



DFB FIBER LASER

The fiber lasers commercialized by IDIL Fibres Optique are built around the design of a DFB (Distributed Feed Back) laser. They use an Erbium or Ytterbium doped fiber on which a FBG (Fiber Bragg Grating) is written. By construction, this laser is naturally single-frequency. Such type of laser is then also tunable, via thermal control over several nm without any mode hopping. It is pumped, thanks to a multiplexer, by a laser diode operating @ 980 nm.

The optical output is isolated in order to avoid any light feedback which could perturbate the laser. A PM type is also available.

The driver integrates three main functions :

- Power and temperature stabilisation of the pump laser diode.
- Temperature stabilisation of the DFB laser via a Proportional Integral and Derivative electronic for setting the right wavelength.
- Output power controller for the pump laser diode and DFB itself (drift management). Two output power diagnostics are available.

RS232 version is available only on benchtop laser.

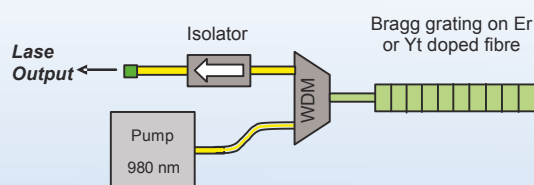


Diagram of fibre laser

SPECIFICATION

Output power	Up to 10 mW
Available wavelength	1020-1200 nm 152 -1610 nm
Wavelength stability	±1 pm peak to peak
Output power stability	Dérive < 5 %
Magnitude stability (20 kHz - 2 GHz)	±1.5 % rms
Spectrum	Single-frequency FWHM < 20 kHz
Polarisation	Linear
Polarisation ratio	> 25 dB
Package	OEM - Benchtop

APPLICATION

Laser spectroscopy
Interferometry
Wavelength reference
Test and measure equipment for telecom applications
Scientific applications

