1550nm Erbium Doped Fiber Amplifier · GA5100 Series

USER MANUAL

CONTENT

1.0 PRODUCT SUMMARY

1.1 Product summarize

EDFA is the great achievement of opto-electronics in the international information field in recent decade. Its appearance leads to the revolution of optic-communication, brings revolutionary progress for CATV transmission with high quality, long distance and large area, and also reduces the building cost of the network greatly.

GA5100 amplifier adopts the mature 1550nm module technology of international famous company. The core components are all originally imported from America, which provides high quality and high reliability for the products.

2.0 AMPLIFIER CONTROLS, INDICATORS, AND ALARMS

This section of the manual will give an overview of the available menus in the GA5100 series amplifier. All instructions in Section 2.0 refer to the representation of the front panel shown in the diagram below. The user can scroll through the menus by using the push buttons that are on the front panel and are located in the right of the LCD screen.

2.1 The operation of the panel

2.1.1 Open menu

A. Plug in 220V city power supply

B. Turn on power switch in the rear panel, then input power and turn on the laser key in the front panel

Front panel shows "**KEY ON**...". Laser status lamp turns green from red, and the machine enters self-checking. After checking, it enters working status and display "**Descriptor**".

2.1.2 Start-up main menu

Press ▲\▼ button and the following menu will be displayed in sequence.

Menu # 1 - Descriptor
Read-only menu, tells the model of this equipment

Menu # 2 - S/N
Read-only menu, tells the serial-number

Menu # 3 - INPUT
Read-only menu, tells the input optical power

Menu # 4 - OUTPUT
Read-only menu, tells the output optical power

Menu # 5 - PUMP BIAS1
Read-only menu, tells the current of pump

Menu # 6 - PUMP BIAS2
Read-only menu, tells the current of pump

Menu # 7 - TEC1
Read-only menu, tells the current of pump in cooling/heating situation

Menu # 8 - TEC2
Read-only menu, tells the current of pump in cooling/heating situation

Menu # 9 - PUMP TEMP1
Read-only menu, tells the temperature of pump

Menu # 10 - PUMP TEMP2
Read-only menu, tells the temperature of pump

Menu # 11 - +5V Reads
Read-only menu, displays the voltage +5V

Menu # 12 - -5V Reads
Read-only menu, displays the voltage -5V

Menu # 13 - UNIT TEMP
Read-only menu, tells the temperature of chassis

Menu # 14 - IP
Adjustable list, displays the IP address of SNMP

Menu # 15 - Sub
Adjustable list, display the address of net mask

Menu # 16 - GW
Adjustable list, displays the gateway address of SNMP

Menu # 17 - TR1
Adjustable list, displays the TRAP1 address of SNMP

Menu # 18 - TR2
Adjustable list, displays the TRAP2 address of SNMP

2.1.3   Menu assistant manual

1. Input power (INPUT):
    Input power >+10 dBm, display HIGHER;
    Input power <-10 dBm, display LOWER.

2. Output (OUTPUT):
    When input display HIGHER or LOWER, the output power displays NO OUTPUT.

3. Laser temperature (TEMP): °C. The laser temp is seted in the range of 20°C~30°C. If the detected temp exceeds the range, the
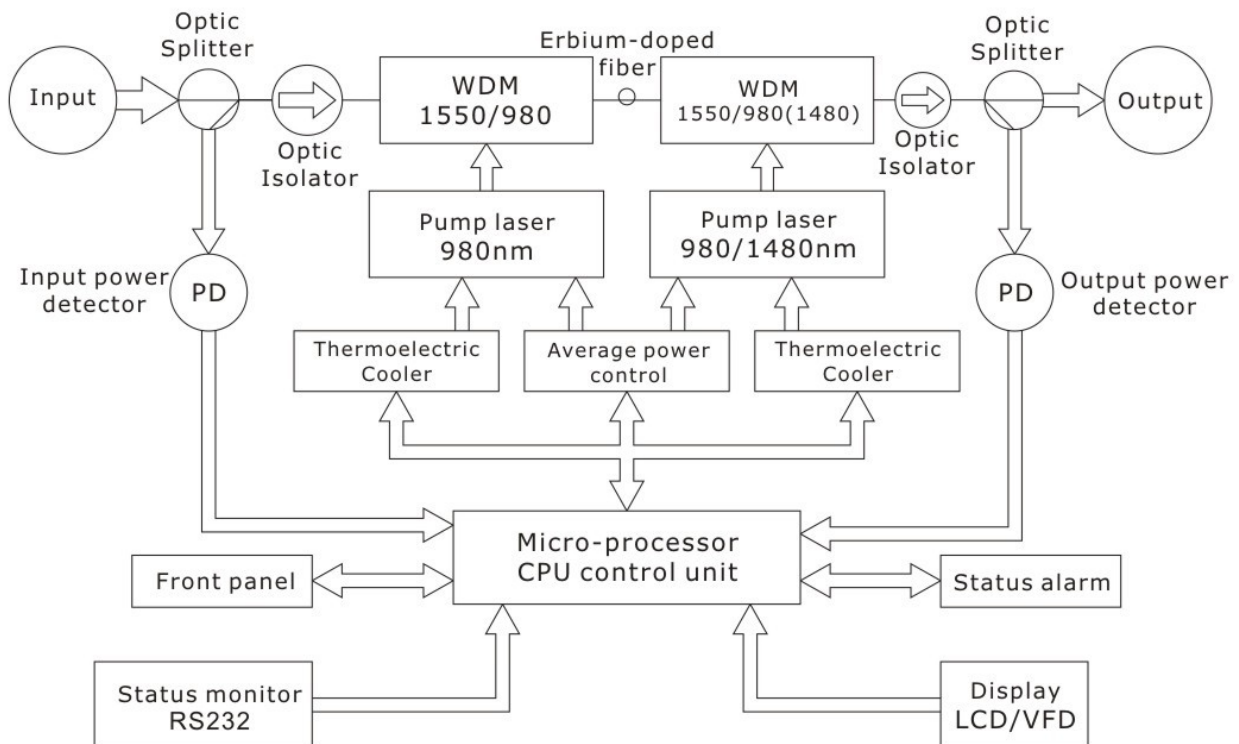
red light will show an alarm and the power supply of the laser will be off automatically.

