

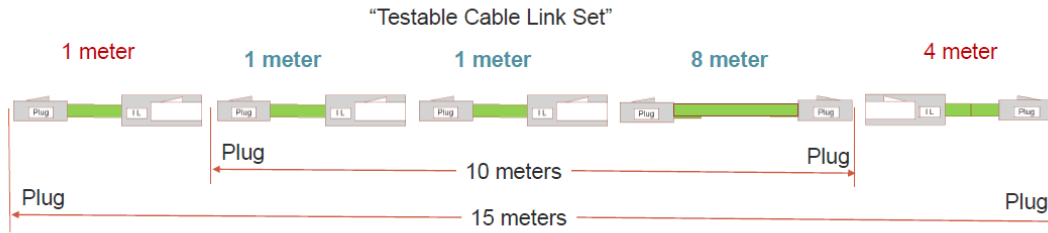
Link Segment Measurement of Optical Fiber

Adamant Co., Ltd.
Yasuhiro Hyakutake
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- This presentation shows
 - the feasibility potential of glass optical fiber with actual measurement.

Procedure are Based on Proposed Testable Link Segment Configuration

Proposed Testable Link Segment Configuration



- All testable Link Segments must end with a Plug at each end.
- Producing the least combinations of cable types call for (1 meter x 4), (8 meter x 1) and (4 meter x 1).
- Using the 8 meter as a Plug to Plug provides that transition for both a 10 & 15 meter testable link.
- Testable Links combinations of: 8, 9, 10, 11, 12, 13, 14 and 15 meters are possible with varying In-Line connections ranging from '0' to '4' in number are possible.
- Adding one additional 1 meter Plug to Plug would enable additional Testable Link combinations of: 2, 3, 4, 5, 6, 7 meters.



[Gardner_3NGAUTO_01a_061417.pdf](#)

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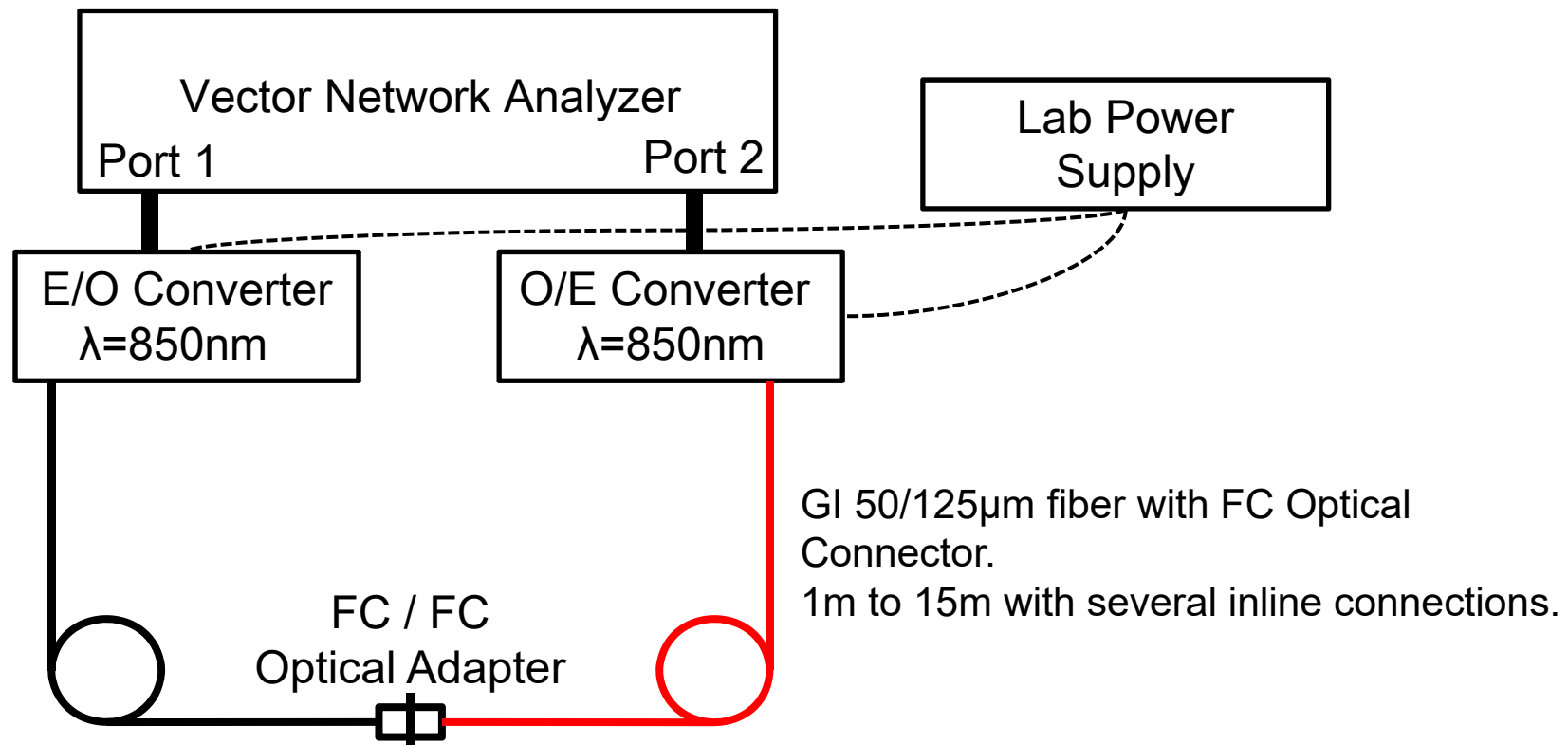
Proposed Testable Link Segment Configuration (X) Alternative

