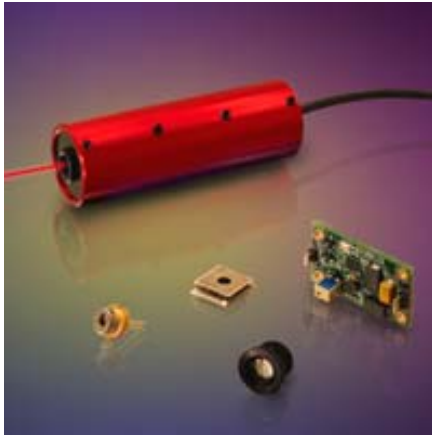


TECIRL Series

Thermoelectrically Cooled Infrared Laser System



Product Features

- *Integrated TEC & Laser Controller*
- *Compact Size, 1 × 3 inch*
- *Low RMS Noise*
- *Excellent Beam Quality*
- *Excellent Power and Wavelength Stability*
- *ESD and Over-Temperature Protection*
- *Long Life Time*
- *Low Power Consumption, < 2W*

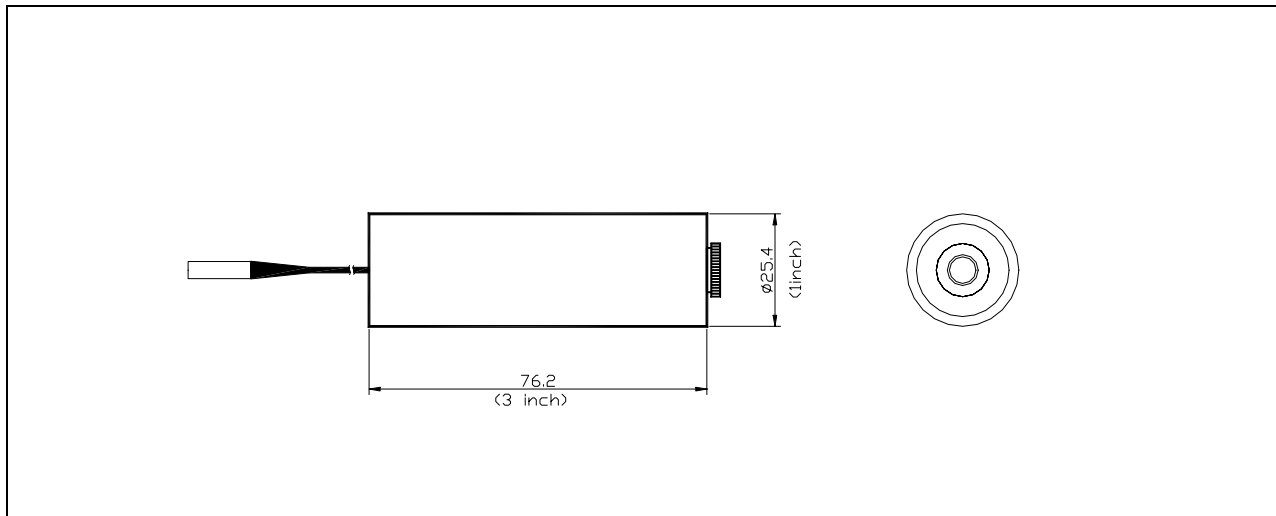
The **TECIRL Series Thermoelectrically Cooled Red Laser System** is a compact self-contained, highly reliable laser operating at very stable wavelength and power. Built in temperature controller stabilizes the laser temperature within $\pm 0.01^\circ\text{C}$. The laser output power stability is less than 1% over long term. The stable power, low noise and beam pointing stability of this laser is ideal for bioanalytical, measurement and imaging application. It is powered by 3.3V DC or 110~220 wall mount power adaptor (supplied with the laser) with plug & play operation.

Two versions are offered CW (continuous wave) or modulated; both have the output power range from 1mW to 200mW.

