

LEOCO CORPORATION		PRODUCTION SPECIFICATION		No.	S-04-5011	Rev.	7
* 5011 Series RAST 5 connector *							
This product specification contains the test method, the following datum are the general performance and requirements of the LEOCO 5011 series wafer & socket.							
1. Construction and dimensions shall be in accordance with the referenced drawings.							
2. Characteristics:							
Current rating: 16 A max. AC DC							
Voltage rating: 380V AC DC							
Temperature rating: -40°C ~ +120°C							
3. Electrical performance:							
Item	Description	Test Method & Condition			Requirement		
3-1	Contact resistance	It should be tested in accordance with method EIA-364-23.			20mΩ max. Initial. After test 40 mΩ max.		
3-2	Insulation resistance	In accordance with EIA-364-21, DC 500 V shall be applied between contacts and between an individual contact and a case for one minute.			1000 MΩ min.		
3-3	Dielectric Withstanding Voltage	In accordance with UL1977, AC 1760 V shall be applied between contacts and between an individual contact and a case for one minute. (leak current 2mA)			There should be not flash over spark over or dielectric breakdown.		
4. Mechanical Performance :							
Item	Description	Test Method & Condition			Requirement		
4-1	Pin Retention Force from Base	Apply axial pull out force at the speed: 25 mm / minute on the PIN inserted in the Base.			4.0kgf/Contact Min.		
4-2	Terminal Retention Force from Housing	Apply axial pull out force at the speed: 25 mm / minute on the contact assembled in the housing.			4.0kgf/Contact Min.		
4-3	Durability	It should be tested in accordance with method EIA-364-09. Connector shall be subjected to 10 cycles of insertion and withdrawal in one minute.			Contact resistance less than 40 mΩ.		

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5. Environmental Performance :							
Item	Description	Test Method & Condition			Requirement		
5-1	Humidity	Test method EIA-364-31. Temperature: 40±2 °C Humidity: 90 ~ 95 % (RH) Period: 96 hours.			NO damage. Contact resistance less than 40 mΩ. Insulation resistance more than 10 MΩ. Dielectric Withstanding Voltage meets the requirement of item 3-3.		
5-2	Salt spray	Connector shall be tested in accordance with method EIA-364-26. Temperature: 35±2 ° C Density: 5 % in weight. Period: 48 hours.			NO damage. Contact resistance less than 40 mΩ.		
5-3	Solder ability	Connector termination ends shall be checked for solder ability in accordance with method EIA-364-52. Solder temperature: 260±5 ° C Immersion period: 5±0.5 sec.			NO damage. Minimum: 95 % of immersed area.		
5-4	Temperature rise	Mate connectors: Measure the temperature rise at rated current after 4 hours. Test method: EIA-364-70			Temperature rise 50° C max.		
5-5	Heat aging	Temperature:85±2℃ Period:96 hours			No damage. Contact resistance less than 40 mΩ.		
5-6	Resistance to Soldering Heat	Soldering temperature: 260±5℃ Soldering time:3~5 sec.			No damage. Contact resistance less than 40 mΩ.		
5-7	Low temperature	Temperature:-25±3℃ Period:96 hours			No damage. Contact resistance less than 40 mΩ.		
6. VDE test item							
6-1	Voltage proof(Test 4a of IEC 60512)	Test shall be according to test 4a of IEC60512.Test duration shall be 1 min. Test voltage is 1.39KV (rms)			There shall be not flash over spark over or dielectric breakdown.		

7.Product Qualification Test Sequence

Test or Examination	1	2	3	4	5	6	7	8	9	10
	Test Sequence									
Appearance examination of product	1	1,6	1,3	1,4	1	1,3	1,4	1,4	1,4	1,4
Contact resistance		2,7		2,5			2,5	2,5	2,5	2,5
Insulation resistance		3,8								
Dielectric Withstanding Voltage		4,9								
Pin Retention Force from Base	2									
Terminal Retention Force from Housing	3									
Humidity		5								
Heat aging							3			
Salt Spray				3						
Solder ability			2							
Temperature rise					2					
Durability								3		
Resistance to Soldering Heat									3	
Low temperature										3
Voltage proof(Test 4a of IEC 60512)						2				

8.Socket Mating Force and Unmating Force for RAST 5 Serial: (Without lock on the Housing)

No. Of circuits	Mating Force Max. (Unit: kgf)	Unmating Force Min. (Unit: kgf)
2 Circuits	4.0	1.6
3 Circuits	5.0	2.2
4 Circuits	6.0	2.8
5 Circuits	7.5	3.4
6 Circuits	8.5	4.0

9. Socket Mating Force and Unmating Force for RAST 5 Serial: (With lock on the Housing)

No. Of circuits	Mating Force Max. (Unit: kgf)	Unmating Force Min. (Unit: kgf)
2 Circuits	4.5	2.6
3 Circuits	5.5	3.2
4 Circuits	9.0	3.8
5 Circuits	10.5	4.4
6 Circuits	12.0	5.0