

Bi-Directional Integrated Optics Components for EFM

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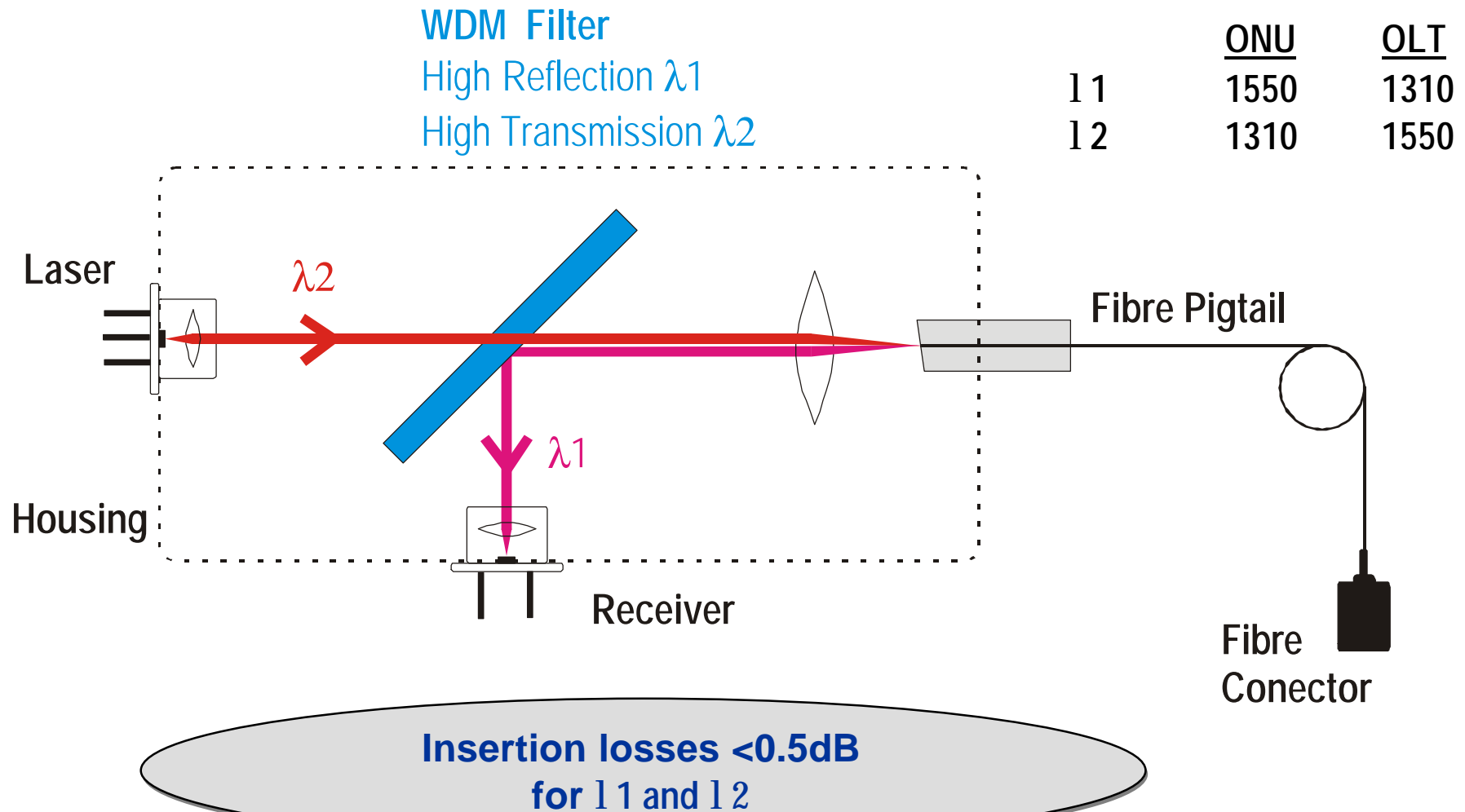
Bi-Directional optics for EFM

Introduction

- Bi-Directional integrated optical components may be used in P2P and P2MP links and are located in the OLT and ONU.
- The following will be addressed in this document:
 - What is a Bi-Directional integrated component
 - Comparison to a 1000Base-LX TRx
 - Cost comparison of P2MP with P2P using one and two fibres