4. Bias (BIAS): Bias is the key index of the laser. If the fixed range is exceeded, the power supply of the laser will be off automatically to protect the laser

5. +5Vvoltage(+5V READS)   >±0.5V alarm.
    -5Vvoltage(-5V READS)   >±0.5V alarm.

6. Press ▲\▼ key to amend the IP address menu that needs to be amended. Press ▲▼ at the same time to enter the menu, press ▼ to choose the amended place, push ▲ to amend, and then press ▲▼ to enter into save and exit.
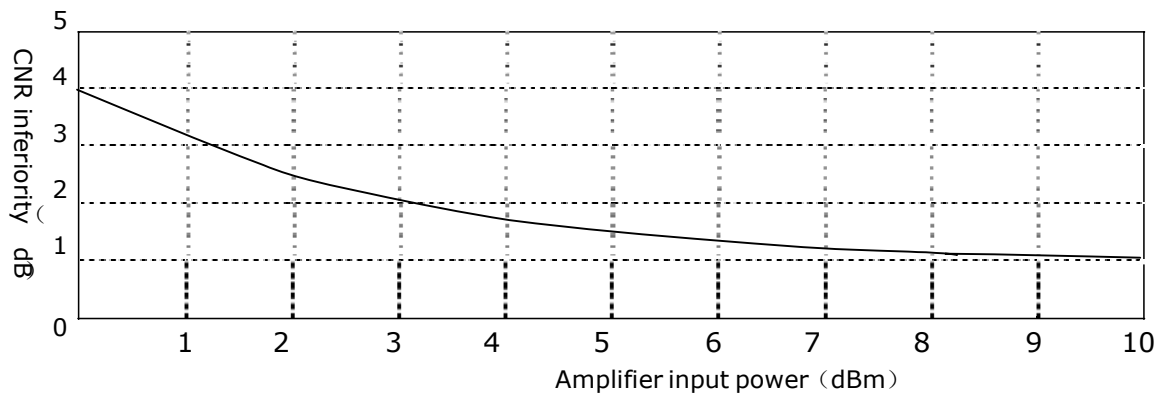
    For example, amend IP setup menu, IP: 192.168.000.015; if you want to change 5 to 6, use ▲▼ to enter the IP menu, then press ▼ to choose the place of 5, press ▲ key to change 5 to 6, and then press ▲▼ to save amended IP:192.168.000.016

3.0   EQUIPMENT OPERATION PRINCIPLE

3.1   GA5100 Series amplifier circuit principle

3.2   C/R inferiority rate

4.0   DESCRIPTION OF STATUS ALARM

Working status indication (LED) is near the powers supply switch in the front panel. When it is green, the device is working properly; when it is red, the laser does not work; when it is red sparking, there is an alarm.

A.   With 220V power supply, if the machine is good, the digital panel will display "READY: KEY OFF" and there is Red light.

B.   Turn on with the key, the digital panel will display "KEY OFF". After a few seconds, the laser is turned on automatically and the indication light turns into Green from Red.

C.   Pressing ▲\▼ bottom can display parameters .

D.   If any fault listed above occurred, there will be an alarm (Red sharking), Microprocessor will cut down the laser automatically, and digital panel will show the reason of the fault.

E.   In order to protect the laser, the power supply of the laser has time-delay function. After turning on with the key, the laser will start to work after 10 seconds.

5.0   OPERATION NOTICE

1.   The machine should have good grounding with grounding resistance<4Ω.

2.   The machine adopts high performance, high reliability, and steady voltage switch power supply. It has constant voltage overflow protection and can work in 220 VAC electric network. The micro-processor can monitor the output DC voltage. If the Fuse is melted broken, it will show that the machine's inner parts has occurred problems.

3.   In order to make sure reflect loss is ≥45dB, we use SC/APC connector; other type (such as FC/PC) cannot match with it. Keep the connector clean when

installing. After several plug-in/out, clean it with degreased cotton with anhydrous alcohol.

4. Do not turn on the machine separately or without protection cover at the connector end. Otherwise the laser will do harm to human body, especially eyes.

6.0   GUARANTEE AND REPAIR ITEMS

1.   Each unit is packaged with<Products Qualification Certificate> and with the series number of the certificate, one-year's guarantee can be provided.

2.   The micro-processor software of the device has the function of monitoring laser status, digital display, trouble alarm, network management etc. The pump laser will not be damaged only by man-induced factor. If the Red lamp sparking (Alarm), please send the product back to manufacturer for repairing. The user should not open the top cover for repair, otherwise, even within guarantee period, maintain and material fee will be charged.

3.   Lifelong maintain and upgrade can be provided even though the guarantee period is expired.

4.   If component is damaged by man-induced factor, material fee will be charged.

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