

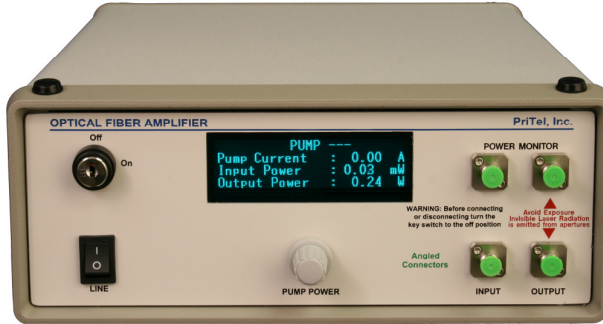
# PMFA Series

## POLARIZATION MAINTAINING OPTICAL FIBER AMPLIFIERS

PriTel's PMFA Series of Polarization Maintaining Optical Fiber Amplifiers are based on well-established diode pumped pure Er and Erbium-Ytterbium co-doped optical fiber technology.

PriTel also manufactures amplifiers with excellent short-pulse performance. Certified shortpulse performance is available for PriTel SP-PMFA High Power Optical Fiber Amplifiers for pulsewidths down to 300 fs.

*PMFA-xx model without power monitor option*



*PMFA-xx model with power monitor option*

### Specifications

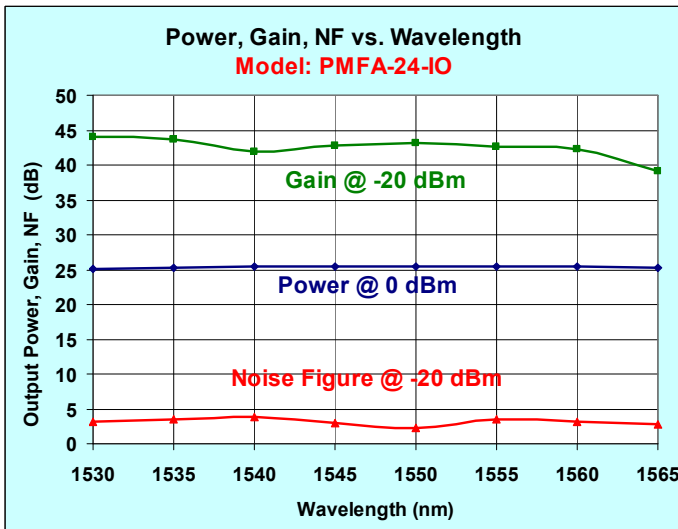
|  | <b>PMFA-15</b>   | <b>PMFA-24</b>                             | <b>PMFA-27</b>  | <b>PMFA-30</b>        |
|--|--|--|---|-----------------------|
| Saturated output power                         | 15 dBm   | 24 dBm                                     | 27 dBm  | 30 dBm                |
| Signal gain                                    | 30 dB<br>@ -20 dBm   | >40 dB<br>@ -20 dBm<br>>45 dB<br>@ -30 dBm | 27 dB<br>@ 0 dBm  | 30 dB<br>@ 0 dBm      |
| Optical noise figure                           | < 3 dB<br>@ -20 dBm  | < 4.5 dB<br>@ -20 dBm                      | < 7 dB<br>@ 0 dBm   | < 8 dB<br>@ 0 dBm     |
| Input power range                              | -30 to +10 dBm   | -20 to +20 dBm                             | -10 to +20 dBm  | -3 to +20 dBm         |
| Wavelength range                               | 1528-1565 nm   | 1528-1565 nm                               | 1535-1565 nm  | 1535-1565 nm          |
| Spectral gain flatness (single channel input)  | 0.5 dB typical   | 0.5 dB typical                             | 1.0 dB typical  | 1.0 dB typical        |
| Minimum distortion-free pulse width (standard) | 1.0 ps   | 1.0 ps                                     | 1.5 ps  | 1.5 ps                |
| ACC  | Standard   | Standard                                   | Standard  | Standard              |
| APC, ALC                                       | Optional   | Optional                                   | Optional  | Optional              |
| Dimensions                                     | 10 cm x 26 cm x 28 cm  | 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 doped core pumped silica fibers for models PMFA-15 to PMFA-24 |  | Er/Yb, double-clad silica fiber for models PMFA-27 to PMFA-30 |                       |
| Pump source                                    | Diode laser (910-980 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                              | < 50 W   |  |   |                       |



