LightCrimp Plus Singlemode Ceramic ST Style Fiber Optic Connector Kit PN 1928953-3

1. INTRODUCTION

1.1. Purpose

The purpose of this report is to provide termination test data to demonstrate the basic functionality of the LightCrimp Plus SM ST Style Field Installable Connector part number 1928953-3.

1.2. Scope

This report is limited to termination trials of the specified connector on to 900 μm tight buffered SM fiber. Only mated pair loss and return loss at both 1310 and 1550 nm were measured to confirm the basic functionality of this particular embodiment of LightCrimp Plus field installable connector. Testing was performed at the FOBU-Shanghai Manufacturing Plant on 13Apr07.

1.3. Applicable Documents

The following document is an important adjunct to this report. It specifies the test procedures and performance requirements for qualification testing of LightCrimp Plus SM ST Style connector, part number 1928953-3.

TIA/EIA 568-C.3: Optical Fiber Cabling Components Standard

1.4. Conclusion

The CS LightCrimp Plus SM ST Style Fiber Optic Connectors meet the attenuation and return loss requirements of TIA/EIA-568-C.3, Optical Fiber Cabling Components Standard.

1.5. Product Description

LightCrimp Plus SM ST Style Fiber Optic Connectors are pre-polished, field installable, SM fiber optic connectors with a 9/125 μm SM fiber stub factory polished and installed in the connector. A mechanical splice mechanism in the connector enables easy field termination of the connector to an optical fiber. This connector may be terminated to 250 μm coated fiber, 900 μm tight buffered fiber, 900 μm easy strip and semi-tight buffered fiber and 2.0 to 3.0 mm jacketed cable.

1.6. Test Samples

The LightCrimp Plus SM ST Style Fiber Optic Connector, P/N 1928953-3, Rev A, test samples were manufactured by CS at the FOBU-Shanghai Manufacturing Plant using the same manufacturing processes used to manufacture all LightCrimp Plus SM connectors.

2. TEST REQUIREMENTS AND PROCEDURES

Test Description	Requirement	Procedure
Visual and mechanical inspection.	Meets requirements of product drawings, including end face geometry.	TIA/EIA-455-13A. Visual, dimensional and functional per applicable quality inspection plan.
Attenuation (insertion loss).	Maximum mated pair attenuation for any single specimen is 0.75 dB.	TIA/EIA-455-171A, Method D3, except launch and receive are both part of the pair under test and are not reference quality. Test at 1310 ± 30 nm and 1550 ± 30 nm. Precondition by cleaning plug and adapter per manufacturers instructions.
Return loss.	Minimum return loss for any single specimen is 26 dB.	TIA/EIA-455-107A or TIA/EIA-455-8. Test at 1310 ± 30 nm and 1550 ± 30 nm. Precondition by cleaning plug and adapter per manufacturers instructions.

Figure 1

3. TEST EQUIPMENT AND MATERIALS

Description	Detail and Part Numbers
Cable Type	900 μm Tight Buffered SM (9/125 μm) Fiber
Termination Type	900 μm
900μm Buffered Fiber PN	5599208-6
Connector Kit PN	1928953-3
Coupling Receptacle PN	502750-1
Receive Lead PN	492187-2
Test Cable Length	20 m
Test Specimen Quantity	50
Crimp Tool with Die Set PN	492623-1
Cleave Tool PN	492674-1
Cable Holder PN	492703-1

Figure 2

4. TEST SEQUENCE

Test or Examination	Test Group 1 Test Sequence
Examination of product	1
Attenuation (insertion loss)	2
Return loss	3

Figure 3

5. SUMMARY OF TESTING

5.1. Examination of Product

All samples met their required QIP inspections and acceptance testing requirements.

