Broadstick Fiber Optic Patch cords Single Mode

TEST REPORT

REPORT NO. 20220103Q220079

According to best practices and international standards, we perform a performance test to the Broadstick fiber optic jumpers . This test is performance in accordance to Telcordia GR-326.

The present Test Report (TR) summarizes the qualification measurements and tests performed to verify the design and the optical, mechanical and environmental performance of the Broadstick Patch cords at the accredited test & calibration laboratory. This current TR is a summary of the internal qualification report can be validated at: www.prolabstesting.com.

The qualified product is subject to periodic requalification with the purpose of guaranteeing the product compliance to the specifications measured in the present report over the years. For requalification purposes the principle of similarity is applied, where the qualification data of similar products can be used if they meet the same technology platform and are manufactured using the same process.

For more information please contact: info@prolabstesting.com

ITEM DESCRIPTION:

Broadstick Fiber Optic Patch cords Single Mode according to GR-326 compliant to TIA568

Test Report

Singlemode Optical Patch Connector Assemblies

Test	Test Conditions	Measurement Wavelength	Criteria	Pass or No
Ferrule End Face Geometry	room temperature	1310nm&1550nm	Undercut/Protrusion< ±50 nm ROC:7-25 mm Apex Offset<50um	Pass
Pertormance of New Product	room temperature		IL<0.4 dB, Ref<-40.0 dB	Pass
Thermal Age	85C,168 hours	1310,1490,1550, 1625nm	IL<0.5 dB △IL<0.3 dB Ref<-40.0 dB ARef<5.0 dB	Pass
Thermal Cycle	40C~75C,168 hours			Pass
Humidity Aging	75C195%,168 hours			Pass
Humidity/Condensation Cycling	'-10C-65C;90%~100% 168 hours			Pass
Post-Condensation Thermal Cycle	40C~75C,168 hours			Pass
Vibration	1.5mm amplitude,2 hours,3 axis 10~55 Hz,rate:45Hz/min	1310nm&1550nm		Pass
Flex	0.9 kgf load;o",90*,Q*.-90°.Q 100 cycles			Pass
Twist	1.35 kgf load,10 cycles			Pass
Proof	0 pull:4.5 &6.8 kgf load 90°pull:1.5&2.3 kgf load			Pass
Transmission with Applied Tensile Load	0'pull:0.25,0.7,1.5&2.0 kgf load 90'pull:0.17,0.47,1.0&1.3 kgf load 135°pull:0.17kgf load			Pass
Impact	1.5m height,8 impacts			Pass
Durability	200 insertions.measurement at every 25 insertions			Pass
Connector Installation	Panel to connector mounting surface is 70mm			Pass
End of Test	IL,RL,Geometry,and Damage	1310nm &1550nm	IL<0.5 dB,Ref<40.0 dB Undercut/Protrusion< 50nm ROC:7~25 mm Apex Offset<50um	Pass

PERFORMANCE TEST

Insertion Loss:

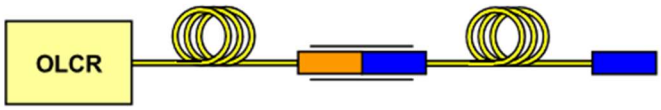
Methods: - Insertion loss measurement method B according to IEC 61300-3-4
- Random mating method 1 according to IEC 61300-3-34

a) Reference measurement:

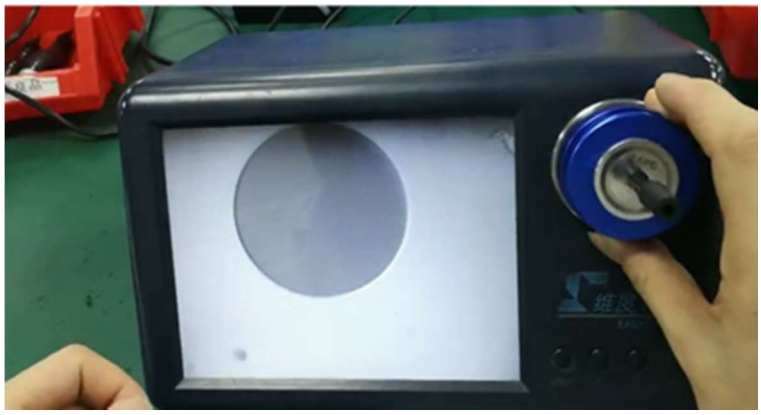
Test	Wavelength	Avg Loss (db)	Max. Loss (db)
Insertion Loss	1310nm	0.17	0.32
	1550nm	0.18	0.34

Return Loss:

Methods: OLCR method according to IEC 61300-3-6



Test	Wavelength	Avg Loss (db)	Max. Loss (db)
Return Loss	1310nm	56	44
	1550nm	56.1	44.5



