



## **MiniGreen™ (9.0 mm) and MicroGreen™ (5.6 mm) Operating Instructions**

### **1. Precautions:**

MiniGreen™ and MicroGreen™ lasers are sensitive to damage from electrostatic discharge (ESD). Before unpacking the laser for installation and testing, observe proper grounding and handling procedures to protect the laser.

The MiniGreen™ laser is rated for a maximum green output power of 100 mW and is therefore a Class IV laser. These devices are not eyesafe at the output aperture and operators should observe proper precautions to protect their eyes as well as the eyes of other personnel. MicroGreen™ lasers have a maximum output of 5 mW and are classified as Class IIIa. These lasers are also not eyesafe at the output aperture and operators should observe proper eye safety precautions.

### **2. Electrical Connections:**

In Figures 1 and 2 below the electrical pins are identified. The bodies of MiniGreen™ and MicroGreen™ laser devices are (+) (lower pin) while the (-) connection is the upper right pin. The third pin is unused for these constant current devices.

### **3. Test Data:**

The label found on the box each laser is shipped in identifies the Model Number, Serial Number, and the measured current and thermistor setting to obtain the rated power output. All MiniGreen™ and MicroGreen™ devices are tested at Snake Creek Lasers using SCL-HS-5.6MM or SCL-HS-9.0MM heatsinks mounted on a thermoelectric cooler (TEC) maintained at the equivalent temperature shown on the box (in kΩ). The thermistor used to provide a constant temperature is located near the base of the heatsink. Some users may choose to purchase Snake Creek heatsinks to test their green lasers with, while others may choose to build a custom heatsink. If custom heatsinks are used there will be differences in the current at which a specified output is obtained. When using a custom heatsink, after connecting the laser to a suitable power supply, increase the current until the specified power output is obtained as measured with a detector or calorimeter. The output from all Snake Creek green lasers is filtered to insure that only 532 nm light is obtained and any residual 1064 nm light is filtered out.



#### **4. Maximum Current:**

For the SCL-CW-532-5.6MM-005 laser, the maximum current that can be delivered to the device is 220 mA. For the SCL-CW-532-9.0MM-100, the maximum diode current is 1200 mA. Failure to limit the current to these devices to the quoted maximum currents may result in device failure or irreversible damage. If either of these devices are operated at lower output powers of course lower currents will be needed.

#### **5. Heatsinking:**

Instructions for the proper heatsinking of Snake Creek green laser devices may be downloaded from our Web site [www.snakecreeklasers.com](http://www.snakecreeklasers.com). Operating green lasers without heatsinking will result in significantly reduced power output and in possible device failure.



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