

LEOCO CORPORATION	PRODUCTION SPECIFICATION	No.	S-04-5011	Rev.	4
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* 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 ~ +110°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 initial. After test 500 MΩ min.
3-3	Dielectric Withstanding Voltage	In accordance with EIA-364-20, AC 500 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 contact assembled in the housing.	2.0kgf/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.

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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 twice of initial. Insulation resistance more than 10 MΩ
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 twice of initial.
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	Steam aging	Connector shall be 38mm above the water surface. Temperature: 93±3 °C Period: 480±15 min. Oven temperature: 105±5°C Oven period : 60-120min.	Solder ability Minimum: 95% of immersed area.

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.
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7. Product Qualification Test Sequence:

Test or Examination	1	2	3	4	5	6
	Test Sequence					
Examination of product	1	1, 6	1, 7	1, 6	1	1, 3
Contact resistance		2, 7	2, 8	2		
Insulation resistance		3	3	3		
Dielectric Withstanding Voltage		4	4	4		
Pin Retention Force from Base	2					
Terminal Retention Force from Housing	3					
Humidity		5				
Steam aging			5			
Salt spray				5		
Solder ability			6			
Temperature rise					2	
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