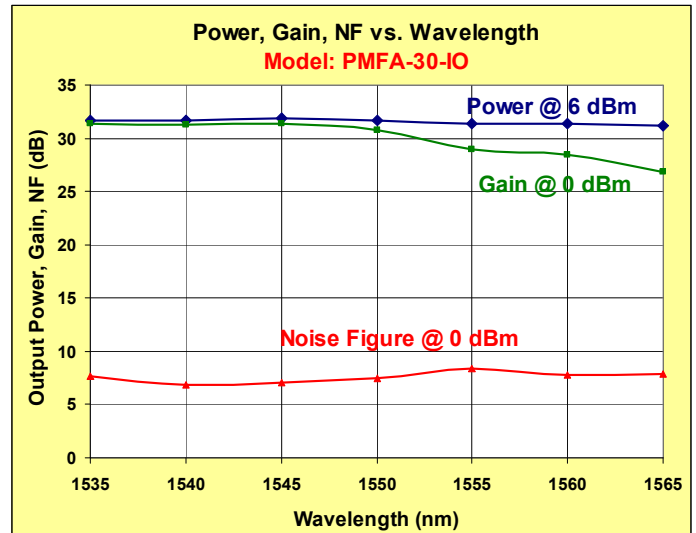
**PriTel, Inc.**  
P.O. Box 4025,  
Naperville, IL 60567-4025, USA  
Ph: +1-630-983-2200, Fx: +1-630-983-2260  
E-mail: PriTel@PriTel.com  
Internet: www.PriTel.com

# Typical Performance of Polarization Maintaining Optical Fiber Amplifiers

## Er doped, Core Pumped Fibers

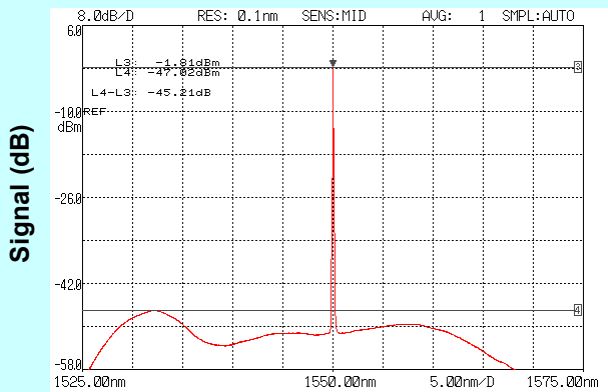


## Er/Yb, Cladding Pumped Fibers



### Output Optical Spectrum @ -10 dBm Input

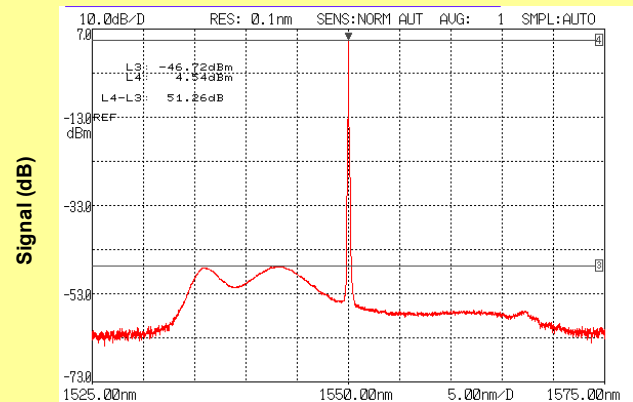
Model: PMFA-24-IO



Wavelength (nm)

### Output Optical Spectrum @ 6 dBm Input

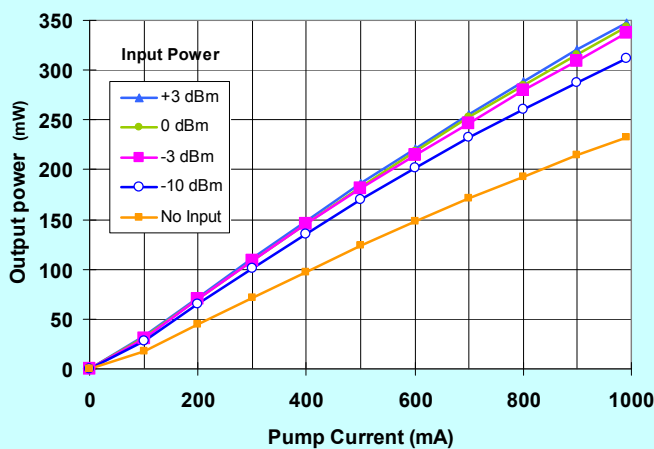
Model: PMFA-30-IO



Wavelength (nm)

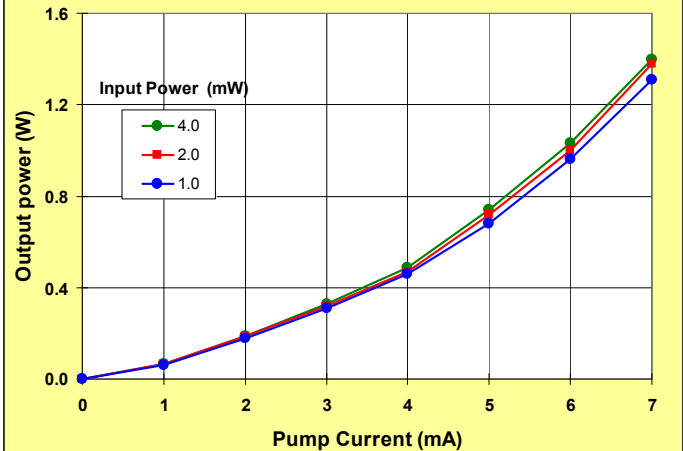
### Pump Current vs Output Power

Model: PMFA-24-IO



### Pump Current vs Output Power

Model: PMFA-30-IO



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