980/1550nm Hybrid WDMs

With the Best Performance in the World

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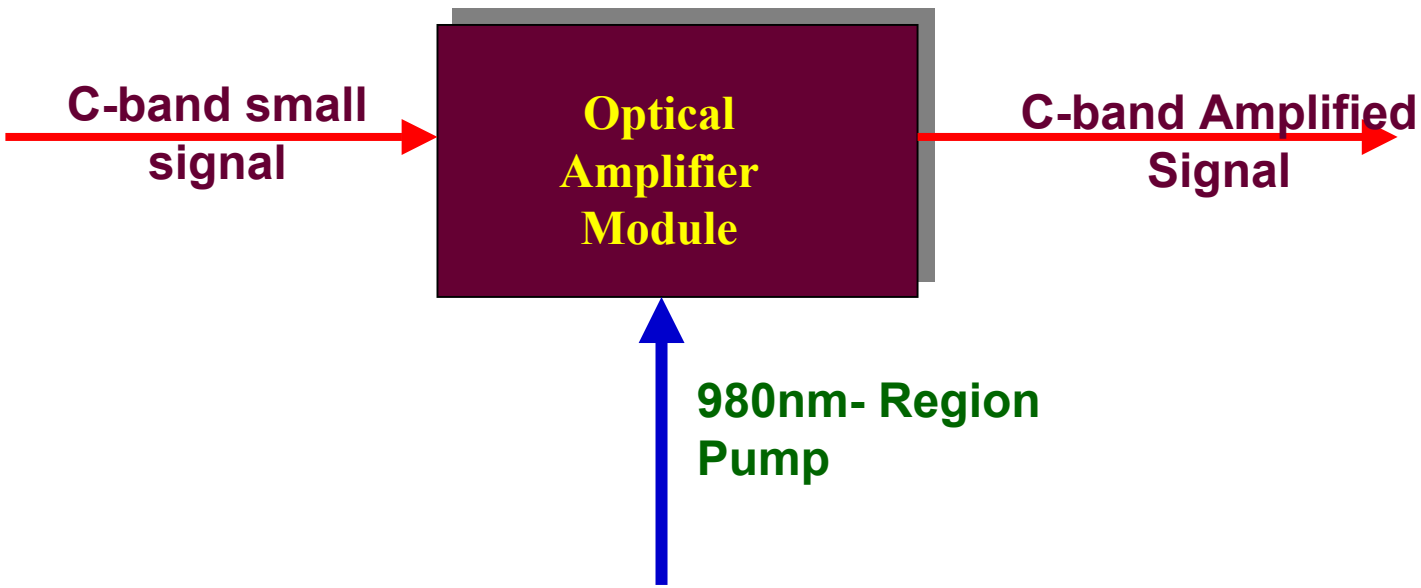
Comcore Technologies' Properties
www.comcore.com

980/1550nm Hybrid WDMs

1 Schematic of The Simplest Optical Amplifier



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2 History of Developing 980/1550nm WDM

Using two different fiber to make the 980/1550nm WDM

- One is SMF28 fiber, the other is CS980 fiber
- Insertion Loss is Higher
- Isolation is Lower
- Fabrication Repeatability is Lower
- Splicing Loss is Lower

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2 History of Developing 980/1550nm WDM (cont.)

Using same fiber to make the 980/1550nm WDM

- The fiber is CS980 fiber, Flexcore 1060, Lucent 980 Coupler Fiber
- Insertion Loss is lower
- Isolation is Higher
- Fabrication Repeatability is Higher
- Splicing Loss is Lower

