



48521 Warm Springs Blvd. Suite 307A, Fremont CA 94539 USA Phone 001 510 962 5884 Fax 001 866 650 8989
WWW.RGLASE.COM EMAIL: rgblasec@rgblase.com

DDR-2100-12 OEM Laser Driver Operation Manual



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

Revision History

Date	Author	Revision	Change Description
Dec. 06, 2006	PM	01	Initial Draft

Table of Contents

Contents

1. Introduction.....	1
2. Initial Set Up.....	1
3. Power Up	1
4. TTL Modulation	2
5. Laser Safety	2

1. Introduction

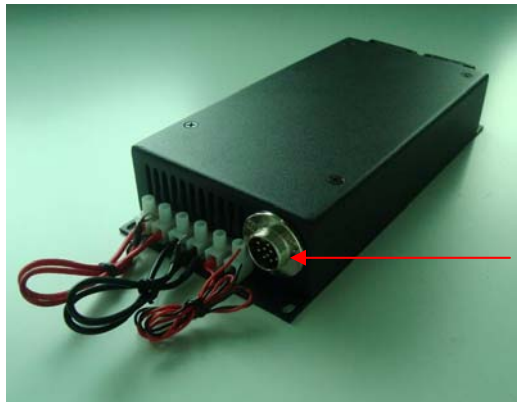
This document provides operational instruction and user manual for DDR-2100-12 OEM laser driver.

2. Initial Set Up

- (1) Mount the laser head onto heat sink or place the laser head on a large metal base as a heat sink with good thermal contact and ventilation.

Caution: The laser case must be kept under specified temperature range during the operation otherwise will be damaged!

- (2) Connecting the laser head to DDR-2100-12 laser driver and fasten the connector to make sure good electrical connection.

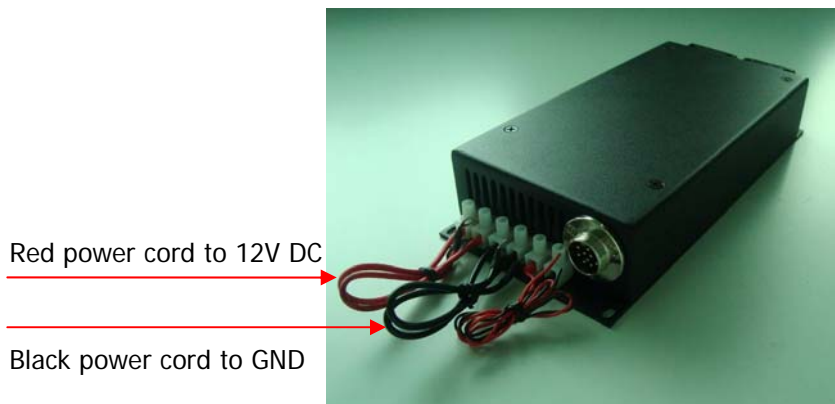


Connector to the laser head

Caution: Before connecting the laser head to laser driver, double check if they have the same serial number, mis-matching between laser head and laser driver will cause damage to both laser head and driver!

3. Power Up

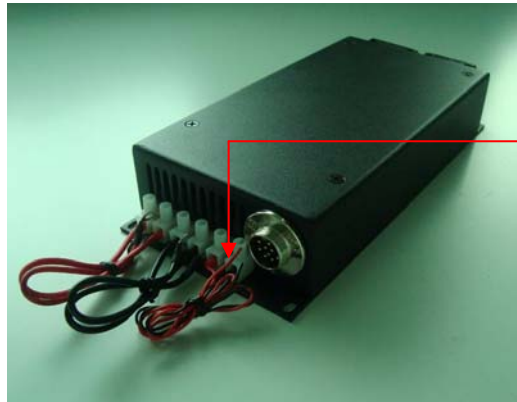
- (1) Double check if the ripple of the 12V DC power supply is less than 100mV and the Max current is equal or greater than 13A.
- (2) Connecting the red power cord to positive output end (+) and the black power cord to the GND (-) of the 12V DC power supply.



- (3) Turn on the 12V DC power supply, wait for 15 minutes and make sure laser head case temperature within specified range and the laser output power is normal and stable.

4. TTL Modulation

- (1) The two twisted wires on the side of the black power cord are TTL input wires. The red wire should be connected to TTL signal source high output end and the black wire should be connected to the TTL signal source ground (GND).



TTL modulation Input Ports

- (2) If no modulation signal was presented on the TTL modulation input wires, the laser will operate at CW state.
- (3) When TTL high signal (4.5V ~5V) was presented on red wire, the laser will on.
- (4) When TTL low signal (0V ~ 0.5V) was presented on the red wire, the laser will off.

Caution: Be sure that the TTL signal source and the 12V DC power supply share the same ground otherwise could cause malfunction!

5. Laser Safety

- (1) Laser light can be harmful to human eyes and skin. Must avoid direct exposure to laser beam and should NEVER point the laser beam to people. DO NOT look at the laser beam directly. Always wear laser safety goggle when laser was on.
- (2) The laser head should be placed onto a stable surface. Be sure not to place any other object on the laser head or the power supply.
- (3) The laser should be operated in a dry clean and dust-free environment.
- (4) The laser must not be exposed to shock or excessive oscillations.
- (5) Never use your laser in the vicinity of highways and airports. DO NOT target moving vehicles and airplanes.
- (6) Never randomly aiming the laser outside the window.
- (7) DO NOT use a laser at the place marked "No smoking" "flammable and explosive".
- (8) Set up controlled access areas with "For laser only" in well marked areas with controlled access. Be sure to post appropriate warning signs visible to all.
- (9) Maintain experimental setups at low level to prevent inadvertent eye encounter with beams.