

ERBIUM AMPLIFIER COMPONENTS

4-FUNCTION HYBRID

DiCon's 4-Function Hybrid is the first of a series of new amplifier hybrid components based on a DiCon-proprietary planar passive technology. This new platform enables up to 6 passive functions to be integrated within a single component with just one pair of collimating lenses in the signal path. Hence both insertion loss and package size are drastically reduced compared to conventional cylindrically packaged components.



FEATURES

- 1.0 dB loss including Isolator, Tap, Pump Coupler and Service Channel WDM
- Ultra-compact planar package
- Optional integrated photodiode
- Optional (Raman) high power handling capability

APPLICATIONS

4-Function Hybrids are designed for use in erbium amplifiers where a Pump Coupler, Isolator, Tap Coupler, and Service Channel WDM are placed in series. Integrating the 4 functions within a single package eliminates 4 splices from the amplifier assembly process while reducing the total size of the amplifier module.



Specifications subject to change. Copyright ©2001 DiCon Fiberoptics, Inc. All rights reserved.

ERBIUM AMPLIFIER COMPONENTS

OPTICAL SPECIFICATIONS¹

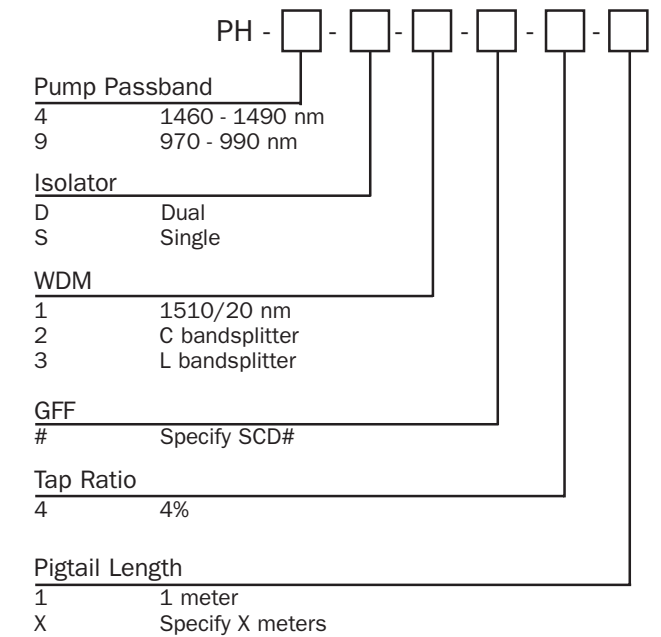
		Single Stage	Dual Stage
Power isolation	23° C	27 dB min.	50 dB min.
	Top	22 dB min.	40 dB min.
PDL	P1 to C	0.1 dB typ., 0.15 dB max.	0.15 dB typ., 0.2 dB max.
Insertion loss	P1 to C	0.9 dB typ., 1.2 dB max.	1.0 dB typ., 1.3 dB max.
	P1 to P2	0.3 dB typ., 0.5 dB max.	
	P1 to P4 ³	13.2 dB min., 14.9 dB max.	
	P3 to C	0.3 dB typ., 0.5 dB max.	
Flatness	P 1 to C	0.15 dB typ., 0.3 dB max.	
	P2 to P1	0.05 dB typ., 0.1 dB max.	
Isolation	P1 to C	50 dB min.	
	P3 to C	15 dB typ., 12 dB min.	
	P1 to P2	15 dB typ., 12 dB min.	
Directivity	P1 to P3	55 dB min.	
	P2 to P3	55 dB min.	
	P2 to C	55 dB min.	
	P3 to P1	60 dB min.	
PMD	P1 to C	< 0.05 ps max.	
Signal passband		1530.0 nm to 1565.0 nm	
Telemetry passband		1500.0 nm to 1520.0 nm	
Back-reflection		- 50 dB max.	
Fiber type		9/125 Corning SMF - 28	
Fiber jacket		250 micron, 200 kpsi bare fiber	
Optical power ²		300 mW max.	
Operating temp.		- 5° C to +65° C	
Storage temp.		- 40° C to +85° C	

1. All specifications referenced without connectors.
2. Up to 2W by special request.
3. Other tap ratios available by request.

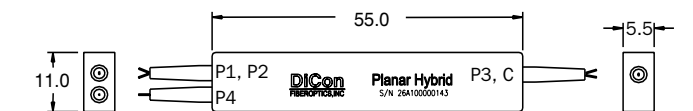
PORT ASSIGNMENTS

P1 to C	Signal in -> signal out
P1 to P2	Pump add
P1 to P4	Signal tap
P3 to C	Telemetry add

ORDERING INFORMATION



HOUSING DIMENSIONS



Units: mm