Application

- *Bioanalytical*
- *DNA Sequencing*
- *Flow Cytometry*
- *Medical Imaging*
- *Capillary Electrophoresis*
- *Confocal Microscope*
- *Particle Counting*
- *Interferometry*
- *Printing (Reprographics)*

Mechanical Drawing



TECIRL Series

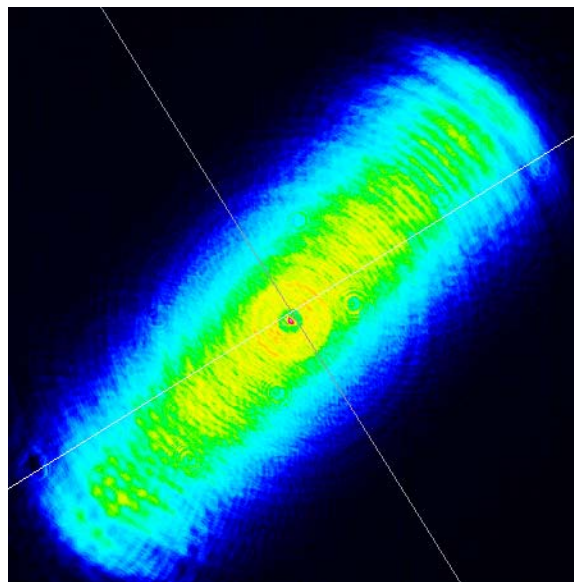
Thermoelectrically Cooled Infrared Laser System

Specification

Optical	Wavelength	780 to 850nm
	Power Stability	<0.5%
	RMS Noise(20MHz Bandwidth)	<0.5%
	P-P Noise	<5% over 8hrs
	Spatial Mode	Single Mode Laser
	Spot Size	Adjustable or Collimated (5mm)
	Divergence at the collimation	< 1 mrad
	Beam shape	Elliptical (Circular as an option)
	Pointing Stability	< ±25 µrad
Electrical	Operating Voltage	3.3V DC
	Operating Current	<0.5A
	Driving Circuit	Auto Power Control
	Electrical Connections	+Red, -Black
Mechanical	Dimension (D x L)	25.4 x 76.2 mm (1" x 3")
	Operating Temperature	-10°C to +40°C(With adequate heat sink)
	Storage Temperature	-10°C to +50°C
	Heat Sink Requirements	Recommended for extended use

Thermal Management: The TECIRL Series Laser System is designed to dissipate heat through its body. For proper cooling, do not restrict air circulation around the device, a additional heat sink with integrated fan can be used to maximum the performance and life of the laser system.

