

Features

- Low and Uniform Insertion Loss
- High Return Loss
- Wide Operating Wavelength, Working Distance & Temperature Range
- Exceptional Reliability and Stability



Applications

- Compact-CWDM Module
- Free-space Optics Integration

Product Description

Primanex CCWDM collimators are specifically designed for compact CWDM or DWDM modules that have long free-space working distances, and show very low and uniform insertion losses among all channels. Such collimators can be custom designed based on customer's select of geometrical configuration, fiber and filter types etc.

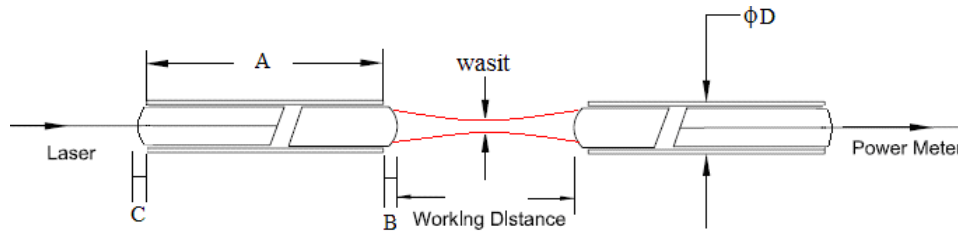
Specifications

Item	Unit	Parameters	Note
Working Wavelength	nm	1310/1550	Customizable
Lens Type	N/A	C-lens	
Fiber Type	N/A	Single mode	Custom select among Corning SMF-28e+, XB, or LBL etc
Insertion Loss	dB	Typ. 0.8 (for 8 or 8+1 module), Typ. 0.6 (for 4 or 4+1 module)	Measured from Common to any port including filters
Beam Size	mm	< 0.70 (Typ.)	3 σ diameter (occupies >99% of total beam power) along full beam propagation path. Can be custom designed.
Pointing Accuracy	deg	≤ 1.0	Guaranteed by design
PDL	dB	≤ 0.03	Guaranteed by design
Return Loss	dB	55	
Maximum Optical Power	mW	500	High-power available upon request
Dimension (ϕ -D x A)	mm	$\phi 1.4 \times 9$	With glass tube; and customizable
Lens Excess Length (B)	mm	0.2~0.7	Customizable
Pigtail Excess Length (C)	mm	0.5~1.0	Customizable
Fiber Length	m	≥ 1.5	Customizable
Operating Temperature	$^{\circ}\text{C}$	-40 ~ +85	
Storage Temperature	$^{\circ}\text{C}$	-40 ~ +85	

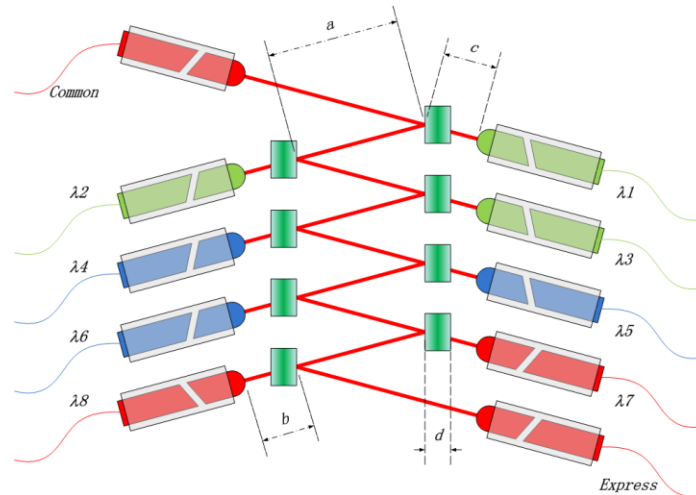
*. All the specifications are based on the devices without connectors, and guaranteed over wavelength, polarization and temperature.

**.. Specifications are subject to change without notice.

Dimensions and Beam Illustration



Implementation in CWDM ("8+1" as example)



Given the design parameters a , b , c and d , Primanex can custom design collimator optics in order to achieve lowest insertion losses, ensure as uniform as possible insertion losses among all channels, and use less types of collimators to simplify supply chain and inventory management. Only three types of collimators (differing in color) are used in this "8+1" module for example.

Ordering Information (Example: PCCC1-21C32120)

PCCC 1	<input type="checkbox"/>	<input type="checkbox"/>	C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0
Central Wavelength			Module Channels		Fiber Type			Fiber Length
1. 1310nm			1. 4 or 4+1		1. G.652.D			1. 1.5 +/- 0.1 m
2. 1550nm			2. 6 or 6+1		2. G.657.A1			2. 1.8 +/- 0.1 m
3. Others			3. 8 or 8+1		3. G.657.A2			3. 3.3 +/- 0.1m
			4. Others		4. Others			4.Others
Dimension						Fiber Tube		
1. Φ 1.4 x 9mm						1. 250 μ m bare		
2. Φ 1.4 x 8mm						2. 900 μ m tube		
3. Others						3. Others		

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