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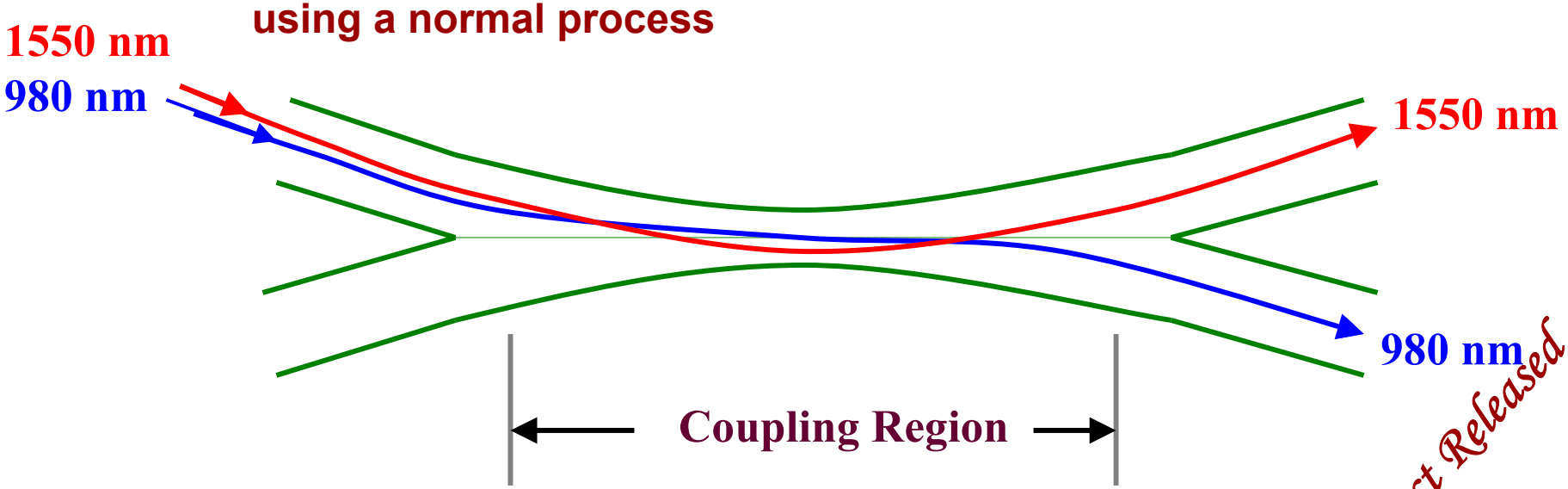
3 Superfusion Process to Provide the New Opportunity

a. Light traces in coupling region for 980/1550nm WDM by using a normal process



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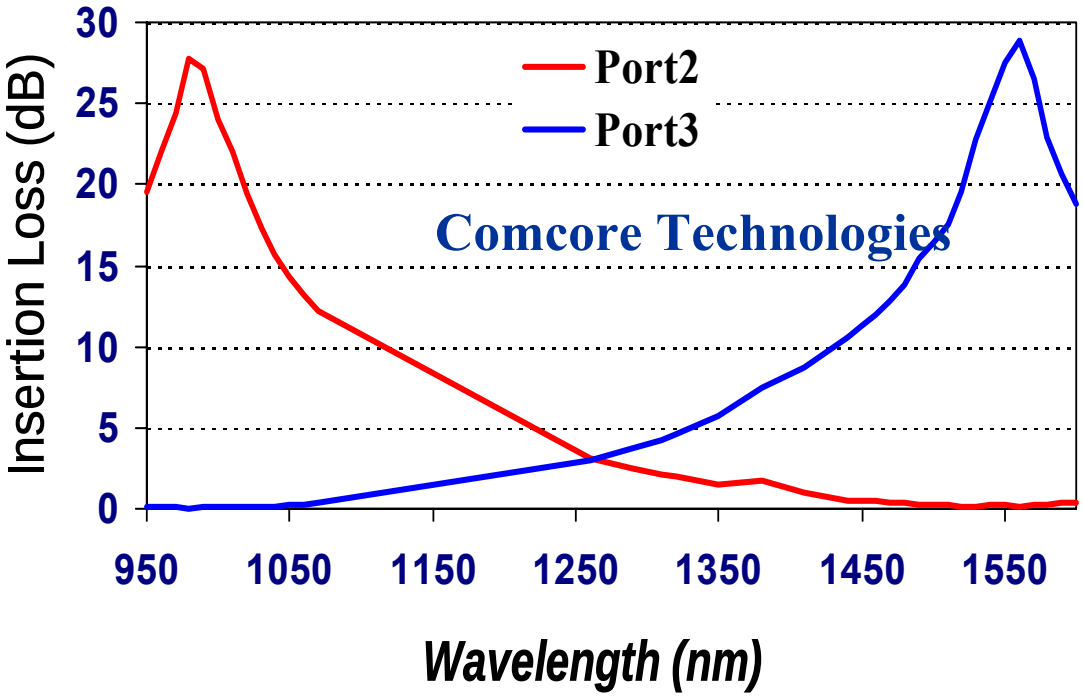
3 Superfusion Process to Provide the New Opportunity

