

## SPFA Series

# SHORT PULSE OPTICAL FIBER AMPLIFIERS

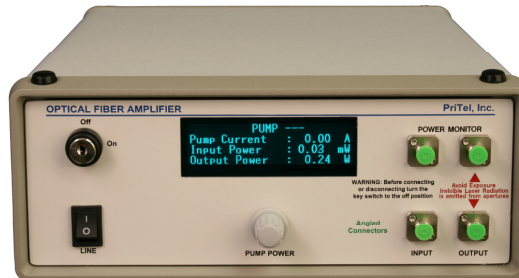
PriTel manufactures EDFAs with excellent sub-picosecond pulse performance with very low dispersion and low PMD without the use of dispersion-compensating fiber that cause high nonlinearities. As seen on the next page, these amplifiers do not significantly change the input pulsewidth.

Certified shortpulse performance to **600 fs** is available in models from 27 dBm to 33 dBm saturated output. Contact PriTel for information about certified performance to **600 fs** for models from 15 dBm to 24 dBm saturated output.

In the SPFA Series, input power and output power are monitored internally and are displayed on the front information panel.



*SPFA-xx model without  
power monitor option*



*SPFA-xx model with  
power monitor option*

## Specifications

Model	<u>SPFA-27</u>	<u>SPFA-30</u>	<u>SPFA-33</u>
Saturated output power	27 dBm	30 dBm	33 dBm
Shortest input pulsewidth without output pulse broadening	<b>600 fs</b> (specify SPFA-XX-06 when ordering)		
Dispersion	<< 70 fs/nm of spectral bandwidth for SPFA-XX-06		
Input power range	-15 to +20 dBm	-3 to +20 dBm	0.0 to +20 dBm
Signal gain	>35dB @ -10dBm	>30 dB @ 0 dBm	>33 dB @ 0 dBm
Optical noise figure	<8 dB	<10 dB	<12 dB
Polarization sensitivity	<0.2 dB	<0.2 dB	<0.2 dB
PMD	< 0.2 ps	< 0.2 ps	< 0.2 ps
Wavelength range	1535-1565 nm	1535-1565 nm	1535-1565 nm
Spectral gain flatness with single ch. Input	0.5 dB typical	0.8 dB typical	1.0 dB typical
Dimensions	10 cm x 26 cm x 36 cm	10 cm x 26 cm x 36 cm	10 cm x 26 cm x 36 cm
<b>Optical</b>			
Gain medium	Er/Yb-doped silica fiber		
Pump source	Multimode diode laser (980 nm)		
Connectors	FC/APC (other connectors available upon request)		
<b>Environmental</b>			
Operating temperature	+15 to 30 °C		
Storage temperature	-20 to 50 °C		
<b>Electrical/ Mechanical</b>			
Operating Voltage	85-264 VAC at 47-63 Hz		
Power consumption	<125 W		

**PriTel, Inc.**

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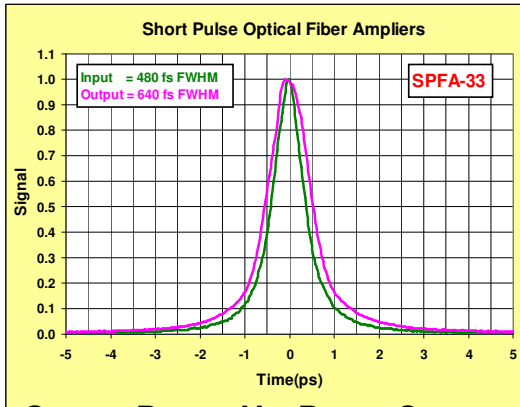
Ph: 630-983-2200, Fx: 630-983-2260 (USA)

