

RELIABILITY TEST REPORT

TESTITEM: 1.ELECTRICAL
2.MECHANICAL
3.ENVIRONMENTAL

SERIES NO.: CI19 SERIES

Header: Cvilux: CI1905M1VR0-NH

Housing/Terminal: Aces: 50294

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

DATE OF TESTING: 2/10/2012

TEST DEPART: R&D

TESTER: Hank Wang

CONTAIN: ATTACHED



REVIEWED : David APPROVED : Eisley VERIFIED : Hank .



1.ELECTRICAL PERFORMANCE :

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
1-1	Rated current and voltage		3.0A (AWG#26) 200V AC/DC	Sample	3.0A (AWG#24) 50V AC/DC
				1	Pass
				2	Pass
				3	Pass
				4	Pass
				5	Pass
1-2	Contact resistance	Dry circuit of DC 20 mV max. , 10 mA max Wire resistance shell be removed from the measured value	Less than 20mΩ	Sample	20 mΩ max
				1	5.05 mΩ
				2	5.09 mΩ
				3	5.24 mΩ
				4	5.28 mΩ
				5	5.15 mΩ
1-3	Dielectric strength	When applied AC 500V 1 minute between adjacent terminal	No breakdown	Sample	500 V 1 minute
				1	Pass
				2	Pass
				3	Pass
				4	Pass
				5	Pass
1-4	Insulation resistance	When applied DC 500 V between adjacent terminal or ground	More than 500 MΩ	Sample	1000 MΩ min.
				1	20×10 ⁵ MΩ
				2	20×10 ⁵ MΩ
				3	20×10 ⁵ MΩ
				4	20×10 ⁵ MΩ
				5	20×10 ⁵ MΩ

2. MECHANICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT		
2-1	Mating & Un-mating forc (with latch)	Insert and withdraw connector at speed of 25 ± 3 mm per minute	Mating: 3.0Kgf max Unmating: 0.3 Kgf min	sample	Mating (Max)	Unmating (Min)
				1	0.97	1.242
				2	1.01	1.338
				3	1.04	1.163
				4	1.01	1.215
				5	0.99	1.254



	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
2-2	Pin retention force	Push pin from insulator base at speed 25 ± 3 mm per minute	More than 0.3Kgf	Sample	> 0.3Kgf
				1	0.912 kgf
				2	1.101 kgf
				3	0.831 kgf
				4	0.970 kgf
2-3	Durability	Connector shall be subjected to 30 cycles of insertion and withdrawal	Contact resistance: Less than twice of initial	Sample	< twice of initial
				1	5.51 mΩ
				2	5.68 mΩ
				3	5.66 mΩ
				4	5.48 mΩ
				5	5.57 mΩ

3.ENVIRONMENTAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
3-1	Temperature rise	Then carried the rated current	30 °C max.	Sample	30 °C max.
3-2	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.	Sample	No damage
				Sample	1 micro second max.
3-3	Solder ability	Soldering time: 3 ± 0.5 second Soldering temperature: $245 \pm 5^{\circ}\text{C}$	Minimum: 90% of immersed area	Sample	90% of immersed area
				1	Pass
				2	Pass
				3	Pass
				4	Pass
3-4	Resistance to soldering heat	Max. Infrared Reflow Soldering temperature & time : 230°C for 60 sec 260°C for 10 sec	Appearance: No damage	Sample	No damage
				1	Pass
				2	Pass
				3	Pass
				4	Pass
3-5	Heat aging	$85 \pm 2^{\circ}\text{C}$, 96 hours	Appearance: No damage	Sample	No damage
				1	Pass
				2	Pass
				3	Pass
				4	Pass
3-6	Humidity	$40 \pm 3^{\circ}\text{C}$, 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



	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
3-6	Humidity	-40 ±3°C, 90-95%RH, 96 hours measurement must be taken within 30 min. after tested	Contact resistance: Less than twice of initial	Sample	< twice of initial
				1	5.52 mΩ
				2	5.66 mΩ
				3	5.63 mΩ
				4	5.49 mΩ
				5	5.42 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	Five cycle consists of :(EIA-364-32) (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.	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	5.55 mΩ
				2	5.57 mΩ
				3	5.61 mΩ
				4	5.49 mΩ
				5	5.72 mΩ
3-8	Salt spray	Temperature: 35 ± 3°C Solution: 5 ± 1% Spray time: Gold flash: 8 hours 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	6.03 mΩ
				2	5.92 mΩ
				3	5.99 mΩ
				4	6.12 mΩ
				5	6.06 mΩ

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