

2.0 μ m High Power QCW Thulium Fiber Laser



Product Description:

Connet 2.0 μ m series high power QCW thulium fiber laser adopts MOPA structure design. By optimizing the pump power and gain fiber length of the amplifier, and properly coiling the fiber, the output power is improved while obtaining the best beam quality without distorting the pulse. Under the condition of millisecond (ms) long pulse operation, the nearly ideal square wave pulse output is guaranteed. MOPA structure design achieved narrow spectral width output (<0.7 nm) and near diffraction limit output beam quality.

Connet 2.0 μ m high power QCW thulium fiber laser can be used in industrial processing, scientific research, biomedicine and other fields, including laser pumping, transparent polymer welding and various medical surgical applications, such as resection, ablation, vaporization, coagulation and hemostasis in urology, urinary lithotripsy and general surgery.

The typical operating wavelength of the Connet 2.0 μ m high power QCW Thulium fiber laser is 1940nm. Products with any wavelength in the range of 1900~2050 nm can be customized according to requirements.

Applications:

- Lithotripsy and Percutaneous Urinary
- General surgery in Urology
- Mid-IR solid state laser pumping
- Welding of transparent polymers
- Scientific and medical research

Features:

- Peak power up to 650W
- Pulse width: 0.04~50ms
- Single mode or Multi-mode output
- Compact design and air-cooled
- All-fiber configuration and maintenance free

Parameter	Unit	Specification		
		Min	Typ.	Max
Part no.		TFL-1940-QCW		
Center wavelength	nm	1940nm +/-1nm		
Bandwidth FWHM	nm	-	-	1
Mode of operation		CW/QCW		
Average power	W	-	-	65
Peak power	W	-	-	650
Pulse energy@10ms/10Hz	J	-	-	6.5
Polarization		Random (Linear Polarization Optional)		
Pulse repetition rate	Hz	1	-	2500
Pulse width (10% duty cycle)	ms	0.04	-	50
Single mode Beam Quality	M ²	-	1.2	-
Trigger mode		Internal or External TTL Trigger		
Polarization		Random		
Power stability (8 hours)	%	-	±1	-
Power tunability	%	10		100
Operating temperature	°C	10		40
Storage temperature	°C	-45	-	+65
Supply voltage	V _{DC}	36~48		
Cooling		Air-cooled		
Output fiber core	um	Single mode or 50um, 100um		
Output fiber length	m	>0.5		
Output connector		SMA905		
Dimensions	mm	360(L)×490(W)×156(H)mm		

Notes:

- 1. Other wavelengths are available upon request.

Ordering Information:

- TFL-XXXX-QCW-P
- XXXX: wavelength
- P: output power (average power/peak power). Typical power: 50/500,65/650;
- e.g.: TFL-1940-QCW-65/650: 1940nm, Max. average power: 65W, Max. peak power: 650W

Max. peak power Vs Pulse width and Repetition rate:

: Supported, : Not Supported

Operating conditions		Max. peak power (W)							
Pulse width (ms)	Repetition rate (Hz)	20	60	100	200	350	500	610	650
0.04	2500	/	/	/	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0.5	200	/	/	/	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1	100	/	/	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
10	10	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	/
50	200	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	/