

OPERATIONAL PRECAUTIONS

Laser Safety

Laser light emitted from the semiconductor lasers is harmful to the human. Avoid looking directly into the module or diode aperture or the fiber emitting end when the device is in operation.

ESD Caution

Handle laser diodes and modules with extreme care to prevent electrostatic discharge (ESD), which is the main cause of unexpected fatal failure.

Always wear wrist straps, work on a grounded anti-static mat, and follow extremely rigorous anti-static procedures. If a laser diode is handled carelessly, it may be destroyed instantly by ESD from a human body. When not in use, shorten the leads of laser diodes and modules to protect against ESD.

Operational Caution

Prevention of current surge

Laser diodes are of fast response devices. Use surge-protected outlets to prevent the possibilities of large momentary transients from switches, power supply and other high current devices such as soldering irons, vacuum pumps, fluorescent lamps, etc.

Soldering

- ◆ Keep the temperature of a solder iron (30W) tip less than 260°C.
- ◆ Apply solder promptly once the connections are brought in place.
- ◆ Ground the metal part of the solder iron tip if a solder iron is used more than 5 minutes.

Cutting leads

- ◆ Perform the work over a conductive mat.
- ◆ Wear grounded anti-static wrist bands.
- ◆ Do not use air nippers as they are a source of static electricity.

Handling

- ◆ Do not directly touch the leads of a laser diode or module.
- ◆ Do not touch the window glass of a laser diode or a fiber emitting end with bare hands.
- ◆ Use care to prevent damage to the window glass by tools or other objects.
- ◆ When dust deposited on the window glass, be sure to remove with an air gun.

Fiber Caution

The bending diameter of fiber should be larger than 4cm for short term storage and larger than 8cm for long term storage.

Operational Procedure

- Connect the electrodes of a laser diode or module correctly according to the supplied pin layout.
- Set the current or voltage to zero before switching on the power supply.
- Increase the current or voltage gradually to the required value; never exceed the rated value.
- Suggest to put the laser modules on a heat sink when operation.
- Decrease the current or voltage gradually to zero when finish.
- Disconnect the laser module.
- Turn off the power supply.

Electrically shorten LD module and store in non-extreme conditions.

Suggest using a constant current power supply.

