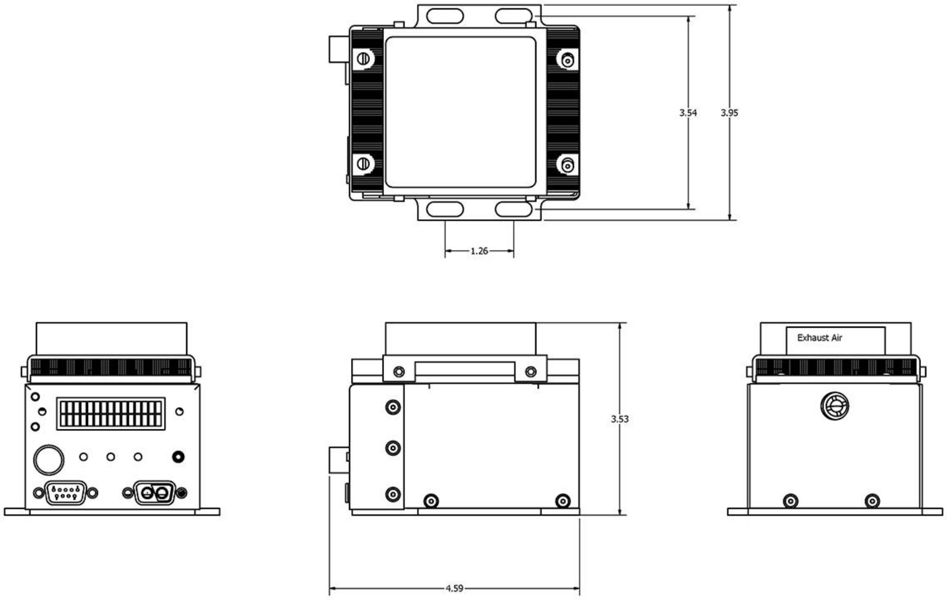
Operating instruction for Grande Laser Diode Modules

Introduction

The Grande series of laser modules offers high optical powers without the need for active circuitry and laser cooling thanks to the heat sync and fan engineered with the module. With both key operation and CDRH required interlock safety features the Grande is a safe yet reliable high power laser module. The LCD screen allows monitoring of internal temperature as well as drive level and bias modulation adjustments to be easily controlled from the module itself.



Installation

Do not mount the laser in a thermal insulating material, such as foam plastic. Heat can have adverse effects on laser diodes. Such effects include decreased output power and large shifts in wavelengths. For best heat dissipation use a metal mounting fixture.

The operating voltage for the Grande laser is 5 VDC for all infrared models and between 5 and 12 VDC for visible light models.

P1: DEMA 9S

Pin	Wire Color	Name	I/O	Function
1		Mod +		Modulation positive input
2		IMon +		Current monitor positive output
3		PdMon +		Photo diode monitor positive output
4		N/C		No Connection
5		N/C		No Connection
6		Mod -		Modulation negative input
7		IMon -		Current monitor negative output
8		PDMon -		Photo diode monitor negative output
9		N/C		No Connection

P2: DSUB COMBO 2 Position 2W2S

Pin	Wire Color	Name	I/O	Function
A1		+5VDC		Power Supply 5VDC Input
A2		Ground		Power Supply Ground

Operating Procedure & Control Description

The Grande series of lasers is controlled via hardware buttons to interact with the firmware of the laser.

To activate the laser ensure the interlock pin is fully inserted into the front of the laser, insert the provided key and turn clockwise. The LCD panel on the front of the laser module will activate and display the current off status. Depress both buttons indicated on the LCD panel to activate the laser. There are two LED indicators on the front of the Grande laser module. The bottom/green LED lights to indicates the laser module power is on. The top/white LED will flash for 5 seconds after the laser is initiated via the buttons on the front of the Grande laser module to indicate the laser is active.

To cycle through the menu and status options depress the far right button indicated below the text “next” on the LCD screen. To adjust the power or bias of the laser up or down, navigate to the appropriate screen using the “next” button and depress the up/down buttons indicated by the LCD screen to achieve the desired power or bias levels.