b. Wavelength responses of a normal 980/1550nm WDM



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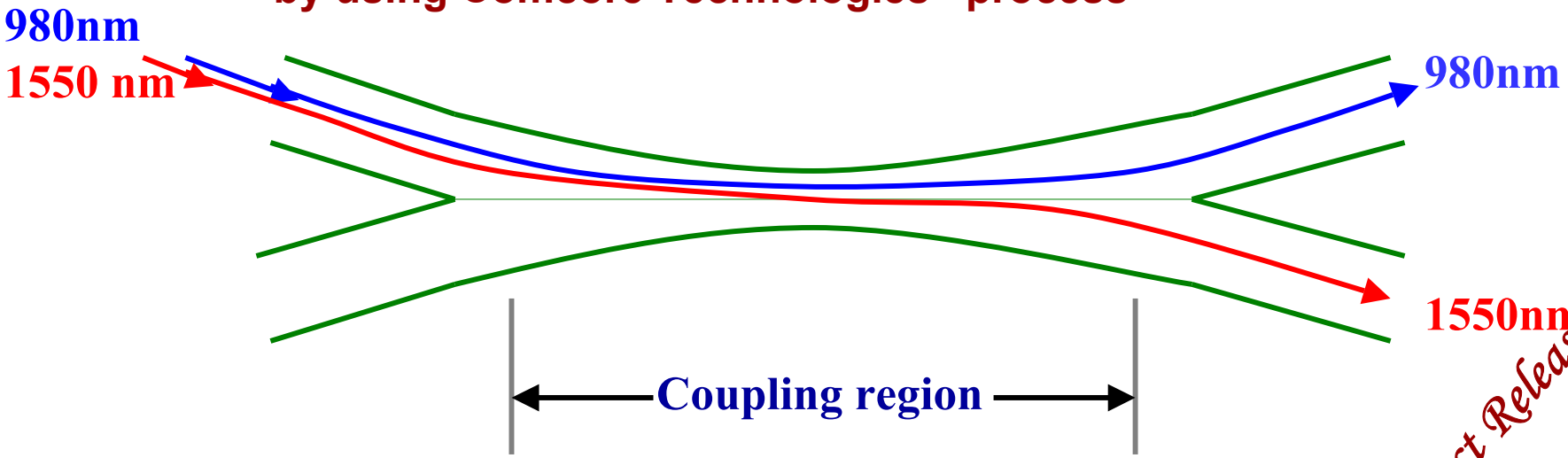
3 Superfusion Process to Provide the New Opportunity

c. Light traces in coupling region for 980/1550nm WDM by using Comcore Technologies' process



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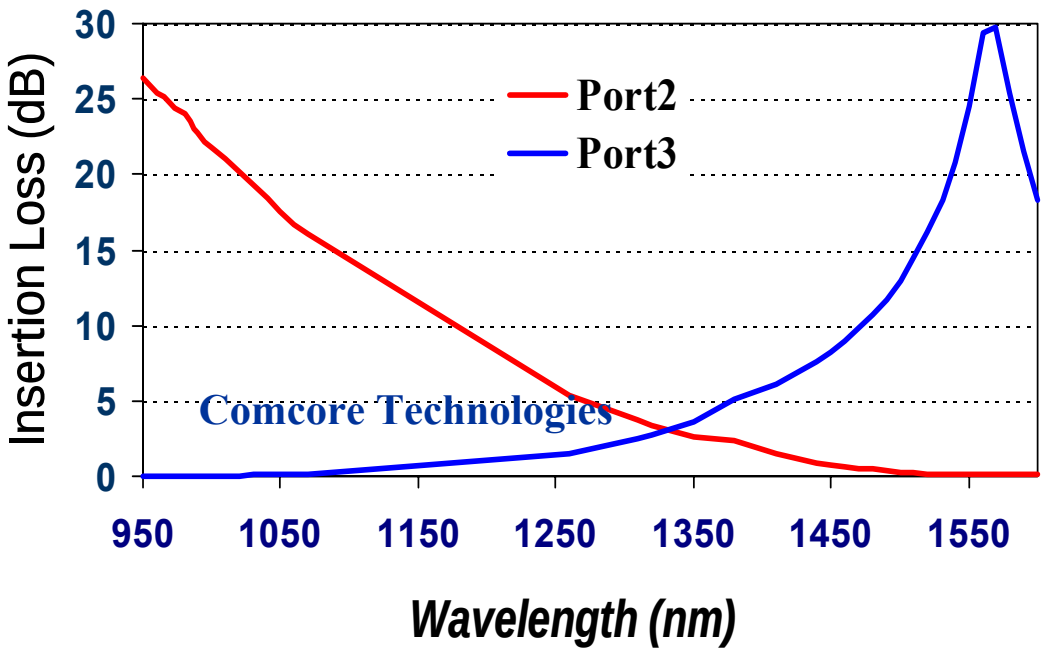
3 Superfusion Process to Provide the New Opportunity

