

1900-2040 nm Thulium Fiber Lasers

from the World Leader in Fiber Lasers



TLR SERIES

TLM SERIES

TLPN SERIES



www.ipgphotonics.com

The Power to Transform®

Thulium Fiber Lasers

1900-2040 nm Pulsed & CW Fiber Lasers



Efficiency

- Over 30% Wall-plug Efficiency
- Industry Leading Diode Lifetime



Advantages

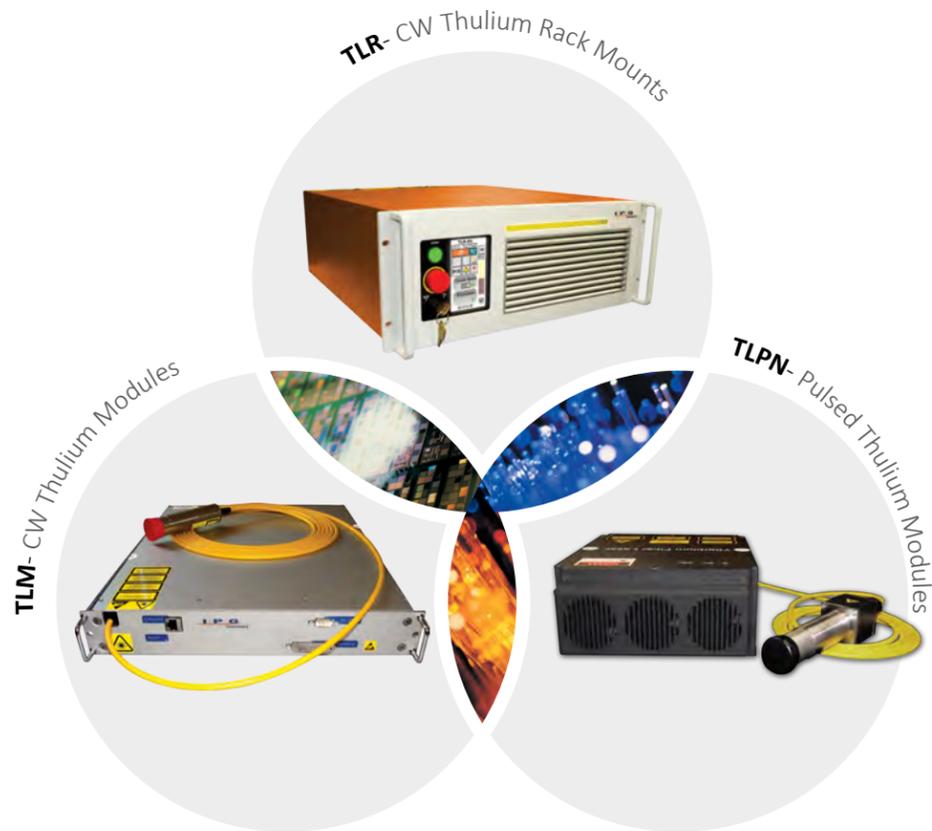
- Higher output powers
- Plug & Play Design
- Compact, Rugged & Easy to Install



Standard Features

IPG Photonics offers CW and pulsed thulium fiber lasers with powers up to 200 W. **TLM** and **TLR** continuous wave thulium fiber lasers have been developed specifically to meet the growing demands of the industrial, medical and R&D markets for high power, compact, efficient, wavelength-selectable, single-mode CW sources of the spectral range of 1900 to 2040 nm. First manufactured in 1999, these lasers have been field tested and deployed in a variety of R&D and medical applications. Now with higher powers and new options, TLM and TLR Series CW Thulium Fiber Lasers provide the ideal solution for both laboratory, medical and industrial market segments.

The **TLPN Series** Pulsed Thulium Fiber Lasers provide nanosecond pulses and average output powers up to 20 W. Based on IPG's pioneering efficient and reliable fiber laser technology, TLPN lasers feature a super-compact lightweight optical head, connected with a fiber cable to a small air-cooled control module. The all fiber construction allows for full range of output power without changes in power stability and beam mode parameters. The TLPN pulsed lasers address variety of materials processing, scientific and medical applications.



Applications

1900-2040 nm Pulsed & CW Fiber Lasers



Common Specifications

Central Wavelength Range, nm	1900-2040
Power Tunability, %	10-100
Beam Quality, M ²	TEM ₀₀ , < 1.1

CW Specifications

TLM Average Power, W	10	30	50	100	120
TLR Average Power, W	10	30	50	100	200
Modulation Frequency, kHz	up to 1				
Power Stability, %	+/- 1				
Optical Noise, % RMS	1				

Pulsed Specifications

Average Power, W	5	10	20
Pulse Energy, mJ	up to 1		
Pulse Duration, ns	1-100		
Repetition Rate, kHz	20-50		



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