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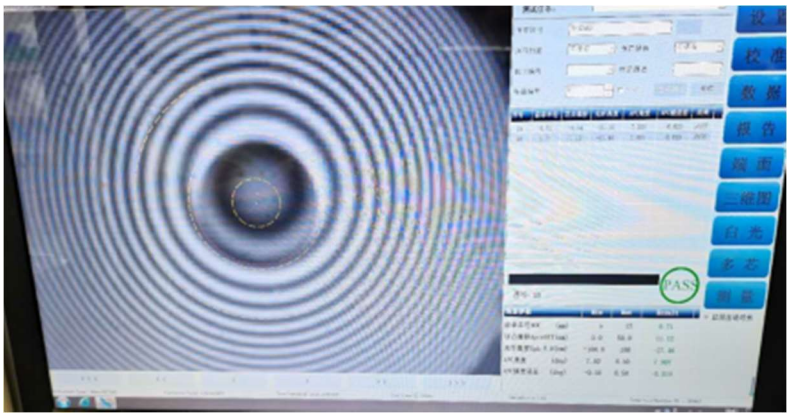
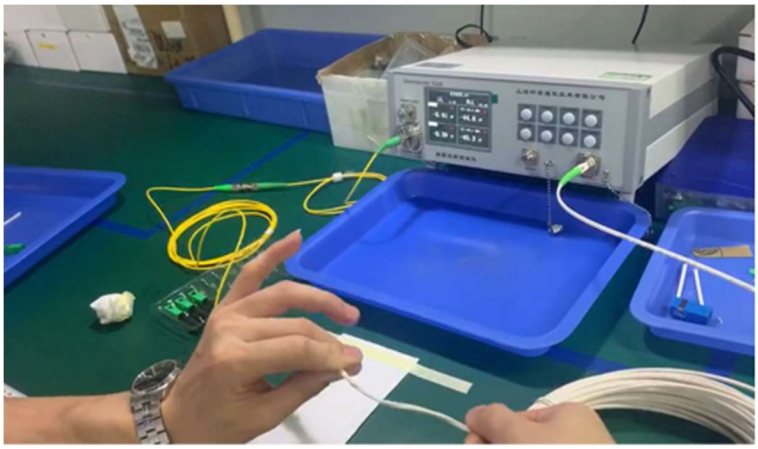
Test Report



Mechanical performance based on Telcordia GR-326

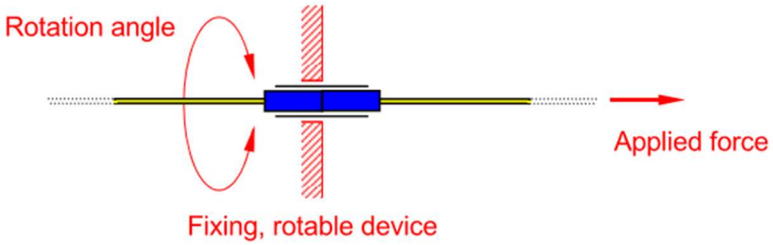
Test Results 1310nm	Insertion Loss (dB)			Return Loss (dB)	
	Avg.	Max	Difference	Avg.	Min
Twist Test 13N +360° to -360° /cycle 5 cycles in test	0.19	0.38	0.08	54.1	43.8
Pull Test 3N 60 seconds	0.18	0.35	0.09	55.5	44.2
Impact Test At 1.5mt 10 times	0.17	0.34	0.04	54.9	43.9
Durability Test 200 times	0.2	0.44	0.10	54.0	42.9
Vibration Test 3 axes, 2 hrs/ax 1.5mm(p/p) 10-50Hz 45Hz/min	0.20	0.33	0.04	55.0	43.6

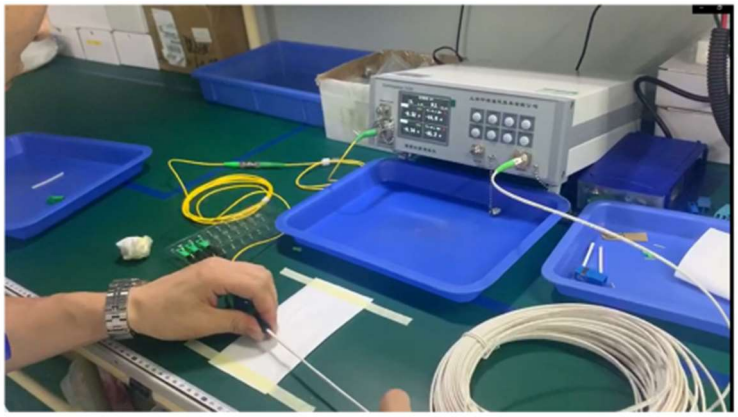


Twist Test

Methods:

- Insertion loss measurement method B according to IEC 61300-3-4
- Active monitoring of attenuation according to IEC 61300-3-3
- Cable torsion test according to IEC 61300-2-5





Pull Test

Impact Test

Durability Test

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Test Report

Environmental performance based on Telcordia GR-326

Test Results 1310nm	Insertion Loss (dB)			Return Loss (dB)	
	Avg.	Max	Difference	Avg.	Min
Thermal Aging +85°C to -2°C 168 hours	0.21	0.35	0.13	54	43.5
Humidity Test 90 to 95%RH 168 hours	0.18	0.39	0.13	53.3	40.7
Thermal Cycle -40°C to 75°C 21 cycles 168 hours	0.2	0.45	0.17	53.3	40.2