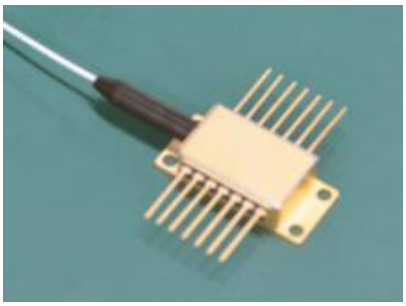
1550nm Single Frequency Laser



1. Product Description

The 1550nm single frequency laser is a high performance external cavity laser. The external cavity design results in several benefits: ultra-fine spectral line-width, low wavelength sensitivity to temperature, low RIN, and high output optical power. The high performance 1550nm single frequency laser is ideal for many applications such as fiber optical sensing, optical communication, LIDAR, and other precise measurement applications.

2. Applications

- Fiber optical sensing
- LIDAR
- Optical communication
- Scientific research

3. Features:

- Single longitudinal mode
- Narrow line-width
- High output power
- Low phase noise
- Standard SMF output
- Standard 14 pin butterfly package.

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4. Technical parameters

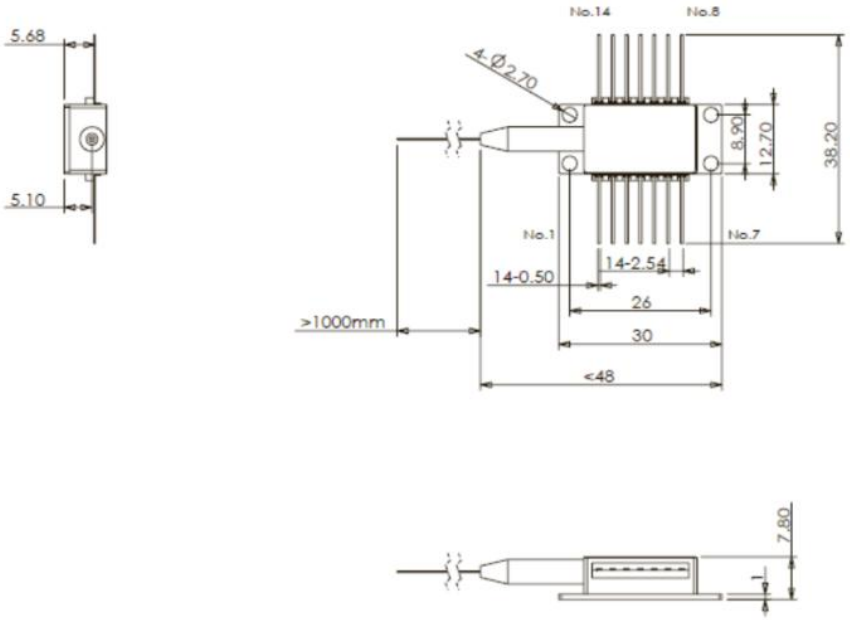
Parameter	Symbol	Min	Typ	Max	Unit
Output Power	P_o			100	mW
Center Wavelength	λc		1550		nm
Spectral Width	FWHM		15		kHz
Side Mode Suppression	SMSR		55		dB
Polarization Extinction Radio*	PER	20			dB
Random Intensity Noise	RIN			-135	dB/Hz
Return Loss	RL			25	dB
Threshold Current	I_{th}		50		mA
Monitor Bias Voltage	V_{PD}		-5		V
Monitor Diode Current	I_{PD}			2.0	mA
Monitor Diode Dark Current	I_{MD}			1.0	nA
TEC Set Temperature	T_{TEC}		25		℃

Note：*.Only for the laser with polarization maintaining fiber output

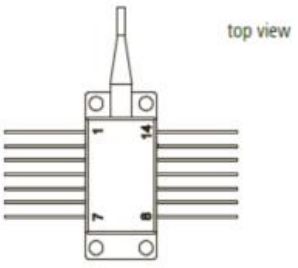
Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
LD Forward Current	I_{LD}		500	mA
LD Forward Voltage	V_{LD}		1.8	V
TEC Current	I_{TEC}		2.5	A
TEC Voltage	V_{TEC}		4.8	V
Monitor PD Reverse Voltage	V_{MR}		20	V
Monitor PD Forward Current	I_{MFC}		10	mA
Operating Temperature	To	-25	70	℃
Storage Temperature	Ts	-20	85	℃
Operating Humidity		5%	85%	

5. Product outline



Pin	Description	Pin	Description
1	TEC Anode (+)	8	PD Anode (+)
2	N.A.	9	LD Cathode (-)
3	N.A.	10	N.A.
4	Thermistor	11	N.A.
5	Thermistor	12	N.A.
6	LD Anode (+)	13	N.A.
7	PD Cathode (-)	14	TEC Cathode (-)



We can provide different pigtail and package by customer requirement .Welcome to contact us.

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6. Ordering Information

RP - XX- XX - XXXX - XX

XX: Product Type	**XX**: Center wavelength	**XXXX**: Fiber output power	**XX**: Fiber/connector type
SF=Single frequency laser	10=1550nm	0040=40mW	01=SMF FC/APC
	11=Specified or ITU	0060=60mW	02=PMF FC/APC
		0080=80mW	
		0100=100mW	