

Turn-key Fiber Coupled Diode Laser System



The **Visotek DL** (Diode Laser) series laser system offer a cost effective, turn-key platform for operating a wide variety of different diodes. The 19" housing includes a fiber coupled diode, power supply/driver electronics and microprocessor controlled cooling system that adapts the temperature of the diode according to the output power, thus stabilizing the wavelength. Non standard systems can be built to order in a number of different configurations using diodes with output powers ranging from 10 Watts to 300 Watts. Air cooled, tap water cooled or chiller water temperature controlled cooling schemes are available for most output powers. The DL series is an easy to use, versatile, alternative to "doing it yourself", designed to meet the needs of customers who need a complete, turn-key diode laser system.

Features

- Fully integrated turn-key system
- Fiber coupled output powers up to 300 W in 400 micron fiber
- Wavelength stabilization
- Air cooled and passive cooling with tap water
- Long lifetime, > 20,000 hours, proven reliability

Applications

- Pumping Fiber and other Solid State Lasers
- Plastic Welding
- Soldering
- Direct Medical Applications
- Medical Device Materials Processing

Options

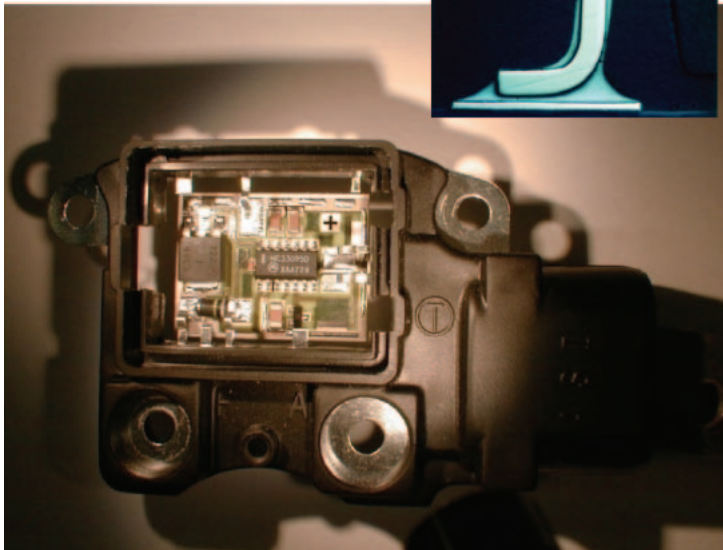
- Processing optics for laser welding, cutting and cladding
- Pilot laser
- Internal shutter
- Power monitoring, measuring laser output power launched into the fiber

The designs and specification of all products sold are subject to change without notice and, in the event of any changes, seller has no obligation to make similar changes in products previously ordered by the buyer.

Specifications

Optical							
Output Power	30 W	45 W	75 W	100 W	140 W	200 W	300 W
Fiber size (micron)	200/400	400/600	400/600	400/600	600	400	400
Center Wavelength (nm)	808-980	808-980	808-980	808-980	940, 980	808	940, 980
Cooling	air	air	air	tap water ¹	tap water ¹	tap water ¹	tap water ¹
Central wavelength variation without wavelength stabilization	+/- 3 nm	+/- 3 nm	+/- 3 nm	+/- 5 nm	+/- 5 nm	+/- 5 nm	+/- 5 nm
Central wavelength variation without wavelength stabilization ¹	+/- 0.3 nm	+/- 0.3 nm	+/- 0.3 nm	+/- 0.3 nm	+/- 0.3 nm	+/- 0.3 nm	+/- 0.3 nm
Output power stability	+/- 2 %						
Spectral width	Typically 3-5 nm (FWHM)						
Beam divergence (NA)	0.22 +/- 0.02						
Output Fiber Cable Length	3 m, 9.75 ft (metal armored)						
Termination	F-SMA 905						
Electrical							
Typical operating current	Universal voltage, 110V/60Hz/10A or 220 V/50 Hz/5A						
Mechanical							
Overall Dimensions (LxWxH)	427 x 487 x178 (4RU) mm (18" x 19" x 7"(4RU))						
Mass	18 kg (40 lbs)						
Cooling							
Flow Rate	N/A	N/A	N/A	> 3 l/min	> 3 l/min	> 4l/min	> 4l/min
Water Temperature	N/A	N/A	N/A	8-20 C	8-20 C	8-20 C	8-20 C
Water quality	N/A	N/A	N/A	Industrial water	Industrial water	Industrial water	Industrial water
Max. particle size	N/A	N/A	N/A	500 micron	500 micron	500 micron	500 micron
Environmental							
Storage Temperature	5 to + 60 C						
Operating Temperature Range	15 to 33 C						
Altitude	0 to 3000 m						
Humidity	10-80 %, non condensing						
Warm-up time	Less than 1 minute						

¹ Wavelength stabilization for water cooled units require a chiller



Soldering with diode laser



Plastic welding with diode laser

visotek^{inc.}
smart laser tools