					1 meter	Total Segment Length	In-Lines
1 meter	1 meter	1 meter	8 meter	4 meter			
					X	1	0
	X				X	2	1
	X	X			X	3	2
X	X	X			X	4	3
				X	X	5	1
		X		X	X	6	2
	X	X		X	X	7	3
(X)	(X)	(X)	X	(X)	(X)	8	0 (4)
	X		X			9	1
	X	X	X			10	2
X	X	X	X			11	3
			X	X	X	12	1
		X	X	X	X	13	2
	X	X	X	X	X	14	3
X	X	X	X	X	X	15	4

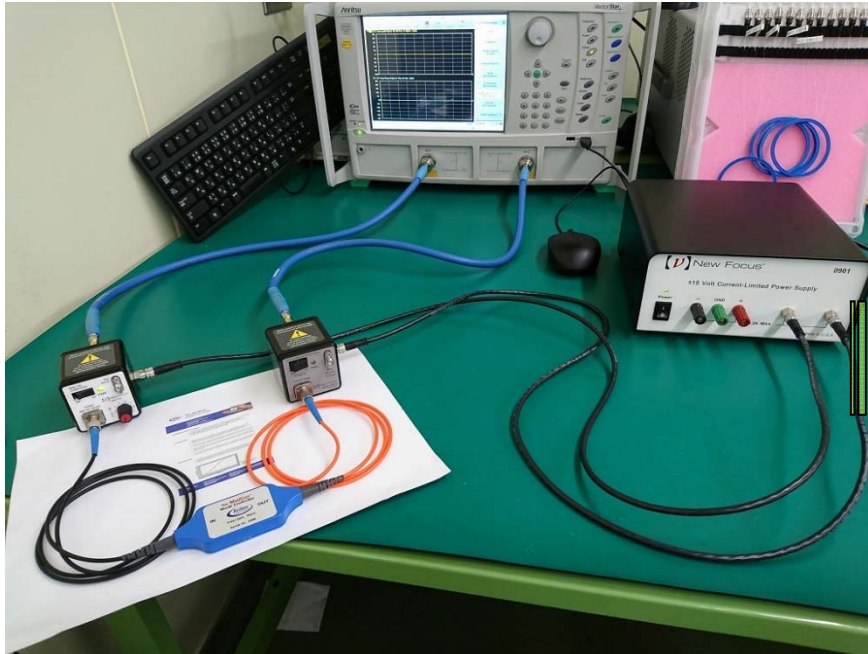
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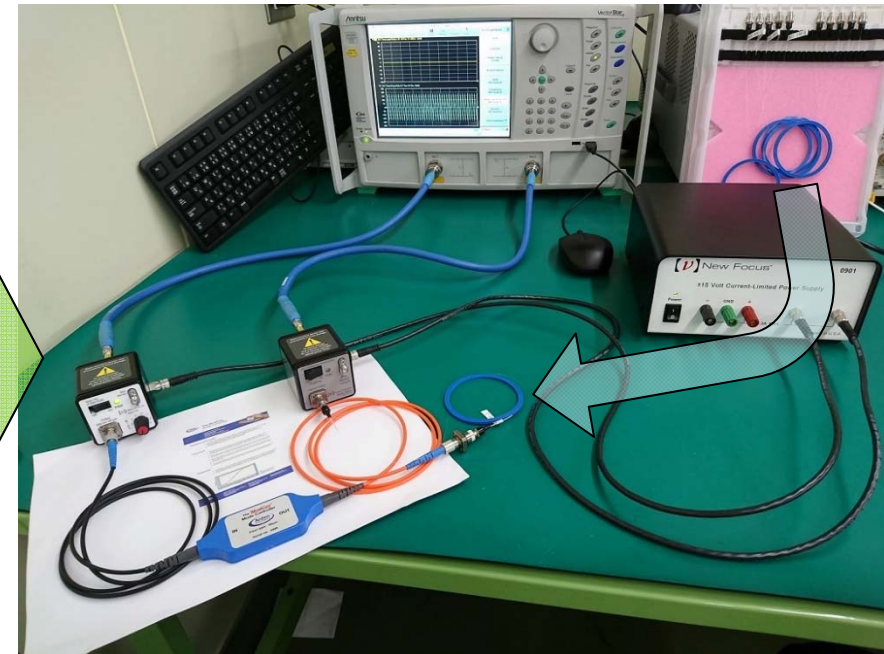
- Bandwidth
 - Minimum Frequency: 10 MHz
 - Maximum Frequency: 7.5 GHz
 - Frequency Step Size: 1 MHz



