

Product Specification

LC 250 μ m/900 μ m Connector XP Fit Plus

Document Number
EPS-0109-002-03

Part Number
951-XXX-XXX

Issued By: Engineering Dept.
Reviewed By: B.P.
Approved By: J.G.
Date: 1/6/2010

www.senko.com

Table of Contents

Disclaimer 2
Range Of Limitations..... 2
Dimensions and Materials..... 2
Optical Characteristics 4
Ordering Information 8
Instructions..... 8
Shipping Information 9
Related Documents..... 9
Product Guarantee..... 9

Disclaimer

The information noted within this document is purely for informational purposes only. Please note that SENKO Advanced Components, Inc. does not warrant or assume any legal liability or responsibility for the accuracy, completeness or usefulness of any information or processes disclosed. Specifications are subject to change without notice.

The following information is strictly confidential. Reproduction or disclosure to any third party is not permitted without the express written consent of SENKO Advanced Components, Inc. The SENKO Group logo as well as the name "SENKO" are Registered Trade Marks ® of SENKO Advanced Components, Inc. All other Trade Marks referred to are the property of the respective rights holders.

For further information or general comments, please contact one of our sales offices.

Range Of Limitations

The Product Information found herein pertain to the LC XP Fit Plus Connector, Part Number 951-XXX-XXX

Dimensions and Materials

Please refer to documents EN09-003

Applicable fiber:

- SM fiber meeting ITU-T G.652.B, G652.D and G657A
- MM(50) fiber meeting ITU-T G.651.1, IEC60793-2-10 A1a.1(OM2) and IEC60793-2-10 A1a(OM3)
- MM(62.5) fiber meeting IEC60793-2-10 1Ab(OM1)
- Allowable fiber diameter 250µm +/-15µm and 900µm +/-50µm
- Configuration: 250µm coated fiber and 900µm tight buffered fiber.

Intermatebility per IEC61754-20 (LC type connectors)

All the materials comply with RoHS

Typical End Face Geometries LC/PC

Sample		PASS	Radius of		Fiber Height		Apex	
ID	Type	FAIL	Curvature		Spherical		Offset	
			(mm)		(nm)		(um)	
1	PC	PASS	13.91	PASS	-19.6	PASS	5.24	PASS
L2	PC	PASS	12.58	PASS	14.6	PASS	31.72	PASS

Optical Characteristics

The SENKO LC XP Fit Plus Connector exhibit the following characteristics

Table 2: Optical Characteristics

Specification	Single mode (1310nm)	Multimode (1300 nm)
Insertion loss	0.2dB typical, 0.5dB Max (PC)	0.1dB typical, 0.3dB Max
Return loss	≥ 55dB typical, 40dB Min (PC)	≥35dB typical, 22dB Min
Durability	< 0.1dB typical change, 500 matings	< 0.1dB typical change, 500 matings
Operating Temperature	-40°C to +75°C	-40°C to +75°C
Tensile strength	250µm fiber = 3N	900µm fiber = 4N
Qualification	SM, MM(50), MM(62.5) per TIE/EIA 568-B.3	
Intermateability	IEC 61754-20	

Notes:

1. Above published insertion loss and return loss values using Sumitomo fiber, using recommended termination procedure and master connector.
2. Return loss values measured at room temperature (23°C +/-5°)

Table 3 - Telcordia GR-326 Service Life Test Result. LC-PC 900µm

XP Fit Plus LC Connector SM PC 900µm											
Sample No.		1	2	3	4	5	6	7	8	9	10
Initial IL (≤0.4dB)	WL1.31	0.22	0.24	0.07	0.44	0.22	0.15	0.13	0.07	0.03	0.11
	WL1.55	0.17	0.19	0.11	0.43	0.12	0.14	0.22	0.1	0.02	0.08
Δ IL (≤0.3dB)		0.09	0.08	0.09	0.07	0.12	0.05	0.06	0.11	0.07	0.11
Last Δ IL (≤0.3dB)		0.01	0.00	-0.02	-0.01	0.01	-0.05	-0.05	-0.02	-0.05	-0.01
PASS / FAIL		PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

