瀚荃股份有限公司
CviLux Corporation

RELIABILITY TEST REPORT

TESTITEM: 1.ELECTRICAL
2.MECHANICAL
3.ENVIRONMENTAL

SERIES NO.: CI25 Series

TEST EQUIPMENT: 1.INSERTION & REMOVAL APPARATUS
2.ELECTRONIC MEASURING APPARATUS
3.ENVIRONMENTAL APPARATUS

DATE OF TESTING: 1 / 5 / 05

TEST DEPART: QA TESTER: Scott.Lien

CONTAINT: ATTACHED

REVIEWED : Jackal APPROVED : Rita VERIFIED : Scott.Lien .

1.ELECTRICAL PERFORMANCE：

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
1-1	Contact resistance	Dry circuit of DC 20 mV max.100 mA max.	Less than 20 mΩ	Sample	20 mΩ max.
				1	3.54 mΩ
				2	3.38 mΩ
				3	3.49 mΩ
				4	3.21 mΩ
				5	3.26 mΩ
1-2	Dielectric strength	When applied AC 1000 V 1 minute between adjacent terminal	No change	Sample	1000 V 1 minute
				1	Pass
				2	Pass
				3	Pass
				4	Pass
				5	Pass
1-3	Insulation resistance	When applied DC 500 V between adjacent terminal or ground	More than 1000 MΩ	Sample	1000 MΩ min.
				1	13×10^5 MΩ
				2	13×10^5 MΩ
				3	13×10^5 MΩ
				4	12×10^5 MΩ
				5	12×10^5 MΩ

2. MECHANICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
2-1	Terminal crimp tensile strength	When crimped AWG# 22 size wire	More than 5.0 Kgf	Sample	> 5.0 Kgf
				1	7.13 Kgf
				2	7.35 Kgf
				3	7.36 Kgf
				4	6.81 Kgf
				5	7.30 Kgf
		When crimped AWG# 24 size wire	More than 3.0 Kgf	Sample	> 3.0 Kgf
				1	5.03 Kgf
				2	4.52 Kgf
				3	4.89 Kgf
				4	5.11Kgf
				5	4.98 Kgf

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
		When crimped AWG# 26 size wire	More than 2.0 Kgf	Sample	> 2.0 Kgf
				1	3.05 Kgf
				2	3.27 Kgf
				3	3.44 Kgf
				4	3.32 Kgf
				5	2.99 Kgf
		When crimped AWG# 28 size wire	More than 1.3 Kgf	Sample	>1.3 Kgf
				1	1.99 Kgf
				2	1.89 Kgf
				3	2.23 Kgf
				4	2.34 Kgf
				5	2.19 Kgf
2-2	Terminal insertion force	Insertion speed 25± 3 mm per minute into housing	Less than 700 gram	Sample	< 700 gram
				1	399 gram
				2	425 gram
				3	436 gram
				4	422 gram
				5	415 gram
2-3	Contact retaining force in insulator	Retention speed 25± 3 mm per minute from housing	More than 1.5 Kgf	Sample	> 1.5 Kgf
				1	2.54 Kgf
				2	2.69 Kgf
				3	2.67 Kgf
				4	2.77 Kgf
				5	2.69 Kgf
2-4	Single contact insertion force	Measure force to insertion using 0.70 mm round pin at speed 25±3 mm per minute	700 gram max.	Sample	700 gram max.
				1	456 gram
				2	433 gram
				3	457 gram
				4	437 gram
				5	406 gram
2-5	Single contact withdrawal force	Measure force to withdrawal using 0.70 mm round pin at speed 25±3 mm per minute	100 gram min.	Sample	100 gram min.
				1	355 gram
				2	350 gram
				3	305 gram
				4	319 gram
				5	329 gram

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
2-6	Durability	Connector shall be subjected to100 cycles of insertion and withdrawal	Contact resistance: Less than twice of initial	Sample	< twice of initial
				1	3.36 mΩ
				2	3.48 mΩ
				3	3.39 mΩ
				4	3.29 mΩ
				5	3.43 mΩ
2-7	Pin retention force	Push pin from insulator base at speed 25±3mm per minute	More than 1.5 Kgf	Sample	> 1.5 Kgf
				1	2.09 Kgf
				2	2.23 Kgf
				3	2.22 Kgf
				4	2.12 Kgf
				5	2.12 Kgf

3. ENVIRONMENTAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
3-1	Temperature rise	Then carried the rated current	30 ℃ max.	Sample	30 ℃ max.
3-2	Vibration	1.5 mm 10-55-10 HZ/minute each 2 hours for X, Y and Z directions	Appearance: No damage	Sample	No damage
			Discontinuity: 1 micro second max.	Sample	1 micro second max.
3-3	Solderability	Soldering time: 5 ±0.5 sec. Soldering pot:230 ±5℃	Minimum: 90% of immersed area	Sample	90% of Immersed area
				1	Pass
				2	Pass
				3	Pass
				4	Pass
				5	Pass
3-4	Resistance to soldering heat	Soldering time: 5 ±0.5 sec. Soldering pot:260 ±5℃	No damage	Sample	No damage
				1	Pass
				2	Pass
				3	Pass
				4	Pass
				5	Pass

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
3-5	Heat aging	85 ±2°C , 96 hours	No damage	Sample	No damage
				1	Pass
				2	Pass
				3	Pass
				4	Pass
				5	Pass
3-6	Humidity	40 ±2°C, 90-95%RH, 96 hours measurement must be taken within 30 min. after tested	Appearance: No damage	Sample	No damage
				1	Pass
				2	Pass
				3	Pass
				4	Pass
				5	Pass
			Contact resistance: Less than twice of initial	Sample	< twice of initial
				1	3.38 mΩ
				2	3.30 mΩ
				3	3.29 mΩ
				4	3.50 mΩ
				5	3.36 mΩ
			Dielectric strength: To pass Para 1-2	Sample	Pass para 1-2
				1	Pass
				2	Pass
				3	Pass
				4	Pass
				5	Pass
3-7	Temperature cycling	One cycle consists of: 1. -55$^{+0}_{-3}$ °C, 30 min 2. Room temp. 10-15 min 3. 85$^{+3}_{-0}$°C, 30 min 4. Room temp. 10-15 min	Appearance: No damage	Sample	No damage
				1	Pass
				2	Pass
				3	Pass
				4	Pass
				5	Pass
			Contact resistance: Less than twice of initial	Sample	< twice of initial
				1	3.36 mΩ
				2	3.58 mΩ
				3	3.26 mΩ
				4	3.29mΩ
				5	3.33 mΩ

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
3-8	Salt spray	Temperature:35±3°C Solution:5±1% Spray time:48±4hours Measurement must be taken after water rinse	Appearance: No damage	Sample	No damage
				1	Pass
				2	Pass
				3	Pass
				4	Pass
				5	Pass
			Contact resistance: Less than twice of initial	Sample	< twice of initial
				1	3.43 mΩ
				2	3.42 mΩ
				3	3.25 mΩ
				4	3.41 mΩ
				5	3.28 mΩ

4.AMBIENT TEMPERATURE RANGE: -25 to + 85°C