JW8001 Bench-top Stabilized Laser Source

User Manual（V210722）

2021.07

Content

1 Overview

1.1 Product overview

JW8001 Bench-top stabilize light source through the unique automatic optical power control (APC) technology and automatic temperature control (ATC) technology, high output power stability and wavelength stability, can meet multiple needs of customers, can achieve a single wavelength output. It is an ideal instrument for scientific research and production under the condition of large attenuation range and very stable power and wavelength. Widely used in optical communication, optical transmission, optical fiber sensing and other fields of scientific research, production and engineering.

1.2 Product features

1. High output stability: 0.005 dB

2. The output power is individually adjustable

3. High wavelength stability

4. High Precision APC and ATC circuits

5. LCD Status Display full parameters

6. CWDM or DWDM or any other wavelength is optional

7. 1 ~ 4 wavelengths and up to 4 output ports are available

8. Provide both internal and external modulation modes

2 Technical specification

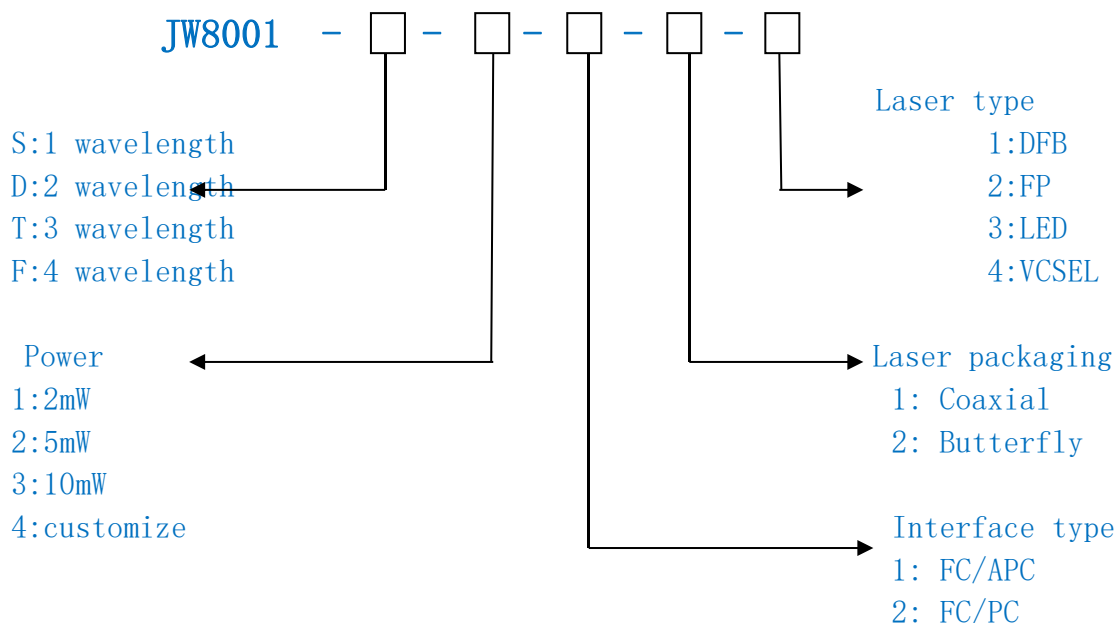| Specifications	JW8001
Maximum output（mW）	2、5、10 or customize
Operating Wavelength（nm）	1310nm 、1550nm or customize
Output Power Stability（dB）（10mW）	±0.005（15min/10mW,25℃）(only 1310/1550nm)±0.025（8Hour/10mW,25℃）(only 1310/1550nm)
Laser type	DFB or customize
Output Return Loss（dB）	>45
TEC Stability（℃）	±0.1
TEC working range（℃ ）	20～30
The light source interface	FC/APC（FC/PC optional）
Adjust the interval（℃）：	temperature（℃）coarse tuning 0.1，fine tuning 0.01Power（mW）coarse tuning 0.2，fine tuning 0.02
Power	AC220V 50Hz
Operating temperature（℃）	0～50
Storage Temperature（℃）	-40～80
Volume（mm）	235×380×145
Weight（kg）	<4

Notes：

1) the above specifications only apply to single mode wavelengths of 10mW, 1310nm and 1550nm;

2) user can customize the light source of 2mW, 5MW, or other output power, DFB\FP\LED\VCSEL and other types of laser, can customize different wavelength laser light source;

3) please contact our business sales or technical support for the detailed specifications of the customized light source.

