



Thulium Doped Fiber Laser

PRODUCT SPECIFICATIONS

1.908 μm Thulium doped fiber laser

1.0 Device Characteristics

The ITF Thulium fiber laser is designed as a stand alone unit for customer evaluation. This laser operates at 1.908um where thulium doped fiber exhibits significant reabsorption loss. Careful design enables a very high wall plug efficiency (>20%) compared to classic bulk or fiber based solutions (<5%). Many applications such as pumping Ho:YAG crystal require a short wavelength source in the 2um region. In this evaluation unit, basic drive electronics are included. Other wavelengths and configurations are available upon request.

2.0 Optical Performance Specification

Parameters	Min.	Typ.	Max.	Units	Tested	Notes
2.1 Laser wavelength	1907	1908	1909	nm	*	
2.2 Laser linewidth			1	nm	*	
2.3 Output power	15.0			W	*	
2.4 Output beam quality	1.3			M ²	*	
2.5 Beam Profile		TEM ₀₀			*	
2.6 Maximum direct modulation frequency		5		KHz	*	
2.7 Electrical to optical efficiency		20		%	*	

3.0 Mechanical and Environmental Specifications

Parameters	Value	Notes
3.1 Fiber laser interface	TTL or manual	1
3.2 Polarization	Random	
3.3 Fiber laser operation	CW or modulated pump	
3.4 Operating temperature	15 to 45 °C	
3.5 Storage temperature	-40 to 70 °C	
3.6 Humidity	0 to 85 %	
3.7 Ramp up time	TBD	
3.8 Cooling	Forced air	
3.9 Weight	TBD (Optical engine with pump < 1kg)	2
3.10 Dimensions	TBD (Optical engine with pump < 1l)	2
3.11 Output fiber termination	ITF end cap	3
3.12 Delivery fiber length	2m armored cable	
3.13 Operating voltage	120-240V AC	

Specification subject to change without notice.
Made in Canada.





Thulium Doped Fiber Laser

PRODUCT SPECIFICATIONS

2 μm Thulium doped fiber laser

1.0 Device Characteristics

The ITF Thulium fiber laser is designed as a stand alone unit for customer evaluation. Careful design enables a very high wall plug efficiency (>30%) compared to classic bulk or fiber based solutions. In this evaluation unit, basic drive electronics are included. Other wavelengths and configurations are available upon request.

2.0 Optical Performance Specification

Parameters	Min.	Typ.	Max.	Units	Tested	Notes
2.1 Laser wavelength	1999	2000	2001	nm	*	
2.2 Laser linewidth			1	nm	*	
2.3 Output power		20		W	*	
2.4 Output beam quality	1.3			M ²	*	
2.5 Beam Profile		TEM ₀₀			*	
2.6 Maximum direct modulation frequency		5		KHz	*	
2.7 Electrical to optical efficiency		30		%	*	

3.0 Mechanical and Environmental Specifications

Parameters	Value	Notes
3.1 Fiber laser interface	TTL or manual	
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3.9 Weight	TBD (Optical engine with pump < 1kg)	
3.10 Dimensions	TBD (Optical engine with pump < 1l)	
3.11 Output fiber termination	ITF end cap	
3.12 Delivery fiber length	2m armored cable	
3.13 Operating voltage	120-240V AC	

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