

Wide range of lasers

Laser diodes play a major part in a number of new technologies in medical equipment. Nic Paton explores how Frankfurt Laser Company is keeping its position at the top of the laser market.

Medical technology is advancing all the time, and laser diodes now have a wide, and growing, range of medical applications. Laser diodes are an integral part of much of the technology used everyday in medical diagnostic equipment, optical computer tomography, patient positioning, surgery, obstetrics, skin diseases, ophthalmology, photodynamic therapy and low-level laser therapy. Frankfurt Laser Company has been a pioneer in this market since 1994, supplying medical and healthcare establishments across Europe.

Its laser products for medical applications encompass a wide range of single mode and broad area laser diodes, pulse IR laser diodes, superluminescent diodes, high power laser diodes and bars with fibre output, laser diode modules with high-quality glass optic and red, green, yellow and blue DPSS lasers. The company has recently brought a number of new products to market.

High power laser diodes in cooled packages

A new range of fibre-coupled laser diodes in cooled packages have been created specifically for medical applications, including dental treatment, surgery, otorhinolaryngology (ENT), obstetrics, skin diseases and photodynamic therapy.

These diodes come in hermetically sealed HHL housings featuring integrated TEC, thermistor to temperature stabilise/wavelength tune laser emission and monitor photodiode to stabilise power output. Integrated fibre sensor and pilot beam come as an option.

Available wavelengths range from 622nm to 2,000nm with output power from 0.2W to 30W. They are available with 62.5µm to 1,000µm core diameter multimode fibre terminated with SMA-905 connector.

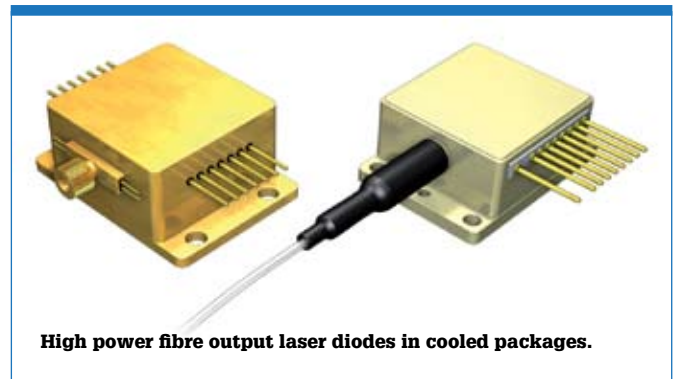
HEML-FC series high power temperature-stabilised laser diode with fibre output

A new line of high power temperature-stabilised laser diode modules, the HEML-FC Series laser modules are equipped with multimode fibre output (standard: 100µm, NA=0.22, SMA905 connector, others on request) and provide high output power for a variety of applications.

The HEML-FC series offers stable power output (<1%) and wavelength (<0.5nm) over a wide temperature band (0 to +40°C) and exceptional pointing stability and alignment. It is supplied with high power laser diodes up to 2W or green DPSS laser up to 200mW. The focus is user adjustable. TTL modulation up to 1MHz (532nm up to 10kHz) and analogue modulation up to 10kHz is standard.

FBLD-976-8.00-FC62.5-4Pin new fibre-coupled laser at 976nm

This laser diode delivers 8W from 62.5µm core fibre and is the highest brightness pump laser on the market. It is designed to provide the power and reliability for all solid-state and direct diode laser systems, particularly pumping and medical, analytical and printing applications.



High power fibre output laser diodes in cooled packages.



HOML2: Next-generation temperature-stabilised laser diode module.

It comes in a hermetically sealed, uncooled two-pin package, which measures 26mm x 12.7mm x 7mm.

HOML2 temperature-stabilised laser module with output power up to 500mW

This new module features user-adjustable power and temperature to tune the wavelength, as well as analogue output signals for power, temperature and operation time. It is available with circular, elliptic and line-shaped beam combined with low beam divergence, ultra-stable power output (<1%) and wavelength (<0.2nm) over a wide temperature band (0 to +40°C) and exceptional pointing stability and alignment.

The laser diode modules are available with the optical output in blue, green, red and infrared wavelength range (405-3,000nm), offer modulation ports for 10MHz digital and 1MHz analogue modulation. Green DPSS laser can be supplied with 30kHz digital modulation. ■

Company profile

Frankfurt Laser Company is a private company engaged in the development, production and distribution of a wide range of FP, DFB and DBR laser diodes, SM individually addressable and broad area laser diode arrays, VCSELs and quantum cascade lasers and incorporating them into products.

www.frlaserco.com