3 Configuration

3.1 standard configuration

NO.	NAME	QUANTITY
1	JW8001 main device	1pc
2	Power cord	1pc
3	User manual	1pc
4	Certification	1pc
5	Inspection report	1pc

3.2 Selecting configuration

JW8001 — □ — □ — □ — □ — □

Laser type
    1:DFB

S:1 wavelength   2:FP
D:2 wavelength   3:LED
T:3 wavelength   4:VCSEL
F:4 wavelength

 Power   Laser packaging
1:2mW   1: Coaxial
2:5mW   2: Butterfly
3:10mW
4:customize   Interface type
            1: FC/APC
            2: FC/PC

4 Overall appearance

4.1 overall appearance

JW8001 Bench-top stabilize light source adopts advanced aluminum profile Cabinet, wide-face liquid crystal display laser output power, wavelength, temperature and other parameters. Through the knob can be displayed menu page, set. The adjustment function has two modes of coarse adjustment and fine adjustment. At the same time, the laser can be turned off /on during press the key. The overall appearance of the machine is shown in figure 4-1.

Figure 4-1 overall appearance

4.2 Front panel appearance

JW8001 support laser core temperature digital adjustment, easy to need to fine-tune the wavelength of the user to use, provide power-off recovery function, power-off restart will save the last operation data, user-friendly operation, as shown in figure 4-2.
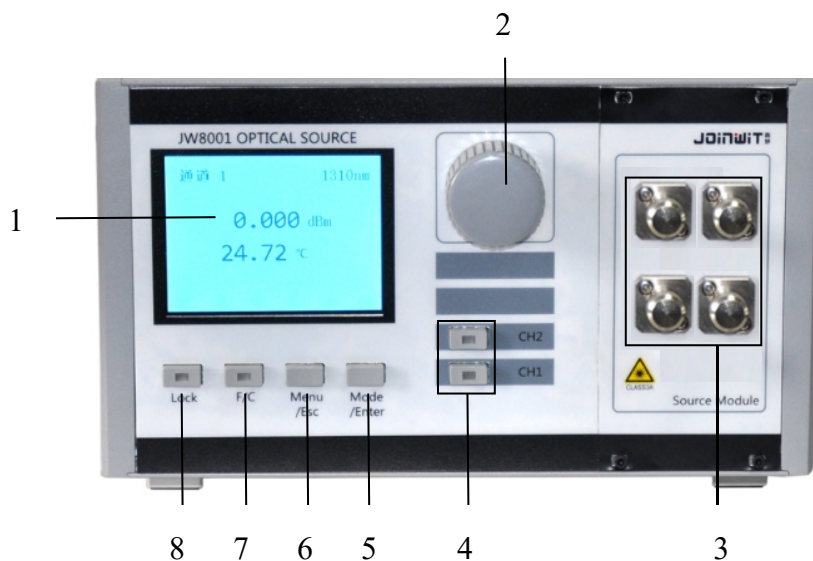
Figure 4-2 Front panel appearance

1) LCD display

2) multi-function knob key

3) fiber optic output port

4) laser switch button

5) mode toggle/confirm button

6) menu/exit button

7) coarse/fine tune button

8) lock key

4.3 Back panel appearance

The back panel of JW8001 is composed of a cooling fan, a power outlet, and a

earthing rod as shown in figure 4-3.

Figure 4-3 back panel appearance

5 Functional description

5.1 Main menu function description

Press"Menu/Esc" Key to enter the main menu option, See Figure 5-1

Channel 1   Menu

1. temperature setting
2. power setting
3. unit setting
4. modulation
5. backlight
6. language
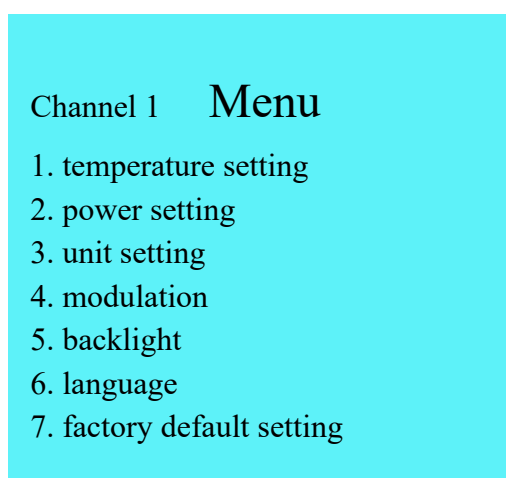7. factory default setting

Figure 5-1 Menu setting interface

Select the menu settings by rotating the "multi-function knob" key under the menu options, the font is shown in red when selected, and Enter the selected submenu options by pressing the "MODE/ENTER" key, then "multi-function button" key to select the sub-Menu options, in the sub-Menu by pressing the "MENU/ESC" key to return to the main Menu, press one more time can exit Menu settings.

