

# Stable Light Source Module



Stable light source plays an irreplaceable role in all optical testing and researching area. In order to satisfy different application scenario needs, Dimension developed 4 kinds of stable light sources: DFB laser source, FP laser source, SLED broadband light source, and ultra-narrow linewidth laser source.

- 1CH, 2CH, or 4CH output available, each channel could be independently controlled. Wavelength and power can be customized.
- Support USB / Ethernet / button controlling.
- Modular design, high precision, high reliability interface with patent. Flexible disassembled SC/FC connector, convenient for post-maintenance.

## DFB laser source

### Main Features



- High stability, 24-hour power stability is less than  $\pm 0.005\text{dB}$
- High precision TEC temperature controlling module
- Output power up to 20 mW
- Support internal modulation

### Applications

- CWDM channel testing
- Optical network monitoring
- IL/RL testing
- Optical passive device, active device testing
- Instrument performance testing

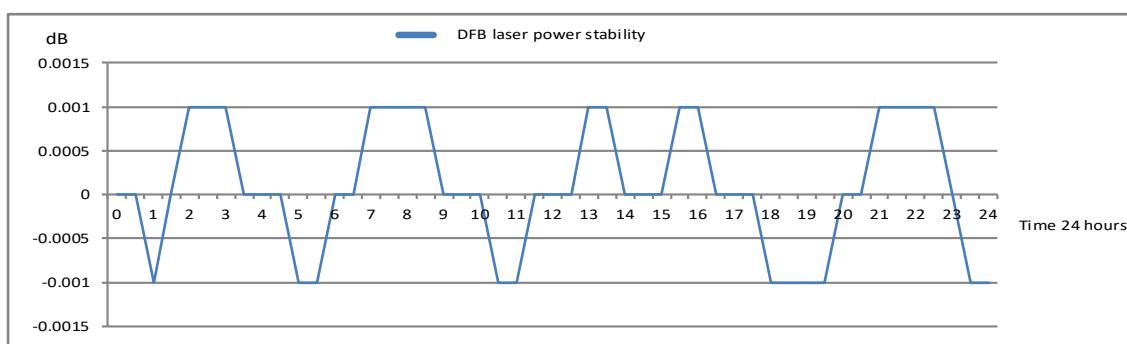
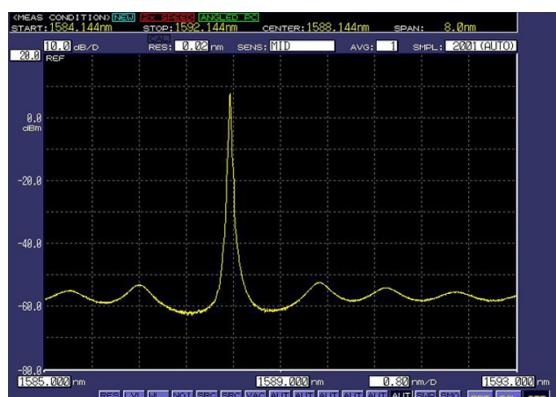


Chart1-1 Parameters of DFB Stable Laser Source<sup>[1][2][3][4]</sup>

Model	DFB Stable Laser Source		
Channel	1,2,4CH available		
Fiber Type	SM 9/125;Panda PMF		
Wavelength	1270、1290、1310、1330、1350、1370、1390、1410、1430、1450、1470、1490、1510、1530、1550、1570、1590、1625、1650,etc.		
Wavelength accuracy	$\pm 5\text{nm}$		
Connector	high precision, high reliability interface, SC/FC flexible switching		
Power stability	Type A	Type C	
Power stability 15mins	850~1270nm: $\pm 0.05$	1270~1650nm: $\pm 0.005$	850~1270nm: $\pm 0.1$
Power stability 24H	850~1270nm: $\pm 0.2$	1270~1650nm: $\pm 0.02$	850~1270nm: $\pm 0.4$
Output power	1mW, 10mW, 20mW,etc.		
SMSR	>40dB		
Polarization extinction ratio (PER)	>17dB		
Modulation	internal modulation HZ(270、1K、2K)		
Warming up time	20 minutes (if the storage temperature is different from the service temperature, the preheating time is 60 minutes)		
Recalibration period	2years		
Working temperature	10°C ~ 40°C		
Storage temperature	-40°C~70°C		
Size	Machine: 359mm*274mm*115mm; Module: 285mm*133mm*36mm		
Input power	AC 90~260V 50Hz		

## SLED broadband light source

### Main Features

- Wide spectral range (3dB spectral width 90nm) <sup>[5]</sup>
- High output power (10mW) <sup>[5]</sup>
- Excellent power stability

### Applications

- Coarse wavelength division multiplexing (CWDM) network testing
- Passive optical network (PON) component manufacturing and testing
- Fiber sensing and spectral analysis.

