



<b>ENGINEERING DEPT.</b>		<b>PRODUCT SPECIFICATION</b>	<b>SPEC.NO.: SPCI116B</b>
<b>REVISIONS</b>	<b>ECNT115170</b>	<b>For CI99 Connectors</b>	<b>PAGE: 1/4</b>

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.: **CI99 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")



REVIEWED : Eisley APPROVED : Eisley VERIFIED : Clark .



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7. ELECTRICAL PERFORMANCE:

	ITEM	TEST CONDITION	
7.1	Rated current and voltage		3A 30V AC (r.m.s.) (AWG#24)
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 300 V 1 minute between adjacent terminal	No change
7.4	Insulation resistance	When applied DC 500 V between adjacent terminal or ground	More than 500 MΩ

8. MECHANICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
8.1	Wire size	Specified wire size	Accepts AWG#24~#28
	Terminal crimp Tensile strength	When crimped AWG#24 size wire	More than 3.0kgf.
		When crimped AWG#26size wire	More than 2.0kgf.
		When crimped AWG#28size wire	More than 1.3kgf.
8.2	Terminal insertion force	Insertion speed 25± 3 mm per minute into housing	Less than 600gram
8.3	Terminal retaining force in insulator	Retention speed 25± 3 mm per minute into housing	More than 0.8 kg
8.4	Single contact insertion force	Measure force to insertion using mating pin at speed 25± 3 mm per minute	700 gram max.
8.5	Single contact withdrawal force	Measure force to withdrawal using mating pin at speed 25± 3 mm per minute	100 gram min.
8.6	Pin retention force	Push pin from insulator base at speed 25±3 mm per minute	More than 0.3 kgf.
8.7	Shell retention force	Push Shell from insulator base at speed 25±3 mm per minute	More than 0.2 kgf
8.8	Mating force	Speed 25± 3 mm per minute	Less than 2.0 kgf
	Unmating force		More than 0.5 kgf



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	ITEM	TEST CONDITION	REQUIREMENT
8.9	Durability	Connector shall be subjected to 30 cycles of insertion and withdrawal	Contact resistance: Less than twice of initial

**9. ENVIRONMENTAL PERFORMANCE:**

	ITEM	TEST CONDITION	REQUIREMENT
9.1	Temperature rise	Then carried the rated current	30°C max. ( AWG#24)
9.2	Vibration	1.5 mm 10 - 55 - 10 HZ/minute each 2 hours for X,Y and Z directions	Appearance: No damage Discontinuity: 1 micro second max.
9.3	Solder ability	Lead-Free Process: Soldering time: 3 ± 0.5 second Soldering pot: 245 ± 5°C	Minimum: 95% of immersed area
9.4	Resistance to soldering heat	Lead-Free Process for SMT Type: Refer Reflow temperature profile(11.1)	No damage
9.5	Heat aging	85± 2°C, 96 hours	No damage
9.6	Humidity	40±2°C, 90-95% RH, 96 hours measurement must be taken within 30 min. after tested	Appearance: No damage Contact resistance: Less than twice of initial
9.7	Temperature cycling	One cycle consists of: 1. -55 <sup>+0</sup> <sub>-3</sub> °C, 30 min 2. Room temp. 10-15 min 3. 85 <sup>+3</sup> <sub>-0</sub> °C, 30 min 4. Room temp. 10-15 min Total cycle: 5 cycle	Appearance: No damage Contact resistance: Less than twice of initial



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	ITEM	TEST CONDITION	REQUIREMENT
9.8	Salt spray	Temperature: $35 \pm 3^{\circ}\text{C}$ Solution: $5 \pm 1\%$ Spray time: $48 \pm 4$ hours Measurement must be taken after water rinse	Appearance: No damage Contact resistance: Less than twice of initial Dielectric strength: To pass para 7-3
9.9	Hand soldering Method	Use a soldering iron that has a sufficient head capacity and high stability of temperature. The tip of the iron should be shaped so as not to touch the part body directly. Temperature : $380 \pm 10^{\circ}\text{C}$ 3s	No damage
9.10	Cold resistance	$-40 \pm 2^{\circ}\text{C}$ , 96 hours	Appearance: No damage Contact resistance: Less than twice of initial

10. AMBIENT TEMPERATURE RANGE:  $-40$  to  $+85^{\circ}\text{C}$

11. Recommended IR Reflow Temperature Profile:

11.1 Using Lead-Free Solder Paste