5.2 Submenu Settings

temperature setting

Press the "Mode/Enter" key and rotate the "Multi-function knob" to set the temperature, as shown in Figure 5-2.
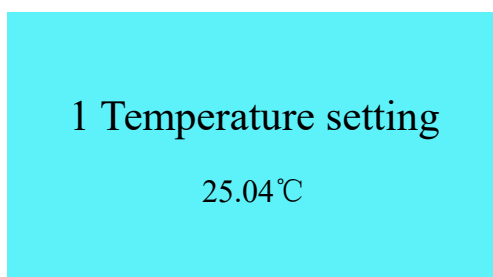
1 Temperature setting

25.04℃

Figure 5-2 temperature setting

power setting

Rotate the "Multi-function knob" key to set the power, as shown in Figure 5-3.
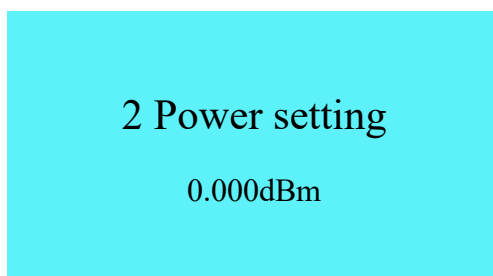
2 Power setting

0.000dBm

Figure 5-3 power setting

Units setting

Rotate the "Multi-function knob", select "dBm" or "mW", and press the "Mode/Enter" key, as shown in Figure 5-4.
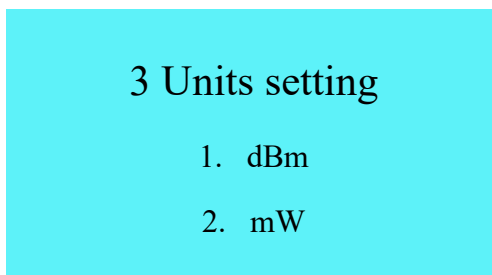
3 Units setting

1. dBm

2. mW

Figure 5-4 Units setting

Modulation

Select "No modulation", "Internal modulation" and "External modulation" from this menu, as shown in Figure 5-5.

4 Modulation

1. No modulation
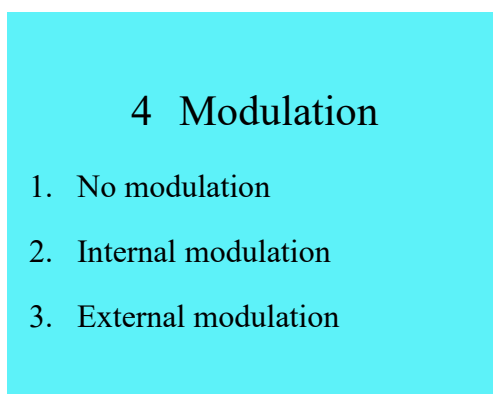
2. Internal modulation

3. External modulation

Figure 5-5 Modulation setting

Backlight

This menu can set the brightness of the screen backlight, including 100%, 80%, 60%, 40% and 20%. The default setting is 100%, as shown in Figure 5-6.
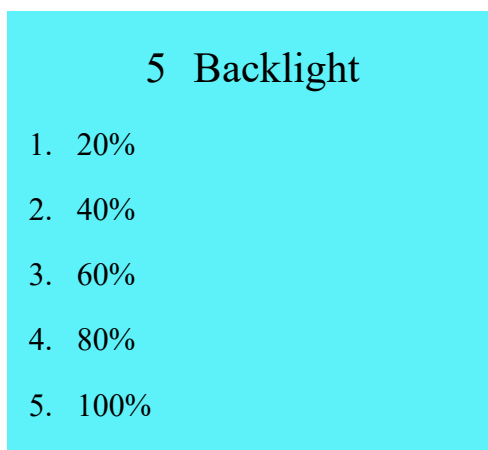
5 Backlight

1. 20%

2. 40%

3. 60%

4. 80%

5. 100%

Figure 5-6 Backlight setting

Language

This menu can be set to "English" and "Simplified Chinese", as shown in Figure 5-7.

