | 64.32 | 餘量 | 0.0036 | 0.0136 | \ | \ | \ | \ | 合格 | 合格 |
| 機械性質Mechanical Properties | | | | | | | | | | |
| 項目 Item | 結晶粒度 Grain Size Mm | 硬度 Hardness Hv | 抗拉強度 TensionStrength Mpa | 伸長度 Elongation % | 導電率 Electrical Conduc %IACS | 彎曲試驗 Bending Test 180 | 表面粗度 Surface Roughness Ra(u m) | 彎曲度 Camber mm/n | | |
| 規範MAX Spec | \ | 170-190 | 490-610 | \ | \ | \ | \ | \ | | |
| 實測 Actual | \ | 178 | 574 | 5 | \ | \ | \ | \ | | |

品質部



Materials Information

PRODUCT NAME: LCP M-401 BK

COMPOSITION/INFORMATION OF LCP M-401 BK

SUBSTANCE/MIXTURE: Mixture

SYNONYM(S): Aromatic Liquid Crystal Polymer(LCP)

| 品名 | 比例 | 用途 |
|------------|-------|------------|
| 德众泰 LCP 树脂 | 0.565 | 构成材料主要成分 |
| 抗氧化剂 | 0.002 | 抗氧化 |
| 科莱恩热稳定剂 | 0.003 | 增加高温稳定性 |
| 黑色母 | 0.01 | 着色 |
| 滑石粉 | 0.2 | 增强剂, 增加流动性 |
| 玻纤 | 0.22 | 增强 |

NAME OF COMPANY: DZT Engineering Plastics Tech. Co.,Ltd

ADDRESS: Building 2 Zhichong Industrial Park, Hi-Tech Zone, Jiangmen City,
Guangdong Province, China

SECTION IN CHARGE: Quality Assurance Department

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EMERGENCY TEL: +86-750-3689708

