Optic Source Module

A variety of optic source modules, including SLD optic source, ASE optic source, DFB optic source, FP optic source, etc., the product has the advantages of small size, light weight, strong environmental adaptability, wide band coverage and reliable working temperature. Different types of products can be customized according to the needs of the user system.

Features:

- **High reliability**
- **Internal power control**
- **High output power**
- **Good temperature adaptability (-40°C～60°C)**

Applications:

- **Optical fiber sensing**
- **Fiber passive device testing**
- **Optical communication system**
- **Other system integration**

Specifications:

Specifications	Unit	SLD	ASE	DFB
Working wavelength	nm	450～1650	1525～1565 1525-1605	1270～1650
Output Power	dBm	≦13	≦20	≦100
Spectral width (normal temperature)	--	8～110nm	40/80nm	1kHz～0.2nm
polarization		High bias: PER>28dB (40dB optional) Low bias: DOP < 5%		NA
Power stability (15 minutes, constant temperature)	dB	0.02		
Power stability (8 hours, constant temperature)	dB	0.05		
Full temperature power stability	%	6		5
range of working temperature	℃	-40～70		
Storage temperature range	℃	-40～85		
Relative humidity	%	5～90，No condensation		
Dimensions	mm	90×70×15		
power supply	DC 5V			
Electrical connector	10-pin connector or customized			
Pigtail type	SM fiber			
Optical connector	FC/APC or other connector			

High stability ASE source

High stability ASE source has been widely used in Fiber Optic Sensing.

In order to meet the requirements of different environmental conditions, the light source has undergone rigorous evaluation in the range of -45~70 °C, and the optical path device and the circuit device from the device to the module are strictly screened. The integrated precision temperature control technology inside the light source not only ensures the spectral stability of the light source, but also reduces the overall power consumption of the light source.

Features:

- **High reliability, meeting the GJB150 standard;**
- **High temperature adaptability, working temperature range: -45~70°C**
- **Gaussian spectral shape**
- **Support output optical power is adjustable**
- **High output optical power stability, best full temperature power stability less than 1%**
- **Average wavelength stability is good, the best full-temperature average wavelength stability is less than 20ppm**

Applications:

- **Fiber optic gyroscope**
- **Defense military research**
- **Passive device testing, production**
- **Biomedical imaging**

Specifications:

Specifications	Unit	Min.	Typical	Max
Working wavelength	nm	1525	-	1565
Output optical power	dBm	-	10	-
	dBm	-	7	-
	dBm	-	5	-
Short-term power stability (single temperature) (1)	dB	-	0.05	-
Long-term output power stability (2)	dB	-	0.1	-
Full temperature power stability (-45~70°C)	%	-	3	5
Wavelength stability (single temperature)	ppm	-	3	5
Wavelength stability (-45~70°C)	ppm		20	30
	ppm		40	50
	ppm		80	100
working temperature	℃	-45	-	+70
Storage temperature	℃	-50	-	+85
Relative humidity	%	5	-	90
Power consumption	w	Normal temp.	-	1.5
		Full temp.	-	3.5
power supply	-	DC 5V		
Electrical connector	-	5V-GND power Wire		
Pigtail type	-	SM fiber		
Optical connector	-	FC/APC or other connector		
structure size	mm	Rectangle: 90X70X15 Square: 80x70x15 Round: 79.5X15		

ECL type Narrow linewidth laser

The ECL Type narrow linewidth laser uses a unique external cavity structure and advanced packaging technology, with narrow line width, low relative intensity noise and low phase noise;

The device uses a standard 14-pin butterfly package, with high output power, high stability, high reliability, and long service life.

Features:

- **Narrow line width;**
- **Low RIN and phase noise;**
- **High output optical power;**
- **High stability**

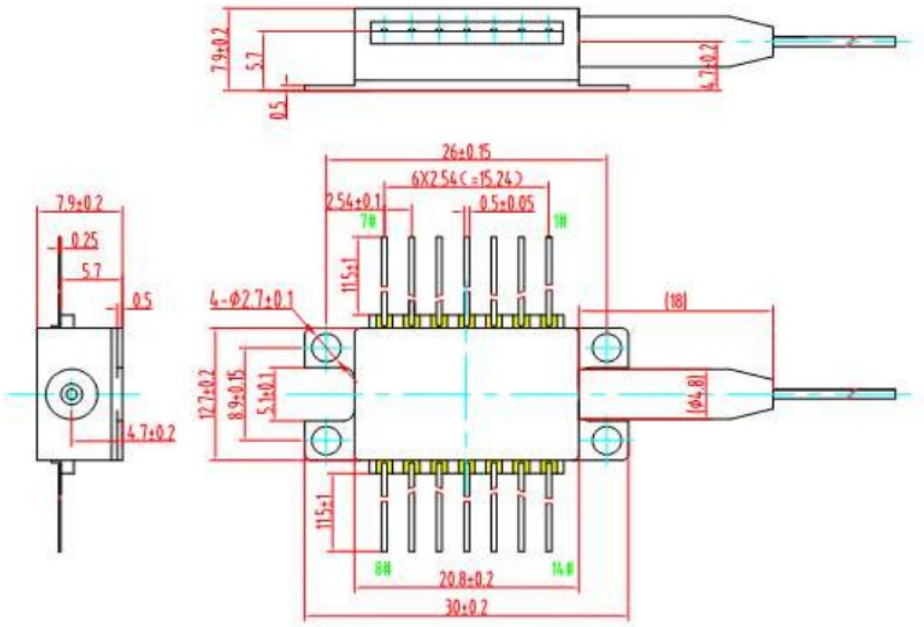
Applications:

- **Optical fiber communication, coherent detection;**
- **Microwave photonics research**
- **Lidar**
- **Microwave photonics research**

Specifications: (Ambient temperature @25℃)

Specifications	Symbol	Min.	Typical	Max.	Unit	Remarks
Fiber output power	P0	5	-	-	mW	ECL
Center wavelength	λc	1530	-	1610	nm	ITUT wavelength, can be customized; ECL
Wavelength tuning range	-	-	30	-	pm	Temperature tuning
Working current	Iop	-	-	500	mA	
Threshold current	Ith	-	50	80	mA	
Operating Voltage	Vop	-	2	3	V	
Linewidth	ΔλL	-	30	60	kHz	Lorenz
			10	15	kHz	
			-	5	kHz	
			-	2	kHz	
Phase noise	-	-	35	-	Urad/rt-Hz 1m OPD	ΔλL<60kHz, @200Hz
	-	-	22	-		ΔλL<20kHz, @200Hz
	-	-	8	-		ΔλL<5kHz, @200Hz
	-	-	4	-		ΔλL<2kHz, @200Hz
Relative intensity noise	RIN	-	-150	-	dB/Hz	
Isolation	ISO	45	-	-	dB	
Polarization extinction ratio	PER	18	-	-	dB	Slow Axis (PMF), 23℃
Side mode suppression ratio	SMSR	50	-	-	dB	
Operating temperature	Top	-5	-	70	℃	
Storage temperature	-	-40	-	85	℃	
TEC Working Current	-	1.2			A	
TEC Working Voltage	-	4			V	
Pin soldering temperature	-	260 (<10s)			℃	

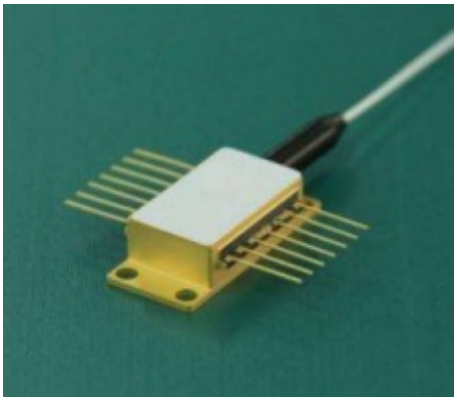
Dimension：



Ordering info：

BF14	X	X	I	X	X	X	X	X
BF14: Butterfly 14pin	ECL	Wavelength (nm): ITU-T wavelength; Customized Wavelength	linewidth: 5: 5kHz 10: 10kHz 35: 35kHz	Pin definition: Type N	Fiber Length: m 0.5: 0.5m 1: 1m	09SMF: 900um SM 25SMF: 250um SM 09PMF: 900um PM 25PMF: 250um PM CS: Customize	Output power: mW 10: 10mW 15: 15mW 5: 5mW	Connector Type: FC/APC FC/PC

ECL type Laser：



Fiber Bragg Grating Demodulation Module

The T800 series grating demodulation module uses a tunable light source to measure the wavelength of the fiber grating, and the wavelength covers 1529~1569nm. The product has high integration, which is beneficial to system integration and low cost.

Features:

- **Compact structure**
- **High wavelength accuracy and good repeatability**
- **No moving parts, vibration is not sensitive**
- **Large operating temperature range**

Applications:

- **Optical communication system**

Specifications:

Specifications	Parameters
Wavelength range (nm)	1529～1569
Number of channels	1, 2, 4, 8
Minimum detectable wavelength interval (nm)	0.5
Dynamic range (dB)	≥40
Wavelength resolution (pm)	1
Wavelength repeatability (pm)	≤ 5
Scanning speed (ms)	≤ 1000
Spectral resolution (pm)	20
Output power (dBm)	>-3
Communication Interface	RS485/ RJ45
Working temperature (°C)	0～50
Size (mm)	159×120×63

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