### Application Eg

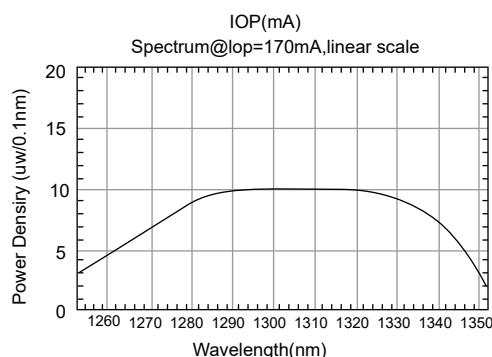
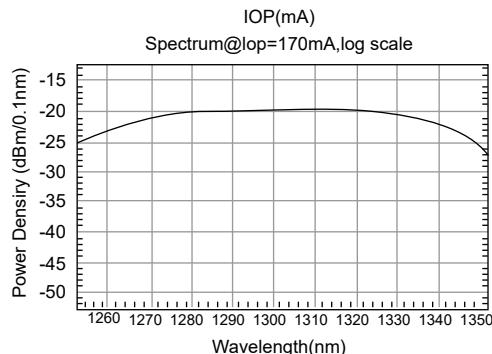


Chart1-2 Parameters of SLED Broadband Light Source [1] [2] [3] [4]

Model	SLED Broadband Light Source
Center wavelength	750、840、880、1020、1050、1280、1310、1410、1490、1550、1610、1640
-3dB spectrum width (Typ.) [5]	40-90nm
Output power (Typ.) [5]	5-10mW
Power stability [5]	±0.05dB/8H (Typical)
Working Mode	CW
Fiber Type	SM 9/125
Connector	high precision, high reliability interface, SC/FC flexible switching
Warming up time	20 minutes (if the storage temperature is different from the service temperature, the preheating time is 60 minutes)
Recalibration period	2years
Working temperature	10°C ~ 40°C
Storage temperature	-40°C~70°C
Size	Machine: 359mm*274mm*115mm; Module: 285mm*133mm*36mm
Input power	AC 90~260V 50Hz
Spectral power density	≥ -20dBm

## FP laser source

### Main Features

- Output power higher than 5 mW
- Support internal modulation

### Applications

- Fiber product testing and verification
- Optical component manufacturing and testing

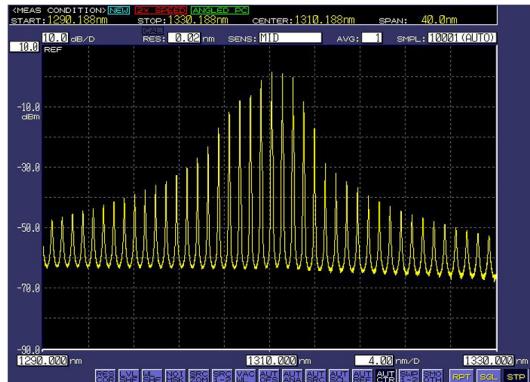


Chart1-3 Parameters of FP Laser Source [1] [2] [3] [4]

Model	FP Laser Source
Channel	1,2,4CH available
Fiber Type	9/125;50/125;62.5/125 available
Wavelength (TEC)	850、980、1060、1310、1550
Wavelength	850、1310、1550
Wavelength accuracy	±20nm
Connector	high precision, high reliability interface, SC/FC flexible switching
Power stability	Type A
Power stability 15mins	850~1270nm: ±0.05 1270~1650nm:±0.005
Power stability 24H	850~1270nm: ±0.2 1270~1650nm:±0.02
Output power	>5mW
Modulation	internal modulation HZ(270、1K、2K)
Warming up time	20 minutes (if the storage temperature is different from the service temperature, the preheating time is 60 minutes)
Recalibration period	2years
Working temperature	10°C ~ 40°C
Storage temperature	-40°C ~ 70°C
Size	Machine: 359mmX274mmX115mm; Module: 285mmX133mmX36mm
Input power	AC 90~260V 50Hz

