C+L band fiber Raman amplifier (module)

- ## Product Description

The WRA-M series fiber Raman amplifier module is specifically designed for optical signal amplification in long-distance optical transmission systems and dense wavelength division multiplexing (DWDM) optical transmission systems. It provides gain-flat, low-noise amplification for optical signals within the C-band or C+L band. The module's status parameters and configuration information can be monitored in real-time via host software and factory parameters can be preset according to customer requirements. Its compact size makes it easy to integrate, and a desktop package can also be provided based on customer needs.

Product features

Miniaturized module design、Wide operating wavelength range、High gain, flat gain、 Low noise figure, low power consumption

Part Number

MP-RFA-C+L-400-SA-M

Application area

Long-distance optical communication networks、Fiber optic sensing、Fiber laser

Core parameters

Wavelength	Pump Power	Connector
1550nm	400mW	FC/APC

General Parameters

Technical Parameters

Parameter	Unit	Min.	Typ.	Max.	Remarks
Wavelength range	nm	1528	1550	1608	C-band
					C+L band optional: 1528~1565nm
Raman gain	dB	10/12/14			

Gain flatness	dB	<2	
Pump power	mW	100/400mW optional	
Pump light polarization degree DOP	dB	5%(typical), 10%(Max)	
Noise figure	ps	0	
Operating temperature range	dB	-5~+35	
Operating humidity range	dB	0-70%	
Control method		RS232 Serial communication	
Communication interface		D89 female	
Power supply		DC12V/3A	
Pigtail connector type		FC/APC adapter or custom	
Input/output pigtail type		Standard single-mode fiber SMF-28	
Module dimensions	mm	125(W)×150(D)×31.5(H)	Optional
Operating mode		APPC(Automatic pump power control)	

Note 1 This amplifier is only a Raman amplifier pump, and it also needs to cooperate with the optical fiber in the user system to generate Raman gain. It is not a discrete fiber Raman amplifier (Discrete Raman Amplifier); usually when the optical fiber length in the transmission system exceeds 50km, it is recommended to configure a distributed Raman amplifier.

***Note 2 The gain of a distributed Raman amplifier refers to the signal power comparison at the receiving end of the system when the Raman amplifier pump is turned on and off, also known as the switch gain (On-Off Gain). The switch gain is different from the amplifier gain in the usual sense and does not refer to the ratio of the output power to the input power. The actual effect of the distributed Raman amplifier (Raman gain coefficient, gain flatness) is closely related to comprehensive factors such as the transmission fiber type, fiber length, signal wavelength and power. The typical value here is only a reference value.**