The result of Temperature Cycle test [Δ IL WL 1550nm] (900 μ m)								
Sample No.	1	2	3	4	5	6	7	8
Max Δ IL (\leq 0.3dB)	0.13	0.13	0.11	0.12	0.07	0.09	0.08	0.09

See page 10 for data chart

The result of Temperature & Humidity Cycle test [Δ IL WL 1550nm] (900 μ m)				
Sample No.	1	2	3	4
Max Δ IL (\leq 0.3dB)	0.002	0.000	0.002	0.032

See page 11 for data chart

Table 4 – TIA/EIA-568-B.3 Performance Requirement Testing Results (900µm)

	Item	Condition	Specification	Sample Size	Result	Pass /Fail
1	Insertion Loss (FOTP-13)	WL 1310µm, 1550µm	≤ 0.75dB	50	IL Avg: 0.16dB@1310nm 0.14dB@1550nm IL Max: 0.27dB@1310nm 0.22dB@1550nm	Pass
2	Return Loss (FOTP-8)	WL 1310µm, 1550µm	≥ 26dB	50	RL Avg: 47.38dB@1310nm 46.02dB@1550nm RL Min: 40.84dB@1310nm 41.18dB@1550nm	Pass
3	Low Temperature (FOTP-188)	0° C, 96 hrs	Before test: IL ≤ 0.75dB During test : ΔIL ≤ 0.3dB After test: IL ≤ 0.75dB RL ≥ 26dB	8	<u>Before test:</u> IL Avg. 0.22dB, Max. 0.37dB <u>During test:</u> IL Avg. 0.00dB, Max. 0.01dB <u>After test:</u> IL Avg. 0.24dB, Max. 0.31dB RL Avg. 46.52dB, Min 46.14dB	Pass
4	Temperature Life (FOTP-4)	60° C, 96 hrs	Before test: IL ≤ 0.75dB After test: IL ≤ 0.75dB RL ≥ 26dB	8	<u>Before test:</u> IL Avg. 0.13dB, Max. 0.19dB <u>After test:</u> IL Avg. 0.18dB, Max. 0.33dB RL Avg. 49.13dB, Min 47.23dB	Pass
5	Humidity (FOTP-5)	40° C, 93%RH 96 hrs	Before test: IL ≤ 0.75dB During test : ΔIL ≤ 0.4dB After test: IL ≤ 0.75dB RL ≥ 26dB	8	<u>Before test:</u> IL Avg. 0.21dB, Max. 0.30dB <u>During test:</u> IL Avg. 0.07dB, Max. 0.08dB <u>After test:</u> IL Avg. 0.24dB, Max. 0.34dB RL Avg. 46.13dB, Min 44.16dB	Pass
6	Impact (FOTP-2)	8 drops from 1.8m	Before test: IL ≤ 0.75dB After test: IL ≤ 0.75dB RL ≥ 26dB	8	<u>Before test:</u> IL Avg. 0.21dB, Max. 0.26dB <u>After test:</u> IL Avg. 0.22dB, Max. 0.26dB RL Avg. 52.21dB, Min 51.91dB	Pass
7	Strength of coupling mechanism (FOTP-185)	Tensile load: 33N 5 seconds	Before test: IL ≤ 0.75dB After test: IL ≤ 0.75dB RL ≥ 26dB	10	<u>Before test:</u> IL Avg. 0.14dB, Max. 0.30dB <u>After test:</u> IL Avg. 0.14dB, Max. 0.30dB RL Avg. 46.41dB, Min 42.35dB	Pass
8	Durability (FOTP-21)	500 Times mating	Before test: IL ≤ 0.75dB After test: IL ≤ 0.75dB RL ≥ 26dB	8	<u>Before test:</u> IL Avg. 0.16dB, Max. 0.25dB <u>After test:</u> IL Avg. 0.16dB, Max. 0.22dB RL Avg. 41.34dB, Min 40.50dB	Pass
9	Cable Retention (FOTP-6)	Tensile Load: 2.2N, 5 Sec. 0°, 90°	Before test: IL ≤ 0.75dB After test: IL ≤ 0.75dB ΔIL ≤ 0.4dB RL ≥ 26dB	8	<u>Before test:</u> IL Avg. 0.18dB, Max. 0.30dB <u>After test:</u> IL Avg. 0.16dB, Max. 0.26dB ΔIL Avg. -0.02dB, Max. 0.00dB RL Avg. 48.71dB, Min 47.46dB	Pass