Measurement Overview

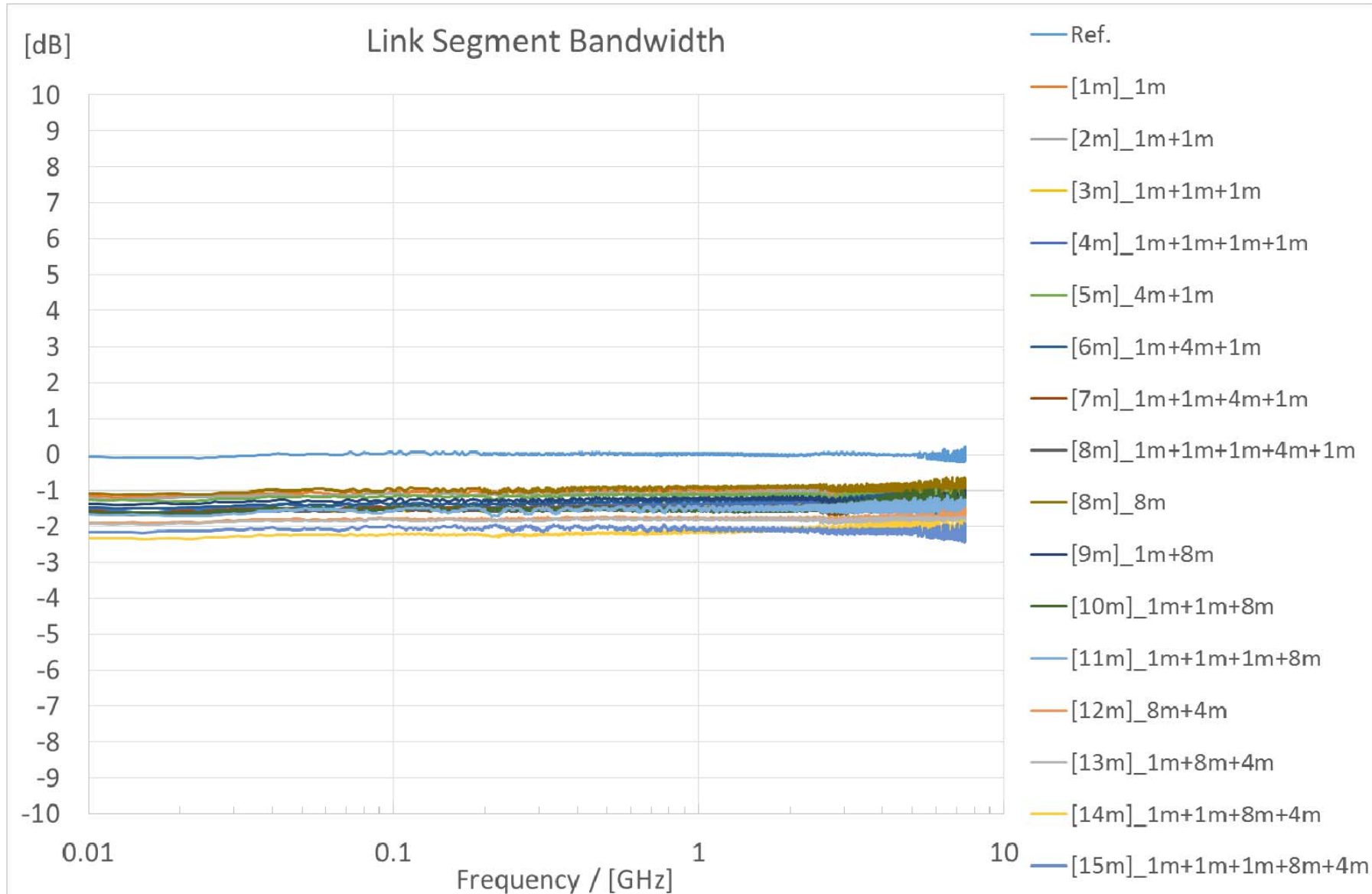


For E/O and O/E “Zero” reference with optical mode scrambler