d. Wavelength responses of a Comcore Tech's 980/1550nm WDM



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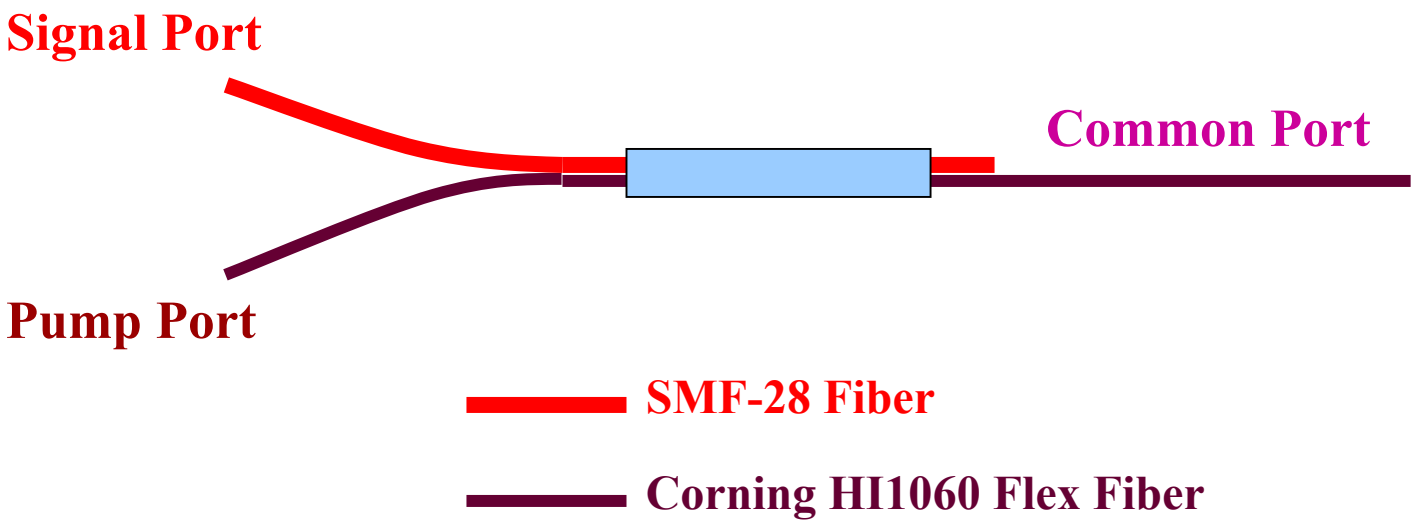
4 Hybrid WDM Structure



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5. Manufacturing Process—Superfusion™ Process

Product Features

- Hi-Reliability
- High Performance
- PDL-Free:<0.01dB for Path Ports
- TDL-Free:<0.0001dB/C for Path Ports
- Telecordia1221 fully Complied

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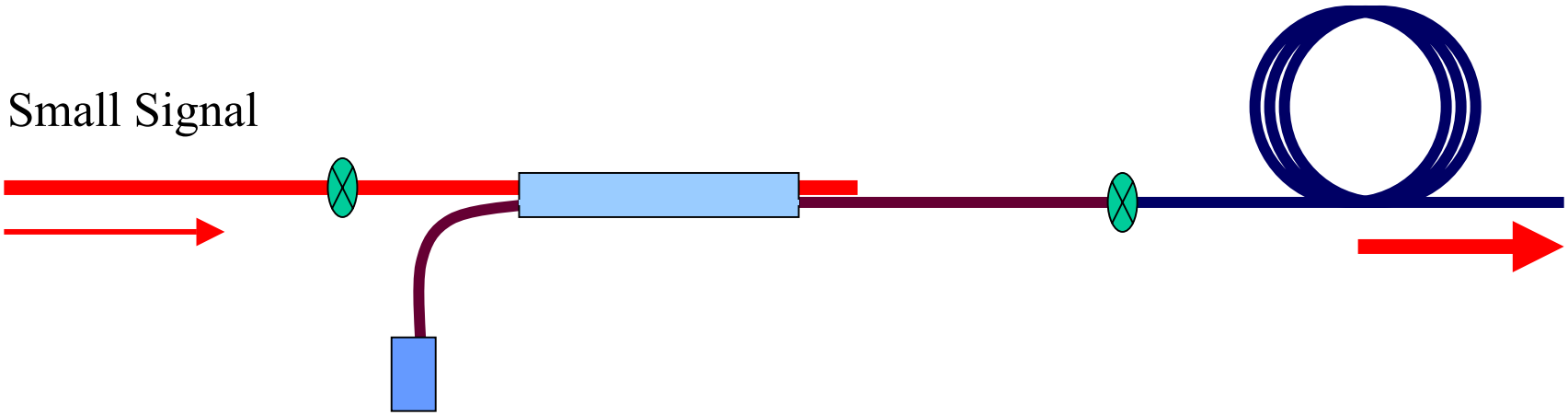
6 Application in EDFAs