E-mail: PriTel@PriTel.com, Internet: www.PriTel.com

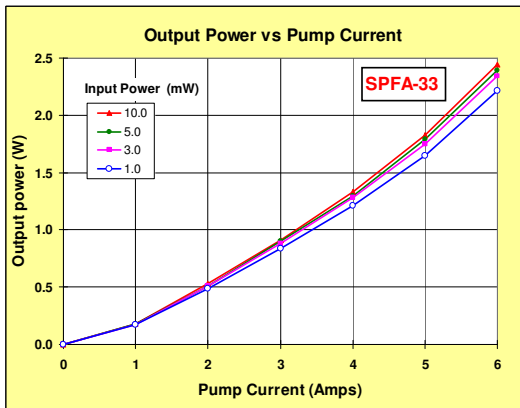
# Typical Performance of PriTel's Short Pulse Optical Fiber Amplifiers

## Amplification of Femtosecond Pulses in Model SPFA-33-600

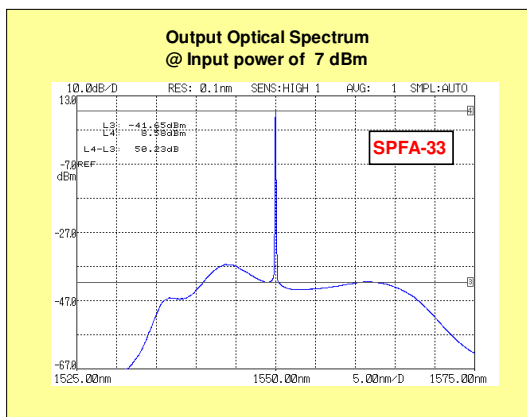
Autocorrelation Traces  
(10 GHz, 1550 nm)



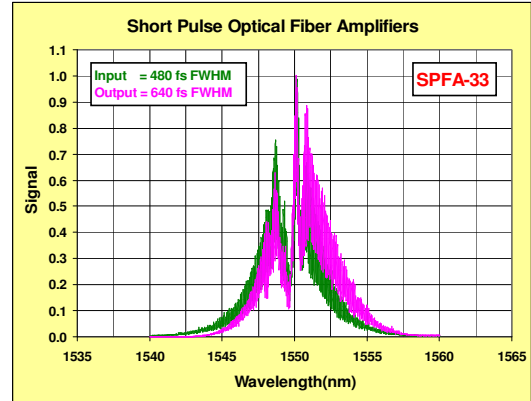
Output Power Vs. Pump Current



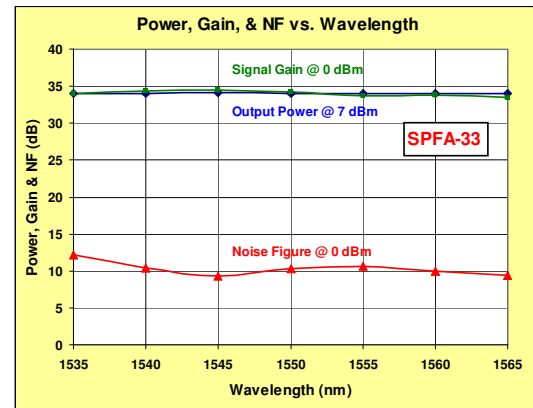
Output Optical Spectrum



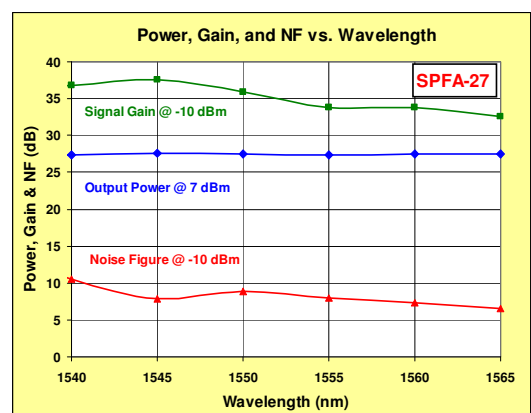
Optical Spectra  
(10 GHz, 1550 nm)



Power, Gain, and Noise Figure



Power, Gain, and Noise Figure



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