by procedure based on IEC 60793-1-41.

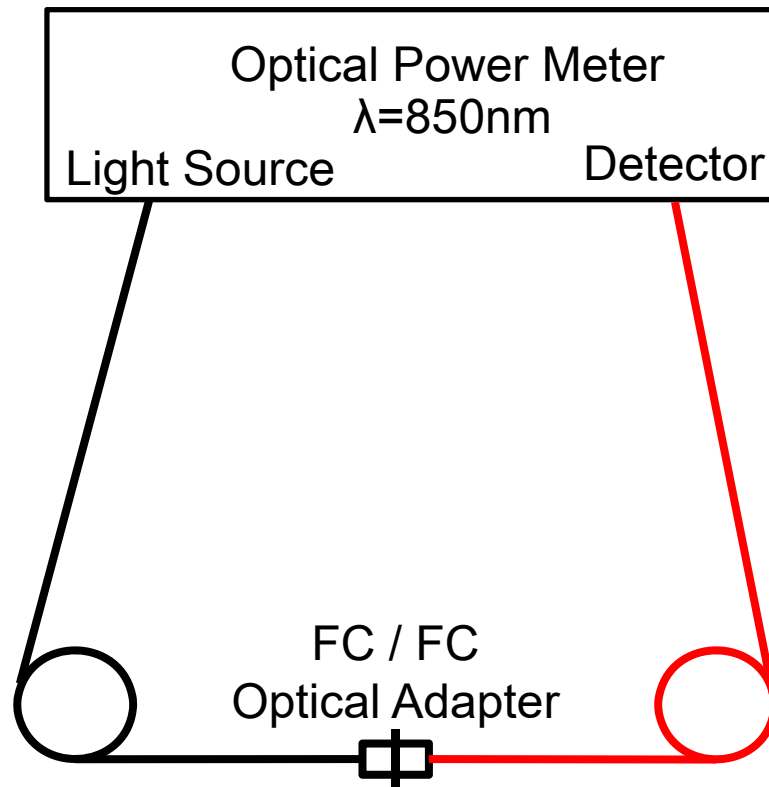


Following and continue to connect the fiber.

