Model "ACM" LASER DIODE OEM SYSTEM INSTRUCTIONS

GENERAL OPERATION

Installation: Do not mount the system in a thermal insulating material, such as foam plastic. For best heat dissipation use a metal mounting fixture. If the system is to be run at the maximum 12VDC input (actual maximum will depend on the particular system you have purchased) the use of a heatsink is recommended for operating temperatures above 25°C.

Heat generation can also be a problem on systems that have an output power of 5mW or greater or, that have 70mA or more of current drawn by the laser. *If either of these conditions exist for your system then a heat sink is recommended to prevent damage to the laser diode*.

An input voltage of 4 to 5VDC will allow the highest ambient operating temperature.

Operation: The system operates in Constant Optical Output Power Mode only. This means that if there is a change in temperature, focus, or any other dynamic that changes the output of the laser, the power supply will automatically adjust current output to compensate.

The optical output power on the standard system is preset at the factory and fixed, no adjustment is possible.

Optional Optical Power Controls: The option X12 is a potentiometer located on the end of the system. This enables the user to adjust the optical output power from 0 up to 100% of the rated power of the system. There is also an Option D1 which enables the power to be digitally controlled instead. If you have this option, then you need to refer to those separate instructions.

Optics: The standard system is not focus adjustable. The corrected beam is collimated and will therefore maintain a minimum divergence. Care should be taken when cleaning the optics to prevent damage. Cleaning methods should follow those customary for glass optics

Telescope Collimator Accessories: The Telescope Collimators can be attached to the system to either focus or expand the beam in order to achieve a smaller far-field spot. Adding this accessory will result in some optical power loss for the system.

If you utilize this accessory, the end plate of the system must be removed. A spanner wrench is provided to properly remove the plate.

Caution: Do not remove the front plate or attach the Telescope Collimator with the system on. Reflections off of the Telescope Collimator represent a hazard to the eyes.

To attach the Telescope Collimator first turn off the system, remove the system front plate and attach the Telescope Collimator. Turn the system back on.

Reflections onto the internal photocell from the lens are a vital part of the feedback loop. This photocell is very sensitive to these reflections. Removing the front plate while the system is operating could change the amount of reflections, thereby changing feedback characteristics. Therefore, *removing the face plate with the system at full power could reduce the amount of reflections resulting in destruction of the laser diode due to excessive drive current.*

Warranty Notes:

Sealed Locking Ring: The laser diode is held in place with a locking ring. This locking ring is factory sealed. It is necessary to remove the lens in order to gain access to this ring. So, accidental breaking of this seal is unlikely.

Breaking the seal on this locking ring voids the warranty.

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