10	Flex (FOTP-1)	2.2N +/-90° 100 cycles	Before test: IL ≤ 0.75dB After test: IL ≤ 0.75dB RL ≥ 26dB	8	Before test: IL Avg. 0.18dB, Max. 0.35dB After test: IL Avg. 0.15dB, Max. 0.30dB RL Avg. 46.95dB, Min 44.16dB	Pass
11	Twist (FOTP-36)	2.2N 220- 280mm position +/-2.5 rev 9 cycles	Before test: IL ≤ 0.75dB After test: IL ≤ 0.75dB ΔIL ≤ 0.4dB RL ≥ 26dB	8	Before test: IL Avg. 0.27dB, Max. 0.37dB After test: IL Avg. 0.27dB, Max. 0.35dB RL Avg. 49.12dB, Min 47.77dB	Pass

(Continued from previous page)

Ordering Information

Part number	Description (all are for 900um buffered fiber)	Color			
		Plug HSG	Rear Body	900um Boot	Dust Cap
951-191-111	XPFit Plus LC, SM PC	Blue	Blue	White	Transparent
951-191-311	XPFit Plus LC APC	Green	Green	White	Transparent
951-191-411	XPFit Plus LC, MM 50/125	Black	Black	White	Transparent
951-191-211	XPFit Plus LC, MM 62.5/125	Beige	Beige	White	Transparent
951-191-511	XPFit Plus LC, MM 50/125 10G OM3	Aqua	Aqua	White	Transparent

Part number	Description (all are for 250um fiber)	Color			
		Plug HSG	Rear Body	900um Boot	Dust Cap
951-191-101	XPFit Plus LC, SM PC	Blue	Blue	White	Transparent
951-191-301	XPFit Plus LC APC	Green	Green	White	Transparent
951-191-401	XPFit Plus LC, MM 50/125	Black	Black	White	Transparent
951-191-201	XPFit Plus LC, MM 62.5/125	Beige	Beige	White	Transparent
951-191-501	XPFit Plus LC, MM 50/125 10G OM3	Aqua	Aqua	White	Transparent

Note: Above are packaged 10 to a box. Ten (10) pieces is the minimum purchased quantity and quantities must be ordered in multiples of 10 connectors.

The above packaged quantities of 10 connectors are pre-assembled and attached to the wedge plate ready to be terminated using an assembly fixture base and fiber guide/holder. Each package of 10 connectors contains Step-By-Step installation instructions, one (1) Fixture Base and one (1) Fiber Guide/Holder which can be discarded after completing 10 XPFit Plus terminations. Each package of 10 connectors also contains 10 white boots used to complete the termination process resulting in superior fiber strain relief of the 900µm fiber.

Instructions

A termination procedure is included with each shipment.

Shipping Information

All connectors are sealed with dust caps and packed in a secure fashion so as to prevent any damage during transit.

Related Documents

Drawings: EN09-003,

Termination Procedure: 900 μ m: ETP-1108-001-XX
250 μ m: (available later)

Product Guarantee

The buyer of this product should inspect the goods upon arrival, and within five (5) business days should notify SENKO of any conditions which may prevent the acceptance of this product. In the event of a claim, appropriate measures will be taken to investigate the cause. Claims must be made in accordance to the conditions stated in the Standard Terms and Conditions of Sale.

**Product specifications are subject to adjustments and improvements please contact a
SENKO sales office to confirm published values**