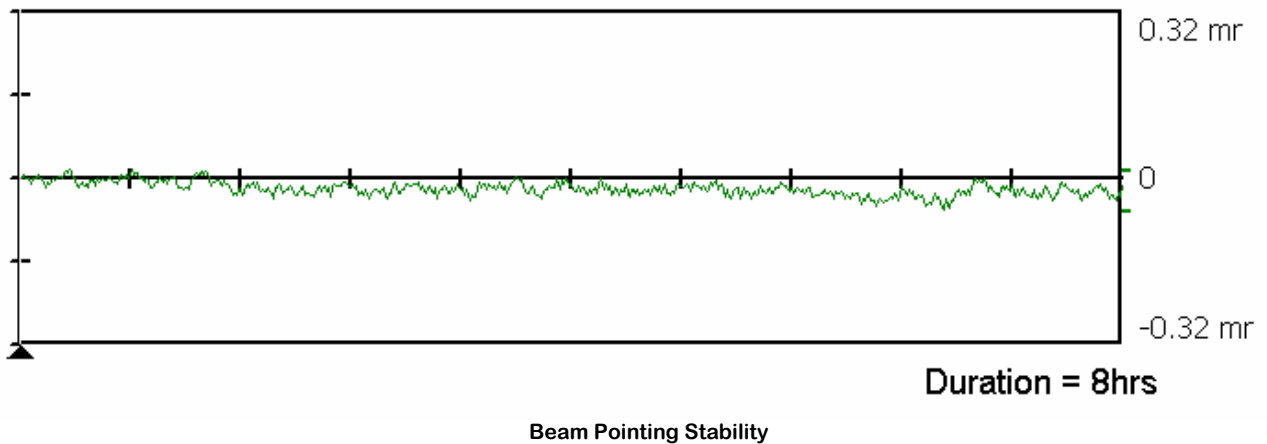
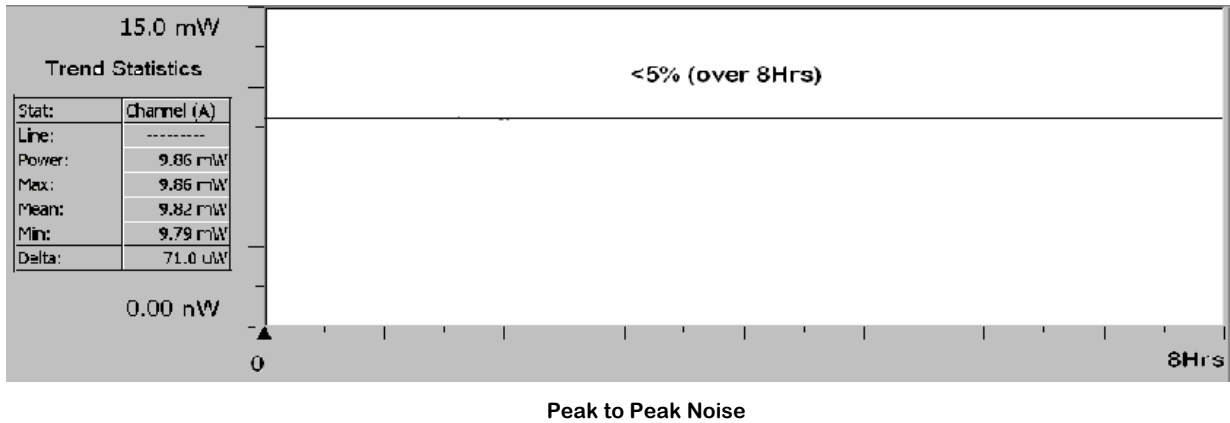
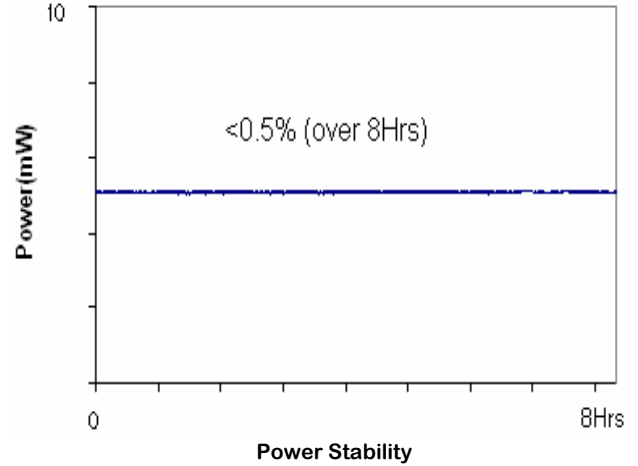
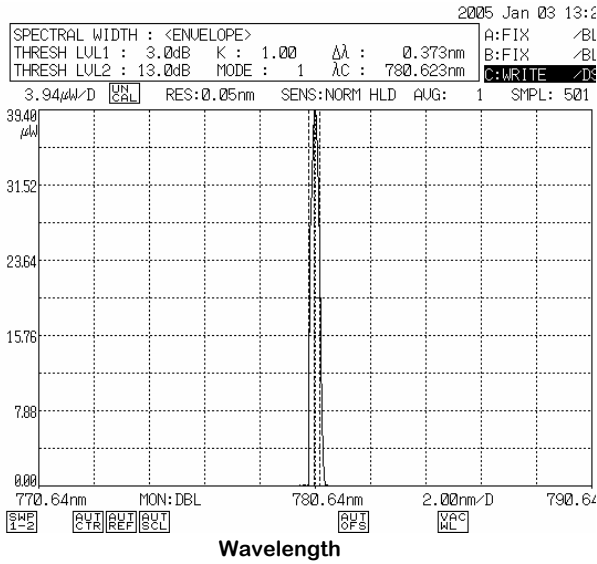
Typical Characteristics



Beam Profile

TECIRL Series

Thermoelectrically Cooled Infrared Laser System



TECIRL Series

Thermoelectrically Cooled Infrared Laser System

Order Information

Power	Wavelength				Classification
	780nm	808nm	830nm	850nm	
1 mW	TECIRL- 1G-780*				Class IIIb
3.5 mW	TECIRL-3.5G-780*			TECIRL-3.5G-850*	Class IIIb
15 mW	TECIRL-15G-780				Class IIIb
30 mW	TECIRL-30G-780		TECIRL-30G-830		Class IIIb
50 mW	TECIRL-50G-780				Class IIIb
70 mW			TECIRL-70G-830		Class IIIb
100mW		TECIRL-100G-808			Class IIIb
200mW		TECIRL-200G-808			Class IIIb

TTL option is available upon request, it can operate from CW up to 155MHz, and the part No. will add -TTL, e.g. TECIRL-15G-780-TTL



Operational Hazard-Semiconductor Laser Diode Module: This laser module emits radiation that is invisible and harmful to human eye. When in use, do not look directly into the laser emitting aperture. Direct viewing of laser diode emission at close range may cause eye damage.

Limited Warranty: One year. No warranty coverage for disassembly, modifications or damage due to abuse or misapplication.

Rev.B Oct. 2004