

## **Key Features**

- High output power
- High gain
- Wide operation range
- Highly reliable and durable





## **Description**

Amonics' nanosecond fiber lasers are with high pulse energy and excellent pulse energy stability. We offer nanosecond fibers with direct modulation diode seed lasers and narrow linewidth seed lasers with external modulation. By using our high power pulse amplifier, the laser with direction modulation can have higher than mJ output energy. By using our proprietary SBS suppression technique, our narrow linewidth nanosecond pulse laser can deliver over 180 µJ pulse energy. The applications of the nanosecond laser include laser marking, laser welding, material processing, and free spacing sensing.

## **Application**



Laboratory



Fiber Optic Sensing



- High power ultrashort pulse amplification
- High-resolution optical time domain reflectometry (OTDR)



ISO 9001: 2015 Certificate No.: CC 5346 Our product is manufactured under a HKQAA ISO 9001 certified quality management system. The ISO 9001:2015 certification applies to the Hong Kong production site only.



## Narrow linewidth Nanosecond Fiber Laser (external modulation) Specifications

Model	ANSFL-UL	ANSFL-PM-UL
Operating wavelength *	1550 nm ± 1 nm	1550 nm ± 1 nm
Pulse Width	100ns to 1000 ns	100ns to 1000 ns
Pulse Repetition Rate	20 kHz to 1 MHz	20 kHz to 1 MHz
Saturated Output Power up to	+2 W	+2 W
Pulse peak power up to (SRS limit)	500 W	500 W
Linewidth	Typ. 15 kHz to 200 kHz	Typ. 15 kHz to 200 kHz
Output Isolation	Min. 30 dB	Min. 30 dB
Polarization Extinction Ratio	NA	Typ.23 dB, Min. 20 dB
Optical Fiber	LMA 25/300 GDF	PM LMA 25/300 GDF

<sup>\*</sup>Different wavelength or other output power models are available upon request

### Nano-second Pulse Width Fiber Laser (direct modulation) Specifications

Model	ANSFL	ANSFL-PM	ANSFL-10	ANSFL-PM-10
Operating wavelength *	1550 nm ± 1 nm	1550 nm ± 1 nm	1550 nm ± 1 nm	1550 nm ± 1 nm
Pulse Width	Typ. 10 ns to 1000 ns	Typ. 10 ns to 1000 ns	Typ. 5 ns to 10 ns	Typ. 5 ns to 10 ns
Pulse Repetition Rate	Typ. 20 kHz to 1 MHz	Typ. 20 kHz to 1 MHz	Typ. 100 kHz to 10 MHz	Typ. 100 kHz to 10 MHz
Saturated Output Power up to	+2 W	+2 W	+10 W	+10 W
Pulse peak power up to (SRS limit)	+1 kW	+1 kW	+10 kW	+10 kW
Linewidth	Typ. 0.2 nm	Typ. 0.2 nm	Typ. 0.2 nm	Typ. 0.2 nm
Output Isolation	Min. 30 dB	Min. 30 dB	Min. 30 dB	Min. 30 dB
Polarization Extinction Ratio	NA	Typ. 23 dB, Min. 20 dB	NA	Typ. 20 dB, Min. 18 dB
Optical Fiber	SMF-28	PM 1550 Panda Fiber	LMA 25/300 GDF	PM LMA 25/300 GDF

<sup>\*</sup>Different wavelength or other output power models are available upon request



### **General Parameters**

	Value	
Operation Temperature	0 to 40 °C	
Storage Temperature	-10 to 70 °C	
Power Supply	90 – 240 VAC, 47 – 63 Hz	
2U Rackmount Dimensions	485(W) x 515(D) x 90(H) mm or 485(W) x 360(D) x 90(H) mm	
3U Rackmount Dimensions	485(W) x 615(D) x 150(H) mm	
Control	Keylock switch, Pump laser current	
LCD Display	Output power, Pump laser current, Input power (Optional)	
Computer Interface	RS232 (Control software & connection cable included) / Ethernet (Optional)	
Protection	Pump laser overheat warning	
Optical Connector	FC/APC, collimator, bare fiber (No output connectors for output power >2W)	

# **Ordering Information**

Product Code	ANSFL(-PM)(-UL)-aaa-bb-cc-R-dd	aaa: Pulse Width in ns bb: Repetition Rate in kHz cc: Average Output Power in dBm dd: FA for FC/APC, CL for collimator, NC for bare fiber
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Amonics undertakes continuous and intensive product development to ensure its product performance at the highest technical standards. As a result, the specifications in this document are subject to change without notice.

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