瀚荃股份有限公司
CviLux Corporation

ENGINEERING DEPT.		PRODUCT SPECIFICATION	SPEC.NO.: SPCI162A
REVISIONS	ECN	For CIE7 Series Connector System	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
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: CIE7 Series

4. SHAPE, CONSTRUCTION AND DIMENSIONS
See attached drawings

5. MATERIALS
See attached drawings

6. ACCOMMODATED P.C.BOARD
6.1 Thickness: 0.8 mm (.031″) ~ 1.6 mm (.063″)
6.2 P.C. Board Layout: See attached drawings

CVILUX CORP
2020.10.23
ISSUED

REVIEWED : Eisley APPROVED : Eisley VERIFIED : Hank .

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7. ELECTRICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
7.1	Rated current and voltage		Rated Voltage(Max.):125V Rated Current(Max.): AWG#24: 2.0A AWG#26: 1.5A AWG#28: 1.0A AWG#30: 0.5A
7.2	Contact resistance	Dry circuit of DC 20 mV max. , 10 mA max.	Less than 20 mΩ
7.3	Dielectric strength	When applied AC 500 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
7.5	Contact Resistance on Crimped Portion	Crimped the applicable wire on to the terminal,measure by dry circuit,20mV MAX.,10mA	Less than 5 mΩ

8. MECHANICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
8.1	Wire size	Specified wire size	Accepts AWG#24~#30
8.2	Terminal crimp Tensile strength	When crimped AWG#24 size wire When crimped AWG#26 size wire When crimped AWG#28 size wire When crimped AWG#30 size wire	More than 3.0 Kgf More than 2.0 Kgf More than 1.0 Kgf More than 0.5 Kgf
8.3	Terminal insertion force	Insertion speed 25± 3 mm per minute into housing	Less than 1.0 Kgf
8.4	Contact retaining force in insulator	Retention speed 25± 3 mm per minute from housing	More than 1.0 Kgf
8.5	Durability	Connector shall be subjected to 30 cycles of insertion and withdrawal	Contact resistance: Less than 40 mΩ
8.6	Pin retention force	Push pin from insulator base at speed 25± 3 mm per minute	More than 1.0 Kgf

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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. Contact resistance: Less than 40 mΩ
9.3	Shock	490m/S 2 (50G) , 3 strokes in each X.Y.Z. axes.	Appearance: No damage Discontinuity: 1 micro second max. Contact resistance: Less than 40 mΩ
9.4	Heat aging	105 ± 2°C , 96 hours	No damage Contact resistance: Less than 40 mΩ
9.5	Cold Resistance	Mate connectors and expose to -40±3° for 96 hours	No damage Contact resistance: Less than 40 mΩ
9.6	Humidity	60 ± 2°C , 90-95% RH , 96 hours measurement must be taken within 30 min. after tested	Appearance: No damage Contact resistance: Less than 40 mΩ Dielectric strength: To pass para 7-3 Insulation resistance: More than 100 MΩ
9.7	Temperature cycling	One cycle consists of : (1)-55 $^{+0}_{-3}$ °C , 30 min. (2)Room temp. 10-15 min. (3) 105$^{+3}_{-0}$ °C , 30 min. (4)Room temp. 10-15 min. Total cycle: 5 cycle	Appearance: No damage Contact resistance: Less than 40 mΩ

	ITEM	TEST CONDITION	REQUIREMENT
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)	Appearance: No damage Contact resistance: Less than 40 mΩ
9.9	SO_2 Gas	Mate connectors and expose to 50±5ppm SO_2 Gas, ambient temperature 40±2°C for 24 hours	No damage Contact resistance: Less than 40 mΩ
9.10	Solder ability	**Lead-Free Process:** Soldering time: 3 ± 0.5 second Soldering pot: 245 ± 5°C	Minimum: 95% of immersed area
9.11	Resistance to soldering heat	**Lead-Free IR Reflow Process:** Soldering time: 20 second Max. Soldering pot: 250~260°C Refer Reflow temperature profile(12.2)	No damage

10. AMBIENT TEMPERATURE RANGE: -40 to + 105°C

11. Mating and Unmating Force:

PIN No.	Mating(kgf max.)			Unmating(kfg min.)		
Unit: kgf	1 th	6 th	30 th	1 th	6 th	30 th
2	3.60	3.40	3.40	0.45	0.40	0.35
3	4.40	4.10	4.10	0.55	0.50	0.45
4	5.20	4.80	4.80	0.70	0.60	0.50
5	6.00	5.50	5.50	0.80	0.65	0.55
6	6.60	6.00	6.00	0.90	0.70	0.60
7	7.20	6.50	6.50	1.00	0.75	0.65
8	7.80	7.00	7.00	1.10	0.80	0.70
10	9.00	8.00	8.00	1.30	0.90	0.80
12	10.20	9.00	9.00	1.50	1.00	0.90
13	10.80	9.50	9.50	1.60	1.05	0.95
15	12.00	10.50	10.50	1.80	1.15	1.05

12. Recommended IR Reflow Temperature Profile:

12.1 Using Lead-Free Solder Paste