

FWMA-1550-Series, Raman fiber amplifier



1. Product Description

Erbium-doped fiber amplifier (EDFA), due to spontaneous emission (ASE) noise, the accumulation of spontaneous emission noise through numerous cascades will greatly reduce the SNR at the receiving end, thus limits the system capacity and non-relay distance. The new-generation Raman fiber amplifier FWMA-1550 series uses the optical gain generated by stimulated Raman scattering (SRS) in the optical fiber to amplify the signal light.

The FWMA-1550 series Raman fiber amplifier has a wide gain spectrum, and the gain bandwidth can be further expanded by using multi-wavelength optical pump.

After years of research and network test, our company has developed and produced the FWMA-1550 series Raman fiber amplifier, and introduced it into the optical fiber long-haul CATV transmission, especially in combination with EDFA, the improvement of the link index is particularly obvious, thus get a flatter gain spectrum and a higher optical signal-to-noise ratio (OSNR).

2. Product feature

- ◆ High quality: Due to Raman fiber amplifier is of distributed structure, the input optical power of the fiber can be greatly reduced, so that SBS has been expanded. At the same time, the nonlinear distortion index has improved significantly.
- ◆ Reliability: Adopt 19" 1U standard chassis, built-in high performance modular dual switching power supply, can work in AC165 ~ 265V city network voltage. DC 48V power supply option is available as well. Chassis cooling with automatic temperature control.
- ◆ Intuitive: The built-in microprocessor monitors the working status of the pump laser, and the working parameters are displayed on LCD.
- ◆ Network management Interface: Web transponder is line with the national standard and compatible with the SCTE HMS standard, achieving WEB monitoring function. The red warning symbol is displayed on the web page, which is convenient for troubleshooting.
- ◆ Input and output optical power gain: 6 ~ 16dB, suitable for optical fiber long haul transmission over 100KM, where it is not convenient to build a relay station in the middle. Raman EDFA will compensate the gain forward when optical power loss is large and the receiving optical power index is poor.
- ◆ Low noise figure and flat gain.
- ◆ Adopt the world's renowned FiTel Raman pump laser.

3. Technical Parameters

Parameter	Unit	Min	Typ	Max	Notes
Wavelength	nm	1528		1563	
Pump Optical Output Power	mW	500			
Raman-off Gain	dBm	5		16	
Gain Flatness	dB			1.0	
NF	dB	0		2	
Polarization Mode Dispersion	ps			0.2	
Polarization Dependent Gain	dB			0.5	
Power Supply	VAC	100		220	48VDC Optional
Consumption	W			60	
Working temperature	°C	0		60	
Working humidity	%	5		95	
Storage temperature	°C	-40		+85	
Case Size	"	19"x15"x1.83"			1U
Network Management Connector		RJ45			Web Browsing

4. Product model series

FWMA-1550 -6, Raman-off gain 6dB
 FWMA-1550 -8, Raman-off gain 8dB
 FWMA-1550-10, Raman-off gain 10dB
 FWMA-1550-12, Raman-off gain 12dB
 FWMA-1550-14, Raman-off gain 14dB
 FWMA-1550-16, Raman-off gain 16dB

