瀚荃股份有限公司
CviLux Corporation

CviLux Group
2026.08.14
ISSUED

ENGINEERING DEPT.		PRODUCT SPECIFICATION	SPEC.NO.: SPCP001S
REVISIONS	ECNT126069	For CP-01 Series Power Connector	PAGE: 1 / 5

1. SCOPE:
This specification contains the test requirement of subject connectors when tested under the condition and procedure with terminals crimped on the specified maximum size wire

2. APPLICABLE STANDARDS:
MIL - STD - 202 Methods for test of connectors for electronic equipment
EIA - 364 Test methods for electrical connectors

3. APPLICABLE SERIES NO.: CP-01 Series

4. SHAPE, CONSTRUCTION AND DIMENSIONS
See attached drawings

5. MATERIAL
See attached drawings

6. ACCOMMODATED P.C.BOARD
6.1 Thickness: 1.6 mm (.063″)
6.2 P.C. Board Layout: See attached drawings

REVIEWED : Eisley APPROVED : Eisley VERIFIED : Eric .

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7. ELECTRICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT			
7.1	Rated voltage(max.)		600V AC (r.m.s.)			
	Rated Current(max.) and Applicable Wire	Circuits/Wire gage	2	4-6	8-10	12-24
		AWG#16~#18 wire gage	9A	8A	7A	6A
		AWG#20 wire gage	7A	6A	5A	5A
		AWG#22 wire gage	5A	4A	4A	4A
		AWG#24 wire gage	4A	3A	3A	3A
		AWG#26 wire gage	3A	2A	2A	2A
7.2	Contact resistance	Dry circuit of DC 20mV max. , 100mA max., Wire resistance shell be removed from the measured value.	Less than 10 mΩ			
7.3	Dielectric strength	When applied AC 1500 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	Wire size	Specified wire size	Accepts AWG#16-#26
8.2	Terminal crimp strength	When crimped AWG#16 size wire	More than 11.0 Kgf
		When crimped AWG#18 size wire	More than 9.0 Kgf
		When crimped AWG#20 size wire	More than 7.0 Kgf
		When crimped AWG#22 size wire	More than 5.0 Kgf
		When crimped AWG#24 size wire	More than 3.0 Kgf
		When crimped AWG#26 size wire	More than 2.0 Kgf
8.3	Terminal insertion force	Insertion speed 25± 3 mm per minute into housing	Less than 1.5 Kgf
8.4	Contact retaining force in insulator	Retention speed 25±3 mm per minute from housing. The retention force shall be evaluated without wire pull-out or wire breakage.	5.0 Kgf Min.
8.5	Contact retaining force in insulator (with TPA)	Retention speed 25±3 mm per minute from housing. The retention force shall be evaluated without wire pull-out or wire breakage.	7.0 Kgf Min.

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	ITEM	TEST CONDITION	REQUIREMENT
8.6	Single contact insertion force	Measure force to insertion using mating square pin at speed 25± 3 mm per minute	700 gram max.
8.7	Single contact withdrawal force	Measure force to withdrawal using mating square pin at speed 25± 3 mm per minute	100 gram min.
8.8	Durability	Connector shall be subjected to 100 cycles of insertion and withdrawal	Contact resistance: Less than twice of initial
8.9	Pin retention force	Push pin from insulator base at speed 25± 3 mm per minute	More than 1.0 Kgf

9. ENVIRONMENTAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
9.1	Temperature rise	Then carried the rated current	30°C max.
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	**Tin-Lead Process:** Soldering time: 5 ± 0.5 second Soldering pot: 230 ± 5°C	Minimum: 90% of immersed area
9.4	Resistance to soldering heat	**Tin-Lead Process:** Soldering time: 5 ± 0.5 second Soldering pot: 240 ± 5°C	No damage
9.5	Heat aging	105± 2°C, 96 hours (UL 94V-0) 85± 2°C, 96 hours (UL 94V-2)	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 Dielectric strength: To pass para 7-3

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	ITEM	TEST CONDITION	REQUIREMENT
9.7	Temperature cycling	One cycle consists of (UL 94V-0): (1)-40 $^{+0}_{-3}$ °C , 30 min. (2)Room temp. 10-15 min. (3) 105 $^{+3}_{-0}$ °C , 30 min. (4)Room temp. 10-15 min.	Appearance: No damage Contact resistance: Less than twice of initial
		One cycle consists of (UL 94V-2): (1)-25 $^{+0}_{-3}$ °C , 30 min. (2)Room temp. 10-15 min. (3) 85 $^{+3}_{-0}$ °C , 30 min. (4)Room temp. 10-15 min.	
9.8	Salt spray	Temperature: 35 ± 3 °C Solution: 5 ± 1% Spray time: 48 ± 4 hours (Stamping before plated) Spray time: 24 ± 4 hours (Stamping after plated) Mate connectors and expose to the following salt mist conditions. Upon completion of the exposure period, salt deposits shall be removed by a gentle wash or dip in running water and dried naturally, after which the specified measurements shall be performed. The specimens shall be suspended from the top using waxed twine, string or nylon thread. The test only define the plating area, without plating area (as copper cross section) will not be defined. (EIA 364-26B / MIL-STD-202 Method 101)	Appearance: No damage on function Contact resistance: Less than twice of initial

10. AMBIENT TEMPERATURE RANGE: -40 to + 105 °C (UL 94V-0)
-25 to + 85 °C (UL 94V-2)

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11. MATING FORCE AND UNMATING FORCE: Unit: Kgf

Number of Circuits	Mating Force (Max.)	Unmating Force (Min.)
2	1.8	0.25
4	2.6	0.5
6	4.1	0.8
8	5.5	1.2
10	6.8	1.6
12	8.3	2.0
14	9.7	2.4
16	11.0	2.8
18	12.5	3.2
20	13.8	3.6
22	15.2	4.1
24	16.5	4.6

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