

Raman Fiber Amplifier

1. Product Description

Beogold's Raman amplifier module can be used for optical signal amplification in ultra-long-haul and dense wavelength division multiplexing (DWDM) systems to increase transmission distance.

The module uses multi-pump laser multiplexer technology to achieve flat gain, low-noise optical signal amplification across C-band through a combination of different types of pump lasers and fiber type.

For laser safety considerations, the module incorporates automatic shut-down mechanism, which automatically turns off the laser output when incidents, such as fiber breakage, line aging occur to ensure personal safety.

The module has built-in drive circuitry and logic control circuitry to monitor key information such as pump laser temperature and module temperature in real time.

All state parameters and configuration information can be flexibly adjusted and monitored by the upper computer control software. Default module state parameters can be provided according to specific order information and customer requirements. Module, table and rack mounted structures are available for different needs.

2. Features

High output power

High reliability and stability

Excellent thermal adaptability: -20~60°C

Module, desktop and rack mounted structures available

Improved SNR



3. Applications

Distributed Raman amplification

Distributed fiber optic sensing

Repeaterless long haul fiber optic communication

40G, 100G high-speed optical fiber communication systems

4. Optical Specifications

Parameter	Unit	Minimum	Typical	Maximum
Pump Wavelength Range	nm	1425	-	1495
Pump Laser Output Power	mW	300	500	700
Raman Gain	dB	6	12	17
Polarization Mode Dispersion	ps	-	-	0.5
Polarization Dependent Gain	dB	-	-	0.5
Operating Temperature Range	°C	-20	-	+60
Storage Temperature Range	°C	-40	-	+70
Relative Humidity	%	5	-	90



5. Mechanical structure

Structure type	Parameter	Specification	Unit	Remarks
Module	Dimensions	150x125x30.5	mm	Can be customized
	Power Interface	DC+5V/GND		Typical
	Pigtail Fiber	SM		Can be customized
	Communication Interface	RS232 serial port		Can be customized
Rack Mounted	Dimensions	1U		
	Power Interface	N-L-C AC220V		
	Optical Interface	FC/APC		Can be customized
	Communication Interface	Console or RJ45		
	Cooling Fan	3	PCS	

6. Electrical Specifications

Structure Type	Parameter	Specification	Unit	Remarks
Module	Power Supply	DC +5V/GND		
	Power Consumption	<30	W	At room temperature
Rack Mounted	Power Supply	AC 220V or DC48V		
	Power Consumption	<50	W	At room temperature

7. Communication Type

Structure type	Parameter	Specification
Module	Communication Interface	26-Pin serial port
	Communication Protocol	RS232
	Communication User Interface	Read and set output power
Rack Mounted	Communication Interface	RJ45 or RS232
	Communication Protocol	SNMP or RS232
	Communication User Interface	GUI

8. Ordering Information