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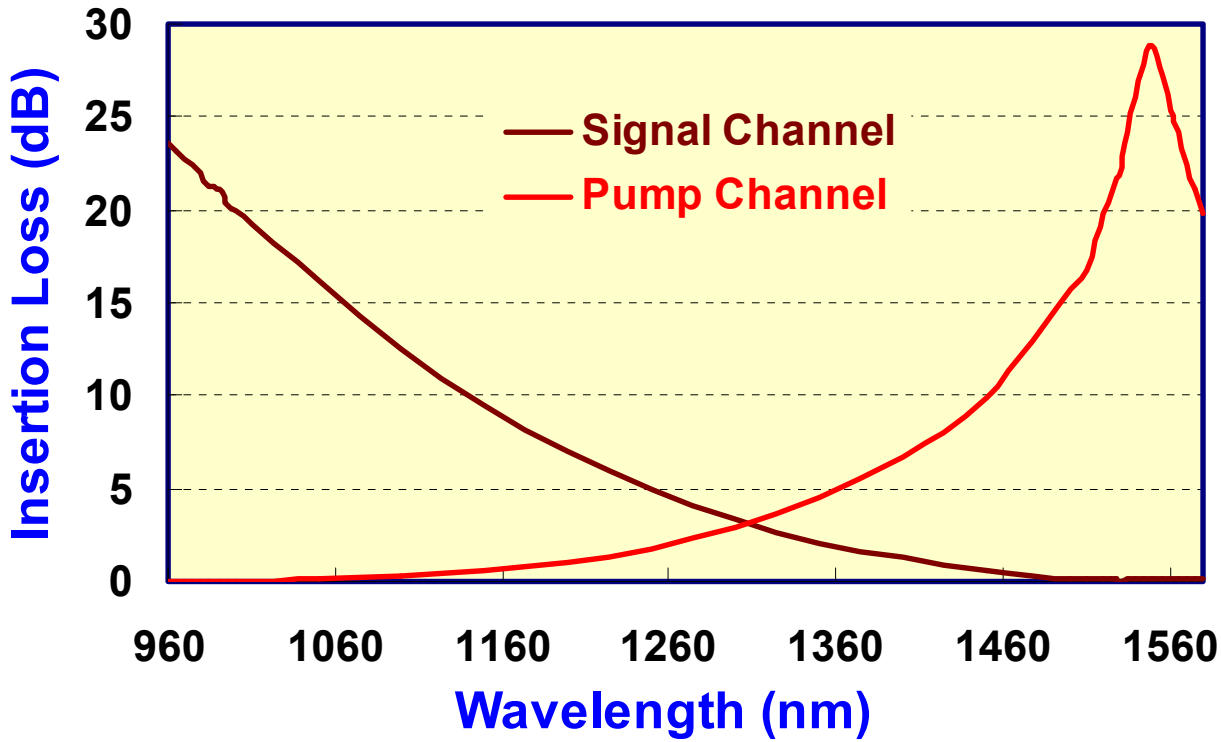
7 Typical Insertion Loss Dependence with Wavelength



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8 Key Optical Performance Comparison

Bandwidth : 965 to 990nm for Pump Channel; 1528 to 1562 for Signal Channel

		Hybrid WDM	Huawei WDM
IL (dB) for Signal to Common Port	Max.	0.15	0.1
PDL (dB) at 1550nm	Max.	0.01	0.01
Isolation (dB) for Signal to Common Port	Min.	20	20
IL (dB) for Pump to Common Port	Max.	0.05	0.05
PDL (dB) at 980nm	Max.	0.01	0.01
Isolation (dB) for Pump to Common Port	Min.	20	20
Return Loss (dB)	Min.	50	50

