LEOCO CORPORATION	PRODUCTION SPECIFICATION	No.	S-09-3976	Rev	2

* 3976 SERIES CONNECTOR *

This product specification contains the test method, the general performance and requirements for LEOCO 3.96mm pitch wire to board connector series.

1. Construction and dimensions shall be in accordance with the referenced drawings.

产品结构和尺寸依据所提的产品图面

2. Characteristics 特性:

Item	Standard		
Rated Voltage(max.)	250V AC,DC		Insulation O.D. 3.20mm(max.)
Rated Current(max.) And Applicable Wires	AWG#18	7A AC,DC	
	AWG#20	6A AC,DC	
	AWG#22	5A AC,DC	
	AWG#24	4A AC,DC	
Ambient Temperature Range	-25℃~+85℃ *		

*:Including terminal temperature rise

3. Electrical performance 电气特性:

Item 项目	Description 内容	Test Method & Condition 测试方法及条件	Requirement 要求
3-1	Contact Resistance 接触阻抗	Mate connectors,measure by dry circuit,20mV MAX.,10mA. (Based upon JIS C5402 5.4)	10 mΩ max
3-2	Insulation Resistance 绝缘电阻	It should be. tested in accordance with method 302 condition B of MIL-STD-202 When the DC 500V rms applied between adjacent contacts.	1000 MΩ.min
3-3	Dielectric Withstanding Voltage 耐电压	Mate connectors,apply 1500V AC(rms) for 1 minute between adjacent terminal or ground,(Based upon MIL-STD-202 Method 301/JIS C5402 5.1)	No Breakdown
3-4	Contact Resistance on Crimped Portion 铆合处接触阻抗	Crimp the applicable wire on to the terminal,measure by dry circuit,20mV Max.,10mA.	5 mΩ max

4. Mechanical Performance 机械特性 :

Item 项目	Description 内容	Test Method & Condition 测试方法及条件	Requirement 要求
4-1	Terminal crimp strength 铆合张力强度	Fix the crimped terminal,apply axial pull out force on the wire at the speed rate of 25±3mm/minute（JIS C5402 6.8）.	AWG #18: 9.0kgf.min. AWG #20: 6.0kgf.min. AWG #22: 4.0kgf.min. AWG #24: 3.0kgf.min
4-2	Insertion& Withdrawal force 插入力和拔出力	Insert and Withdraw connectors at the speed rate of 25±5mm per minute.	Refer to paragraph 6

4-3	Terminal Insertion force 端子插入力	Insertion the crimped terminal into the housing.	2.0kgf max.	
4-4	Terminal/Housing Retention Force 端子保持力	Apply axial pull out force at the speed rate of 25±3mm/minute on the terminal assembled in the housing.	2.0 kgf min.	
4-5	Pin Retention Force 保持力	Apply axial push force at the speed rate of 25±3mm/minute.	2.0kgf.min	
4-6	Durability 耐久性	When mated up to 50 cycles repeatedly by the rate of 10 cycles per minute.	Contact Resistance	20mΩ Max
4-7	Vibration 振动性	Amplitude: 1.5mm P-P Sweep time: 10~55~10Hz in 1 minute Duration: 2 hours in each X.Y.Z.axes (Based upon MIL-STD-302 Method 201A)	Appearance	No Damage
			Contact Resistance	20mΩ Max
			Discontinuity	1.0 microsecond Max

5. Environmental Performance 环境特性 ：

Item 项目	Description 内容	Test Method & Condition 测试方法及条件	Requirement 要求	
5-1	Humidity 耐湿性	Temperature: 40±2℃ Relative Humidity:90~95% Duration: 96hours (Based upon JIS C0022/MIL-STD-202 Method 103)	Appearance	No Damage
			Contact Resistance	20mΩ max
			Insulation Resistance	100MΩ min
			Dielectric Withstanding Voltage	Must meet 3-3
5-2	Salt Spray 盐雾测试	Connector shall be tested in accordance with method 1001.1 of MIL-STD-1344A condition B. Temperature: 35±2 °C Density: 5±1 % in weight. Period: 48±4 hours.	NO damage. Contact resistance less than twice of initial.	
5-3	Solderability 可焊性	Solder temperature: 245±5 °C Immersion period: 5±0.5 sec.	Solder Wetting	90% of immersed area must show no voids,pin holes
5-4	Resistance to Soldering Heat 耐高温焊接	Specimen shall be mounted on PCB. Solder temperature: 260±5 °C Immersion period: 5±0.5 sec.	NO damage and deformation.	

Item 项目	Description 内容	Test Method & Condition 测试方法及条件	Requirement 标准要求	
5-4	Temperature Rise 温度上升	Carrying rated current load.(UL 498)	30℃ Max	
5-5	Heat Resistance 耐热性	85±2℃，96 hours (Based upon JIS C0021/MIL-STD-202 Method 108A Cond.A)	Appearance	No Damage
			Contact Resistance	20mΩ max
5-6	Cold Resistance 耐冷性	-25±3℃，96 hours (Based upon JIS C0020)	Appearance	No Damage
			Contact Resistance	20mΩ max

6. 3976 Series Mating force and unmating force:

Unit: Kgf

Number of Circuits	Insertion At initial(max.)	Withdrawal At initial (min.)	Number of Circuits	Insertion At initial(max.)	Withdrawal At initial (min.)
single	1.0	0.20			
2	2.5	0.60	8	5.5	2.40
3	3.0	0.90	9	6.0	2.60
4	3.5	1.20	10	6.5	2.80
5	4.0	1.50	11	7.0	3.00
6	4.5	1.80	12	7.5	3.50
7	5.0	2.10			