5.2 Attenuation (Mated Pair Loss)

Test Group	1310 nm Mated Pair Loss (dB) (Requirement: 0.75 dB maximum)				1550 nm Mated Pair Loss (dB) (Requirement: 0.75 dB maximum)			
	Mean	Minimum	Maximum	Std Dev	Mean	Minimum	Maximum	Std Dev
1	0.21	0.10	0.44	0.0707	0.23	0.12	0.43	0.0653

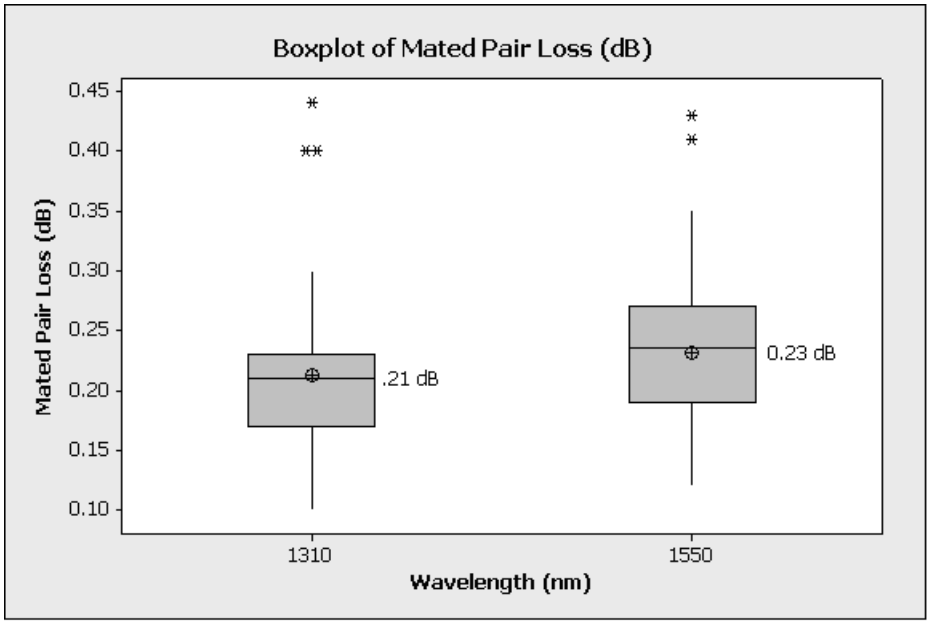

Figure 4

5.3 Return Loss

Test Group	1310 nm Return Loss (dB) (Requirement: 26.0 dB minimum)				1550 nm Return Loss (dB) (Requirement: 26.0 dB minimum)			
	Mean	Minimum	Maximum	Std Dev	Mean	Minimum	Maximum	Std Dev
1	52.3	54.6	49.2	1.006	54.0	56.7	50.8	1.014

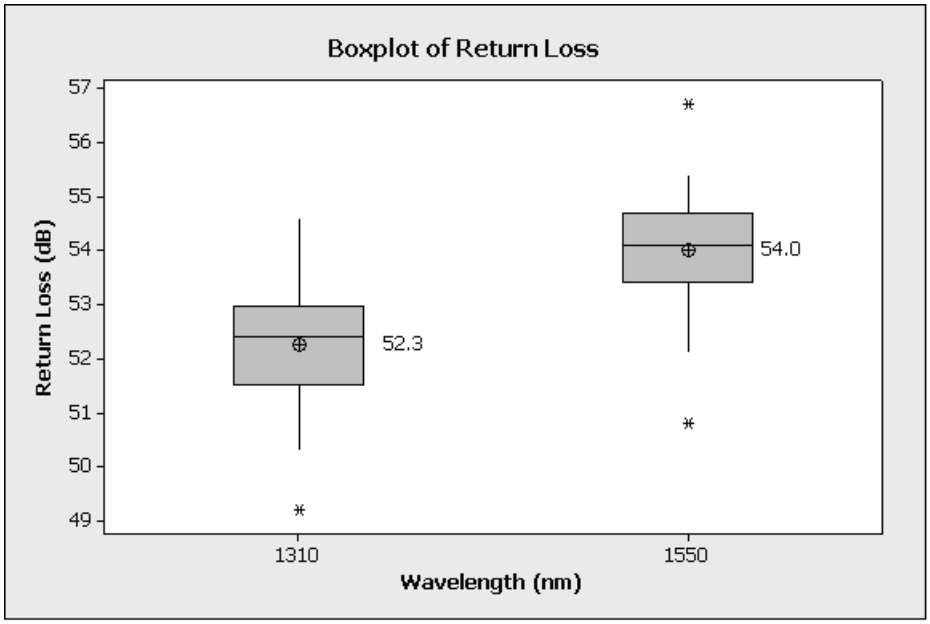

Figure 5