All optical components integrated in single housing

Schematic diagram of a Bi-Directional component



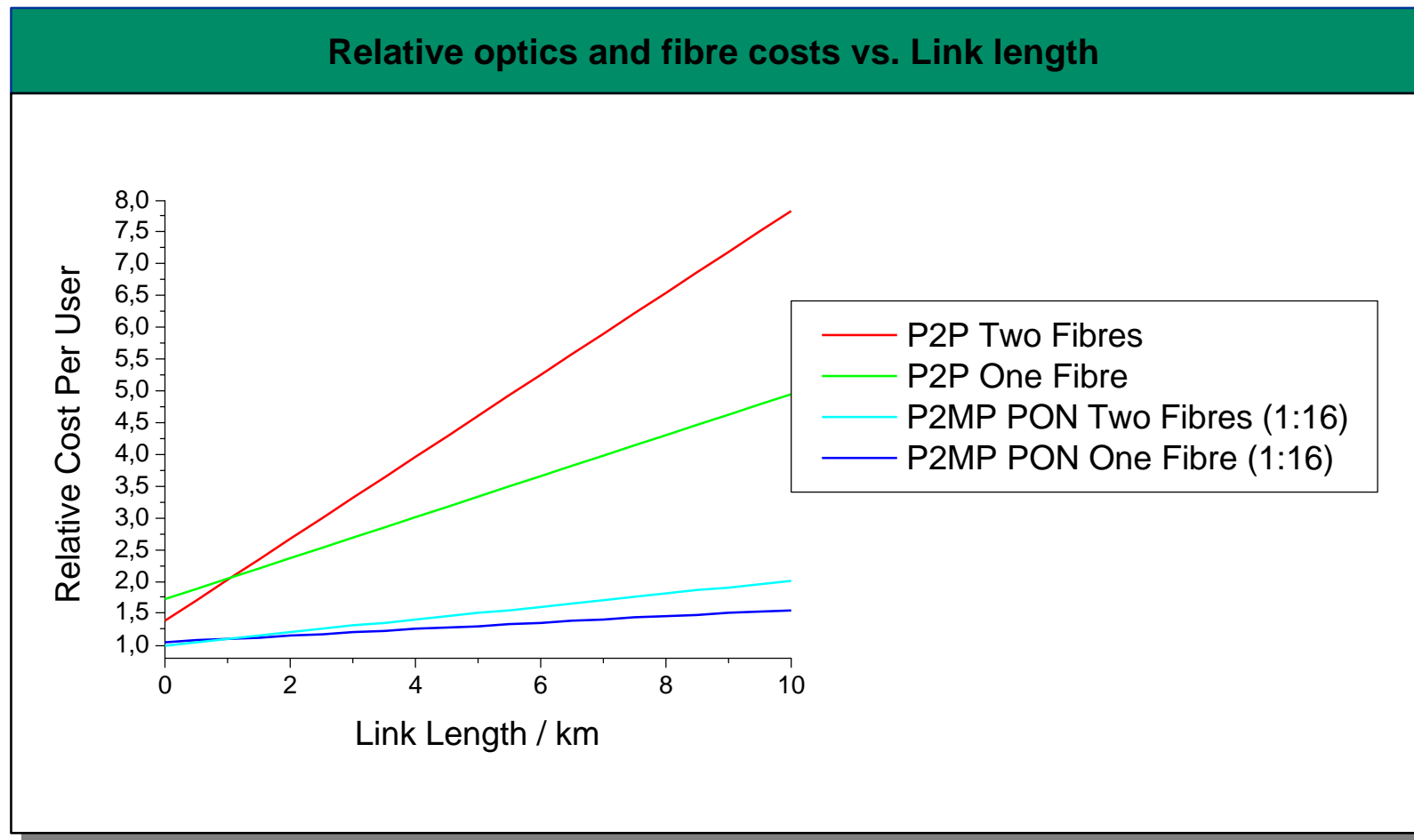
Issues still open with Bi-Directional components

Comparison to a 1000Base-LX TRx

	1000Base-LX TRx	Bi-Directional Integrated Component
Number of Fibres	2	1
Number of Wavelengths	1	2
Wavelength / nm	1310	1310/1550 (t.b.d)
Connector and Receptacle	Duplex SC	Pigtailed Fibre + Connector (t.b.d.)
Form Factor	Defined	t.b.d.

PON optics cheaper over all link lengths

Costs comparison



Bi-Directional optics for EFM

Summary

- Single fibre solutions more cost effective than two fibres for links longer than 1km
- P2MP more cost effective than P2P for all link lengths
- The following points need to be addressed:
 - Connector/receptacle type
 - Form factor
 - Transmission wavelengths regions for up and downstream