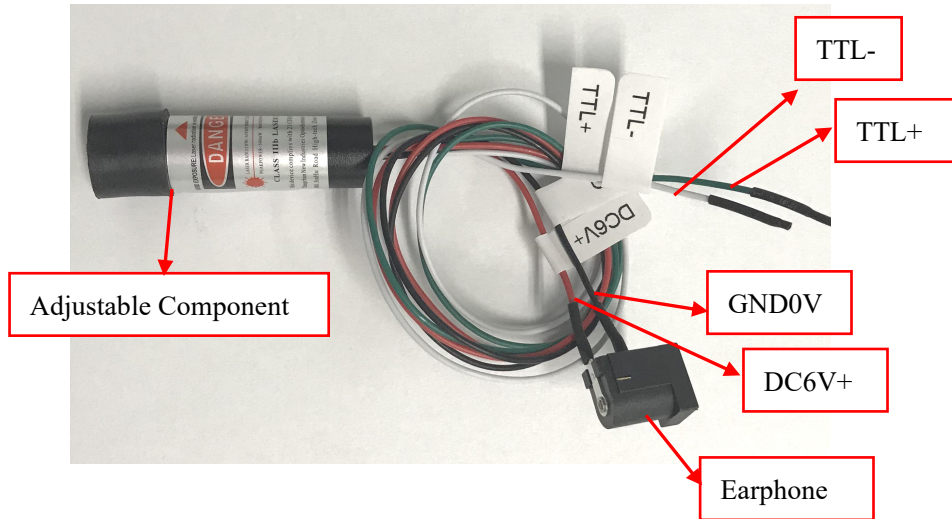


Operation Instruction for the laser Model with PGL-405



Caution-Use of controls or adjustments or performance of procedures other than those specified in this manual may result in hazardous radiation exposure.

Note: The laser only can be operated after the case temperature of the laser system return to the room temperature to avoid the damage of the big temperature range.



1. Product features

- 1.1. Temperature should be adjust between 23 °C -27 °C with heat dissipation set. Otherwise, the laser will not work well. The best laser operating temperature is 25 °C. Do not touch any element of the PC board. Or else, the laser will not work well. It is strongly advise to mount the laser system on a thermally dissipating surface. Failure to comply with this procedure may cause permanent damage to the laser.
- 1.2. If the laser system needs to be installed into equipment, please make sure the airflow clear. If necessary, turn on the extra fans for heat dissipation.

2. Operation

- 2.1. Please take off the label pasted at the aperture of the laser module.
- 2.2. If you do not want to use earphone, please cut it. The red line is “6V+”, please connect it with 6VDC. The black line is “-”, please connect it with 0V. The green line is “TTL+”, The white line is “TTL-”. After doing so, then the laser emit.
 - 2.2.1 Notes for TTL Modulation
 - a) Without signal input (or the leads open), the laser is in CW operation.
 - b) With signal low level ($<0.7V$) input, the laser is in the on state.
 - c) With signal high level ($>2.3V$) input, the laser is in the off state.
 - d) Signal input does not exceed 5.2V.
- 2.3. The beam size turns bigger when clockwise adjust the alignment component and reverse direction turns smaller.
- 2.5. Closing the laser system: Turn off the mains power of the power supply.
- 2.6. To prevent optic path from dust, you should replace aperture label or close the shutter.

3. Operating Environment

3.1. Temperature: 10-35°C (environment temperature)

NOTE: It is not recommended to operate the laser outside of this temperature range for prolonged periods. The unit is designed to shut down if the laser exceeds operating temperature limits. Failure to comply with the environment temperature may cause permanent damage to the laser.

3.2. It should also be noted that the laser must be operated in an environment with low vibration to meet the power stability specifications.

3.3. Humidity: 80±10% (RH)

If the air humidity overruns the figure, the working capability of the laser system will be affected indirectly (e.g. intracavity crystal deliquescence, circuit board short etc.). And operate the laser in an environment in which there is normal aeration.

3.4. Rated voltage: (According to the testing report)

Failure to comply with this procedure may cause permanent damage to the laser.

Following is the possibility if the service voltage is unstable:

3.4.1. Integrated circuit will be damaged; crystal cooling exceeds the rated value (crystal cooling circuit invalid), output power decreased, and fan not run, caused by unstable service voltage.

3.4.2. Unstable power supply makes LD damaged by instantaneous peak current passing.

3.4.3. Unstable voltage static electronic makes potentiometer electric capacity resistor integrated circuit TEC circuit PC board damaged.

4. Warranty and maintenance

4.1. The warranty is 6 months from the shipping date.

4.2. This warranty will not apply to those products which have been repaired or altered other than in accordance with the terms of this agreement.

4.2.1. Abused, misused, improper handling in use, or storage, or used in an unauthorized or improper manner or without following written procedures supplied by manufacturer.

4.2.2. Original identification markings or labels have been removed, defaced or altered.

4.2.3. Any other claims not arising directly from defects in material or workmanship.

4.3. Laser should be operated in the ambient of clean and dry and no electric

4.4. Always use finger cots, latex gloves, or the equivalent when handling optics, and use a clean, cushioned work surface.

4.5. In case you have any question during operation, contact the laser representative.

4.6. Please do not open the laser head without instructions from manufacturer, which may lead to the danger of exposure of hazardous visible and invisible laser radiation. Exceptional care must be taken when operating the laser with the covers removed. Laser protective eye ware must be worn.

4.7. Please operate the laser according to the operation instructions.