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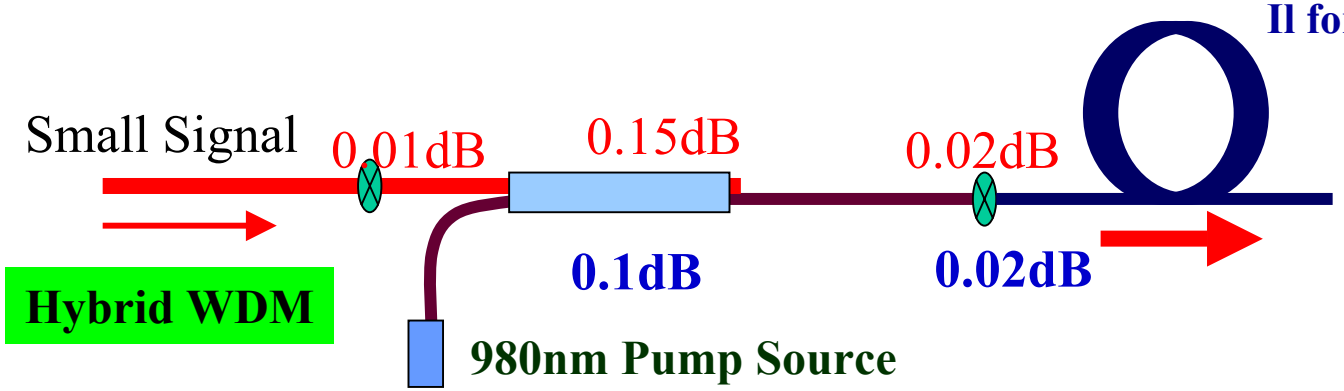
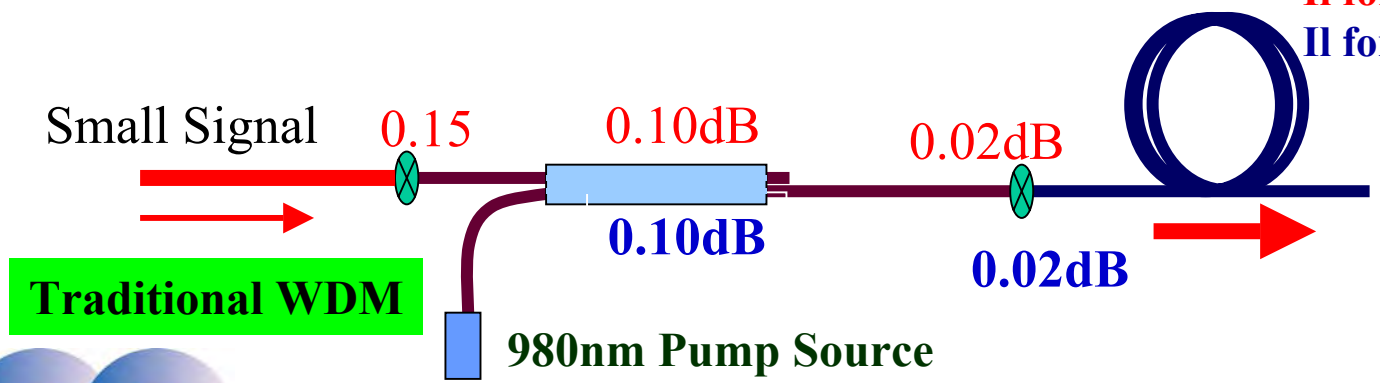
9 IL Comparison Results

Il for Signal Channel: <0.18dB
Il for Pump Channel:<0.12dB



Il for Signal Channel: <0.27dB
Il for Pump Channel:<0.12dB



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10 Device Functions:

- Pump / Signal Combiner (Multiplexer)
- Pump / Signal Splitter(WDM)
- Pump or Signal Stripper (Filter)

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11 Your Benefits From This Migration:

- Reduce Splicing Loss in Signal Path in EDFAs
- Not Required for Special Splicing Machine in Assembling Process
- Save Your Time for Splicing and Assembling Cost
- Improve Overall Performance of EDFAs
- Do not change any assembling process

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