Note that upon the first initialization of the laser the power level will be factory set to approximately 90% of the maximum operating current for the laser diode integrated with your specific Grande model.

Maintenance & Service

This laser module contains no user serviceable parts. Depending on environmental conditions, the optics may require occasional cleaning. Clean, compressed air is recommended to blow the optics clean. If compressed air fails, clean lens carefully with alcohol and a lint-free rag or cotton swab.

Warranty and Repair Return Policy

Opening the Grande laser will void the warranty.

No return of merchandise will be accepted by PTI without an RMA (Return Material Authorization) number, issued by the factory and prominently displayed on the return package. No return shipments will be accepted "Collect" or "COD". On warranty returns, PTI will pay for shipping charges on the return of merchandise to the customer.

When contacting the factory for an RMA number, please have the following information available: model number, serial number(s), and a description of the problem.

Laser Safety

Class 4 lasers are not intended for use in surveying, leveling, alignment, or medical applications.

Caution: Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Caution: The use of optical instruments with this product will increase eye hazard.

Do not shine laser in the direction of other people or at reflective surfaces that might cause exposure to the human eye. Do not mount the laser at eye level.

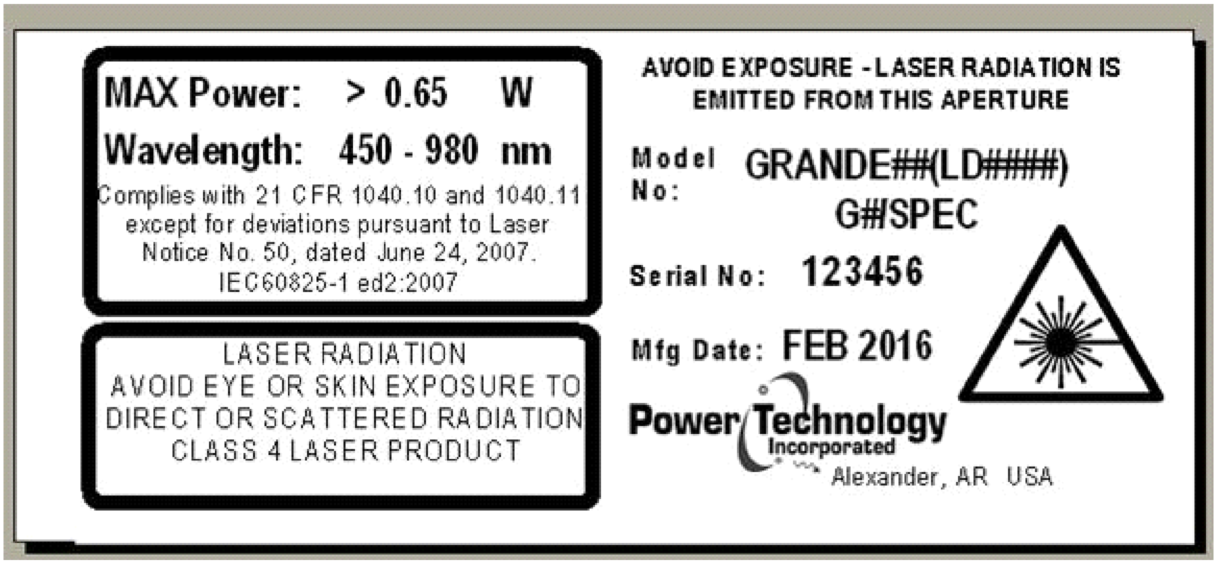
Caution: Always use appropriate safety eye wear when operating the Grande laser module.

Modifications, that affect any aspect of the product's performance or intended functions will require re-certification and re-identification of the product in accordance with the provisions of 21CFR 1040.10 and 1040.11. A copy of 21CFR 1040.10 and 1040.11 can be downloaded from www.powertechnology.com.

The product labels shown below can typically be found near the output optics.

Example of Laser Safety Sticker for the Grande Laser

Power Technology incorporated



***Example above is for reference only and does not include safety or rating information for your specific Grande laser. Please refer to the sticker on your laser for specific safety and classification information.**