6 Language

1. English

2. Chinese

Figure 5-7 Language setting

Factory default setting

If the user needs to restore factory Settings due to errors or other reasons during use, enter this menu and click "Yes" to restore factory Settings. This setting deletes any information previously set, so be careful during setting, as shown in Figure 5-8.

7 Factory default setting
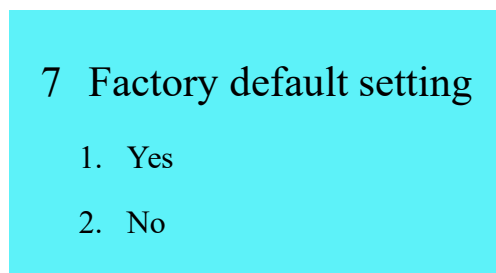
1. Yes

2. No

Figure 5-8 Factory default setting

6 Use Instructions

Power-on display interface

Switch on 220V ac, turn on the power switch of the rear panel, and the display screen will display the device initialization interface, as shown in Figure 6-1.

Figure 6-1 Power-on display interface

Switch the channel

Press the switch button of "CH1" and "CH2" channel on the device panel, and the button indicator will light up. The corresponding channel will be displayed in the upper left part of the interface, as shown in Figure 6-2.

Figure 6-2 Channel switch key

Set light source parameters

Press The Menu/Esc key to Enter the main Menu;

Press the rotate button to switch to the item to be set;

Press the Mode/Enter key to Enter the sub-menu;

Press the Menu/Esc exit key to exit the current setting state;

Press the F/C key to switch coarse/fine tuning according to actual needs, during parameter setting.

7 Maintenance

1) the Tester should operate without significant vibration.

2) keep the output end surface clean. If it is soiled, use cotton swabs and anhydrous alcohol to clean the end surface.

3) when the equipment is not in use, please put on the dustproof cap.

4) be careful about plugging and unplugging the light connector.

5) handle and handle with care to prevent equipment from falling and bumping.

8 Warranty

We do not recommend users repair JW8001 by themselves.
* Warranty period of the instrument is within 18 months from the date of shipment.

1) Shanghai Joinwit Company will provide its product promise, and the warranty period is valid within 18 months from the date of shipment. When the purchased product was found to have quality problems during this period, Shanghai Joinwit Company will make appropriate repairs or replacements.

2) If a problem occurs during the use of the instrument, the solution based on the common failure indication cannot be resolved. Please contact the company's marketing or after-sales personnel. Users are not allowed to open the chassis without authorization; otherwise they will not provide warranty service.

3) For quality failure due to production defects, the manufacturer is responsible for free repair or replacement of the meter. This guarantee is only applicable to the normal use of the meter and no one is damaged or improperly used.

* Warranty of JW8001 does not include wearing parts and problems/faults caused by the following reasons:

4) Unauthorized repair or modification of the instrument
5) Improper use, negligent use, accident, etc.

Appendix I

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Warranty Registration Card

Serial Number:_____

Model Number: _____

Date of Purchase:_____

Company Name:_____

Company Address:_____

TEL: _____   FAX:_____

E-mail:_____

(Please keep this contact, cut the link and send it on this basis) - - - - - - - - - - - -

(Please cut along the dotted line and send back to us)

Product number: --

Product Serial Number: --

Purchase date: ---

User name: ---

Telephone / Fax: ---

Address: ---

Postal Code: E - mail: --

Note: The user, please within one month after the purchase, this part of the company sent back to the party as valid.

Appendix II

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Warranty notice

1. During the warranty period, the user can present this warranty card and invoice or receipt (photocopy) in the event of a malfunction in using this product under normal conditions, and can enjoy unpaid maintenance services.

2. In the following cases, it is necessary to pay for repairs, and charge certain materials, maintenance fees and shipping charges as appropriate;

    1) Failure occurred when the product is used under normal conditions, but it has exceeded the warranty   period.
    2) The warranty card is not presented. The warranty card is missing, altered or missing.
    3) Use under abnormal conditions, such as man-made damage, or under abnormal conditions such as high temperature, high pressure, and humidity, pay for maintenance normally depending on the damage.
    4) Failure and damage caused by non-product quality problems.
    5) Faults and damages that are not caused by the instructions and precautions in the manual.

3. The following circumstances, the company will not be maintained:

    1) Unauthorized repair or modification of the instrument without the consent of the company.
    2) Products not produced and sold by the company.

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FAX：021-64357212

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E-mail: joinwit@joinwit.com