| ENGINEERING DEPT. | PRODUCT SPECIFICATION For 2.00 mm (.079″) Board to Board Connectors of System CB76 | SPEC.NO.: SPCB038A |
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1. SCOPE:
   This specification contains the test requirement of subject connectors when tested under the condition and below standards base on CviLux test procedure

2. APPLICABLE STANDARDS:
   MIL - STD - 202        Methods for test of connectors for electronic equipment
   MIL - STD - 1344       Test methods for electrical connectors
   J-STD-020              Resistance to soldering Temperature for through hole Mounted Devices
   SS-00254              Test methods for electronic components ,LEAD-FREE soldering Part design
                          standards

3. APPLICABLE SERIES NO.: **CB76 Series**

4. SHAPE, CONSTRUCTION AND DIMENSIONS

   See attached drawings

5. MATERIALS

   See attached drawings

6. ACCOMMODATED P.C.BOARD

   0.8 mm (.031″) ~ 1.6 mm (.063″)

CVILUX CORP.
2007.03.14
ISSUED

REVIEWED :   Jacky    APPROVED :   Jiaing   VERIFIED :    Qijie    .

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## 7. ELECTRICAL PERFORMANCE:

| | ITEM | TEST CONDITION | |
|---|---|---|---|
| 7.1 | Rated current and voltage | | 1A 250V AC (r.m.s.) |
| 7.2 | Contact resistance | Dry circuit of DC 20 mV max. 100 mA max. | Less than 20 mΩ |
| 7.3 | Dielectric strength | When applied AC 1000 V 1 minute between adjacent terminal | No change |
| 7.4 | Insulation resistance | When applied DC 500 V between adjacent terminal or ground | More than 1000 MΩ |

## 8. MECHANICAL PERFORMANCE:

| | ITEM | TEST CONDITION | REQUIREMENT |
|---|---|---|---|
| 8.1 | Contact retaining force in insulator | Retention speed 25± 3 mm per minute form housing | More than 400 gram |
| 8.2 | Single contact insertion force | Measure force to insertion using 0.46 mm square pin at speed 25± 3 mm per minute | 600 gram max. |
| 8.3 | Single contact withdrawal force | Measure force to withdrawal using 0.46 mm square pin at speed 25± 3 mm per minute | 20 gram min. |
| 8.4 | Durability | Connector shall be subjected to 50 cycles of insertion and withdrawal | Contact resistance: Less than twice of initial |

## 9. ENVIRONMENTAL PERFORMANCE:

| | ITEM | TEST CONDITION | REQUIREMENT |
|---|---|---|---|
| 9.1 | Vibration | 1.5 mm 10 - 55 - 10 HZ/minute each 2 hours for X,Y and Z directions | Appearance: No damage<br>Discontinuity:<br>1 micro second max. |
| 9.2 | Solderability | **Tin-Lead Process:**<br>Soldering time: 5 ± 0.5 second<br>Soldering pot: 230 ± 5°C<br>**Lead-Free Process:**<br>Soldering time: 3 ± 0.5 second<br>Soldering pot: 245 ± 5°C | Minimum:<br>90% of immersed area |

| | ITEM | TEST CONDITION | REQUIREMENT |
|---|---|---|---|
| 9.3 | Resistance to soldering heat | **DIP Type Tin-Lead Process:**<br>Soldering time: 5 ± 0.5 second<br>Soldering pot: 240 ± 5°C<br>**DIP Type Lead-Free Process**<br>Soldering time: 5 ± 0.5 second<br>Soldering pot: 260 ± 5°C<br>**SMT Tin-Lead Type Process:**<br>Refer Reflow temperature profile(11.1)<br>Soldering time: 10 second Max.<br>Soldering pot: 230 ± 5 °C<br>**SMT Type Lead-Free Process:**<br>Soldering time: 20 second Max.<br>Soldering pot: 250~260°C<br>Refer Reflow temperature profile(11.2) | No damage |
| 9.4 | Heat aging | 105± 2°C, 96 hours | No damage |
| 9.5 | Humidity | 40±2°C, 90-95% RH, 96 hours measurement must be taken within 30 min. after tested | Appearance: No damage<br>Contact resistance:<br>Less than twice of initial<br>Dielectric strength:<br>To pass para 7-3 |
| 9.6 | Temperature cycling | One cycle consists of :<br>(1) $-55\,^{+0}_{-3}$ °C , 30 min.<br>(2)Room temp. 10-15 min.<br>(3) $85\,^{+3}_{-0}$ °C , 30 min.<br>(4)Room temp. 10-15 min. | Appearance: No damage<br>Contact resistance:<br>Less than twice of initial |
| 9.7 | Salt spray | Temperature: 35± 3°C<br>Solution: 5± 1%<br>Spray time: 48± 4 hours<br>Measurement must be taken after water rinse | Appearance: No damage<br>Contact resistance:<br>Less than twice of initial |

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## 10. AMBIENT TEMPERATURE RANGE:

-40 to + 105°C ; + 215°C intermittent (Vapor Phase Solder Reflow) for SMT type

## 11. Recommended IR Reflow Temperature Profile:

### 11.1 Using Typical Solder Paste
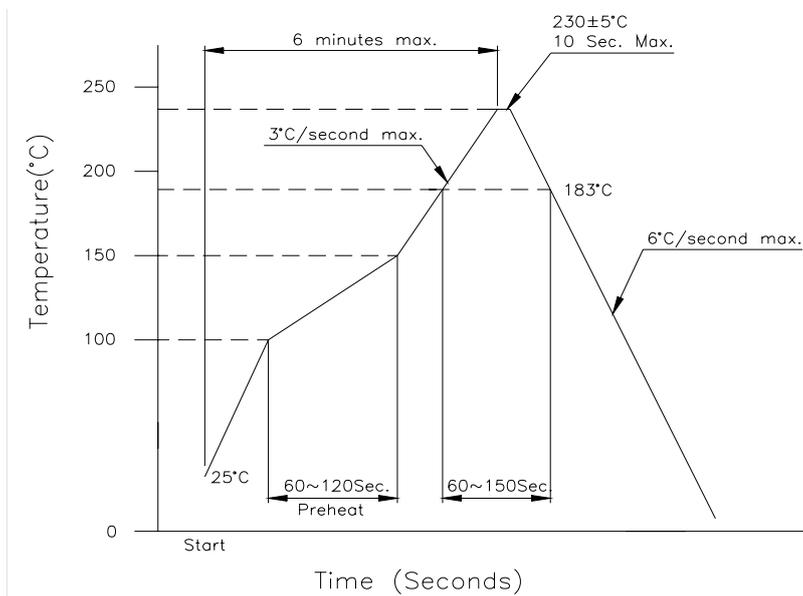


### 11.2 Using Lead-Free Solder Paste