All Measured Data of Bandwidth

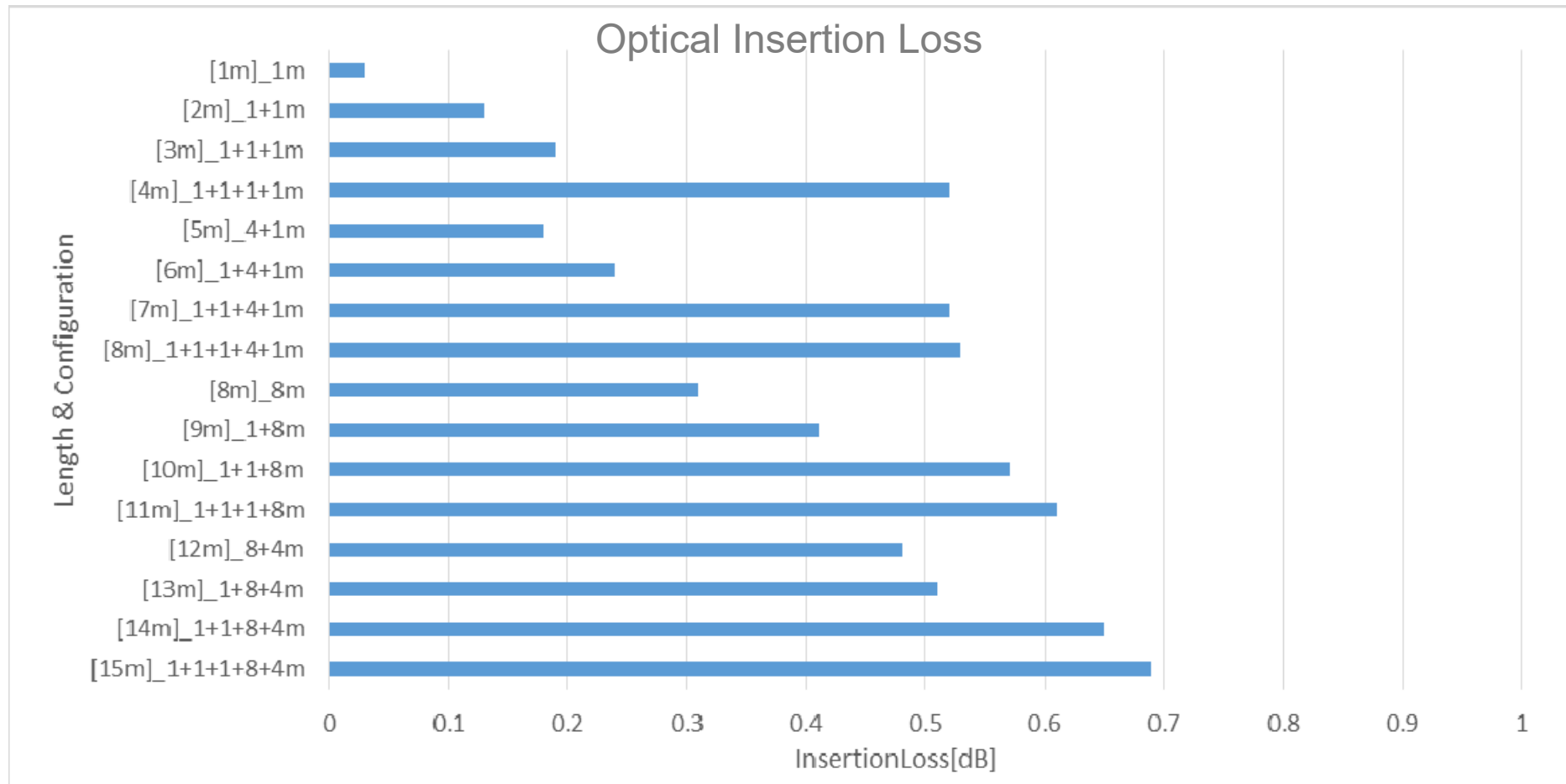


- Optical Insertion Loss



GI 50/125 μm fiber with FC Optical Connector.
1m to 15m with several inline connections.

Optical Insertion Loss by Length & Configuration



- Bandwidth
 - Fiber optics link segment bandwidth around 2dB level down at 15m with 4 inline connections.
- Optical Insertion Loss
 - Fiber optics link segment insertion loss under 0.7dB down at 15m with 4 inline connections.

Thank you!