

## 1064nm Ultra-Narrow Linewidth CW Fiber Laser

### 1. Description:

The 1064nm Ultra-Narrow Linewidth CW Fiber Laser employs a fiber-optic DFB laser cavity structure, outputting a single longitudinal mode narrow-linewidth continuous-wave laser in the 1064nm wavelength band. The spectral linewidth is less than 20kHz, and the output spectral side-mode suppression ratio exceeds 60dB. Higher power versions are also available. It is available in modular or benchtop packaging, making it an ideal laser source for applications such as distributed sensing.

### 2. Features:

- Spectral linewidth  $\leq 20\text{kHz}$ ;
- All-fiber DFB resonant cavity;
- Wavelength stable without mode hopping.



### 3. Applications:

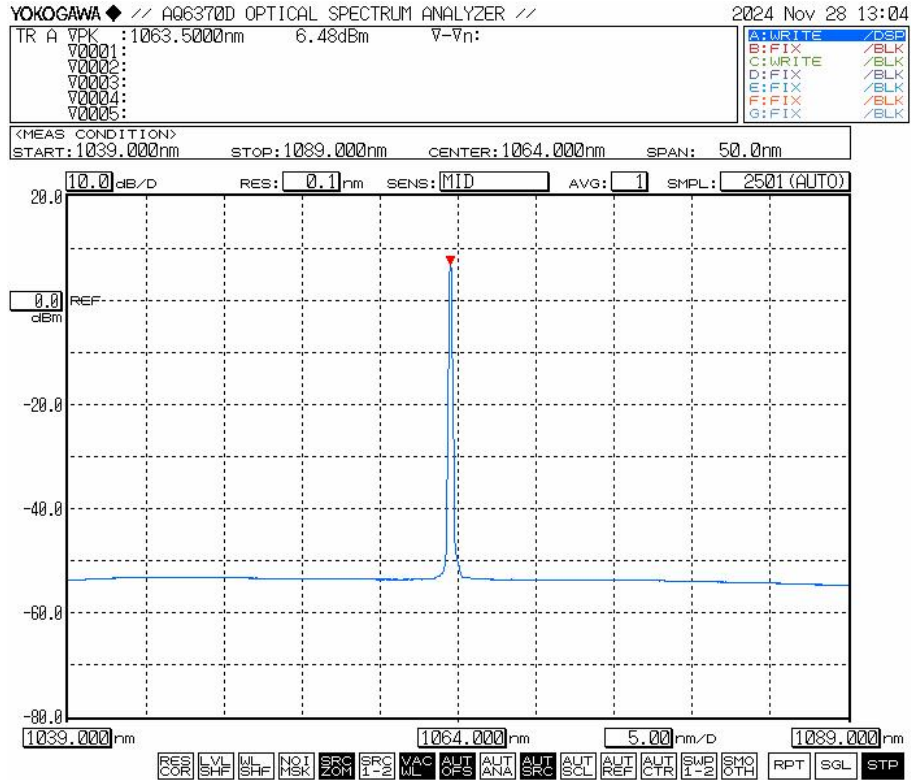
- LiDAR;
- Acoustic sensors, hydrophones;
- Fiber Optic Distributed Sensing.

### 4. Electro-Optical Characteristics:

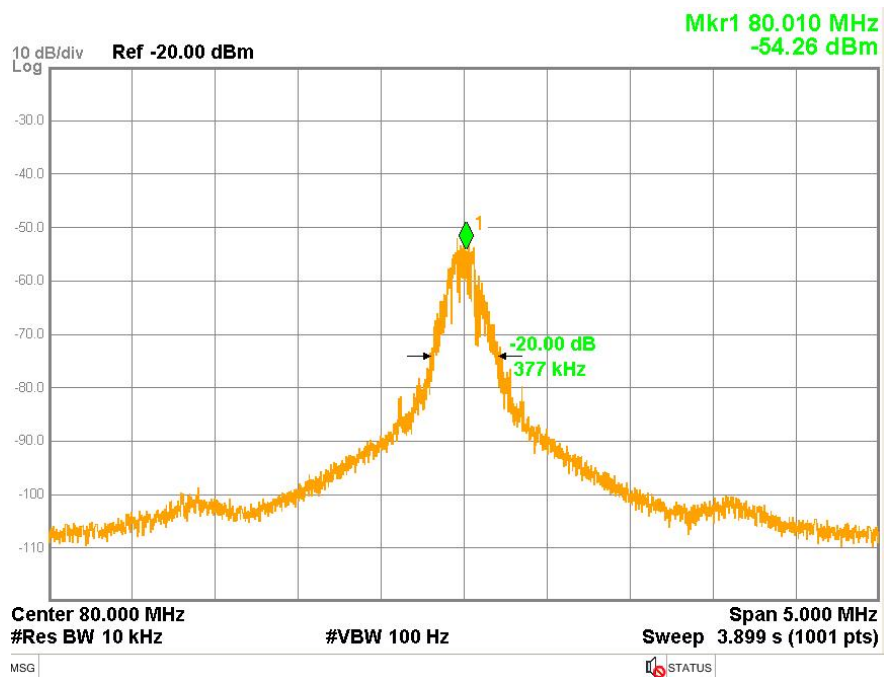
Parameter	Unit	Typical	Remark	
Operating wavelength	nm	1064 $\pm$ 0.1		
Slow temperature tuning range	nm	$\pm$ 0.1		
Output power	mW	50/100/200/500/1000		
Spectral linewidth@3dB	Khz	<20	20dB linewidth / 20	
Side Mode Suppression Ratio	dB	$\geq$ 60		
Wavelength instability	MHz	$\leq$ $\pm$ 25		
Working Mode	-	CW	Continuous light	
Power instability (Short-term 15mins)	dB	$\leq$ $\pm$ 0.02	Equivalence $\leq$ $\pm$ 0.5%	
Power instability (Long-term 8hours)	dB	$\leq$ $\pm$ 0.05	Equivalence $\leq$ $\pm$ 1.2%	
Fiber type	-	Hi1060	Random polarization	
	-	PM980(PER>23dB)	Linear polarization	
Pigtail Connector Type	-	FC/APC	Customizable	
Dimension	50/100/200mW	mm	255(W) $\times$ 285(D) $\times$ 115(H)	B1: Benchtop
	500/1000mW		255(W) $\times$ 322(D) $\times$ 115(H)	B2: Benchtop
	50/100/200mW		125(W) $\times$ 150(D) $\times$ 31.5(H)	M31: Module
	500/1000mW		139(W) $\times$ 235(D) $\times$ 70(H)	M70: Module
Power supply	V	100~240V AC, <30W	Benchtop	
		DC 12V, 24W	Module	

Communication Interface	-	DB9 Female(RS232)	
Operating temperature	°C	-5~+35°C	
Storage temperature	°C	-40 ~ +85	

**5. Typical Spectrum:**



**6. Typical linewidth:**



**7. Ordering information:**

Name	Wavelength	Output power	Power adjustable (optional)	Fiber type	Dimensions
NLFL	-XXXX	-XX	-X	-XX	-X
Laser	1064: 1064nm	50:50mW 100:100mW 200:200mW 500:500mW 1000:1000mW	T: power adjustable	SM: Hi1060 PM: PM980	B1/B2: Benchtop M31/M70: Module