## Ultra-narrow linewidth laser source

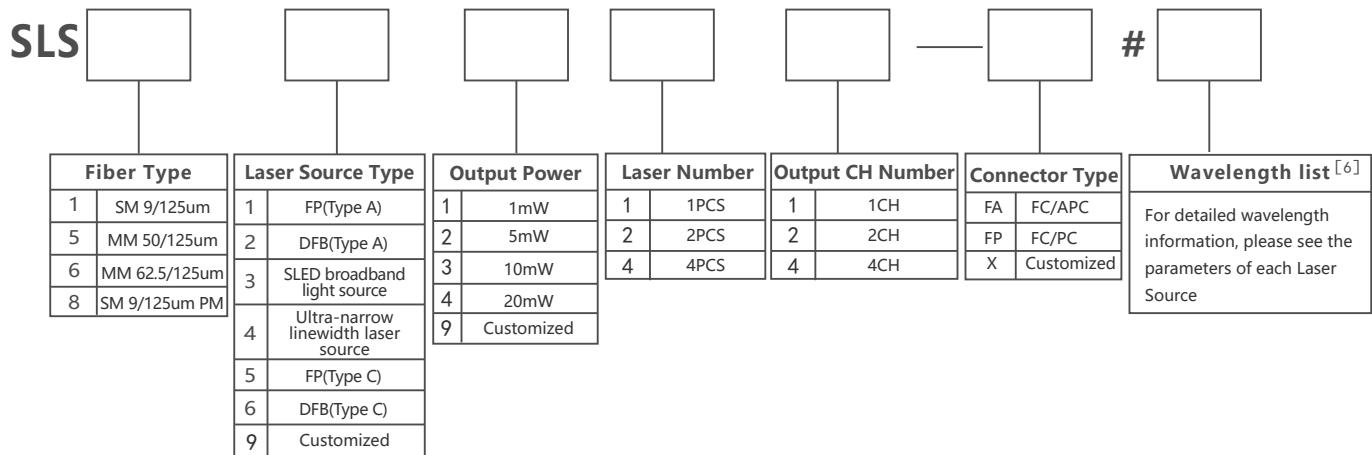
### Main Features

- Ultra-narrow spectral linewidth
- High output power
- High reliability and stability

### Applications

- Fiber bragg grating sensing
- Coherent fiber communication
- Nonlinear research
- Leak detection and monitoring

### Ordering Information



Eg: SLS12344-FA#1310/1490/1550/1625

SM 9/125, Stable laser source DFB, 10mW, 4 Laser source 4 CH output, FC/APC, wavelength 1310/1490/1550/1625nm

Remarks:

- [1] Above specifications are under temperature  $23^{\circ}\text{C} \pm 1^{\circ}\text{C}$
- [2] Center wavelength is the default value displayed on screen.
- [3] Ambient temperature change is less than  $\pm 1^{\circ}\text{C}$
- [4] 20 minutes for preheating if stored at the same temperature before.
- [5] Measured wavelength is 1310/1550nm, and the spectral width and output power of SLED light source are related to the central wavelength.
- [6] The list of wavelengths can be customized, and the number of output channels should correspond to the number of wavelengths in principle. Take 4-CHs output as an example. If you need 4-CHs 1310, the list of wavelengths is 1310\*4. If need 2-CHs 1310, 2-CHs 1550 then the list of wavelengths is 1310\*2/1550\*2; If need four different wavelengths, such as 1270/1290/1310/1330, the list of wavelengths will be written as 1270/1290/1310/1330, corresponding to 1/2/3/4 channels in turn.
- [7] The Type C light source supports only 1 and 5mW
- [8] The 3dB bandwidth of the SLED light source varies slightly with power, ranging from 50 to 90nm.

### Related Products



Optical power meter module



Optical attenuator module



Optical switch module



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