

PEFL-KULT

PULSED ERBIUM FIBER LASER

1.5 μm ULTRA COMPACT LASER TRANSMITTER

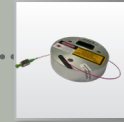


1.5 μm

PK 50A/ PK 50D



PK 2A



1.5 μm eye-safe operation
Energy per pulse up to 100 μJ

The PEFL-KULT series is a range of 1.5 μm pulsed fiber laser transmitters, delivering high peak power and high energy per pulse in ultra-compact modules with diffraction-limited output beam for range finding applications. A varied choice of models offers the possibility to operate over a wide range of operating setpoints (pulse duration, pulse repetition frequency and energy) allowing to be suitable for a various of high-accuracy systems. Compact pulsed laser transmitters are commonly used in applications such as ADAS, 3D scanning, mapping, telemetry, and also for supercontinuum generation.

The compact platforms allow an easy integration in highly integrated systems. The all-in-fiber design requires no maintenance. The PEFL-KULT has been tested under vibrations and shocks conditions in accordance with military standards (MIL-STD-810G, RTCA-DO-160G...) allowing operations in the harshest environmental conditions over a long period of time.

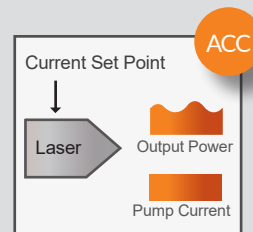
Lumibird electronic board designs offer a wide range of functionalities. The control of the PEFL-KULT can be analogic or digital. Platforms incorporate a microcontroller for internal controls, alarms, and RS232/USB communication making the laser compatible all systems. Pulses are triggered by an external signal supplied by the user system.

Solutions are also radiations proven, allowing spatial applications when the laser is equipped of Radhard erbium doped fiber.

More than 10 000 lasers have already deployed all over the world.

Modes of operation

The devices offer one mode of operation :



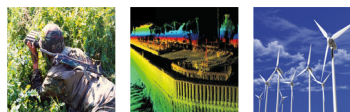
ACC (Automatic Current Control) mode is standard for all devices. The laser is controlled from diodes current set point.

Key features

- 1.5 μm eye-safe operation
- Energy per pulse up to 100 μJ
- Peak power up to 15 kW
- Pulse duration from 0.5 ns to 200 ns
- Pulse repetition frequency from 5 kHz to 2 MHz
- Continuous or burst operation
- Diffraction limited output beam
- Linear or random polarization
- Low power consumption
- Wide operating temperature range (-35 $^{\circ}\text{C}$ to +65 $^{\circ}\text{C}$)
- Compact and rugged package

What applications

- ADAS
- Telemetry, range-finding
- 3D scanning
- Mapping
- Cloud height measurement
- Wind sensing
- Supercontinuum generation



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Optical Specifications @ 25°C

PEFL-KULT	
Mode of operation	Pulsed
Operating wavelength	1545, 1550 nm ¹
Energy per pulse	Up to 100 μJ
Peak power	Up to 15 kW
Average power	Up to 2500 mW
Pulse repetition frequency	From 5 kHz to 2 MHz
Pulse duration (FWHM)	From 0.5 to 200 ns
Seed tap (Option)	1 m pigtail length, > 0.1mW peak power, SMF, FC/PC
Pigtail length	32 +/-2 cm
Fiber type	SMF – PANDA - LMA
Polarization	Random or linear
Beam quality, M^2	1.1 to 1.5
Output termination	FC/APC, ferule APC or Collimator

1 : Other wavelength on request

The PEFL-KULT is available as OEM module for an easy integration.

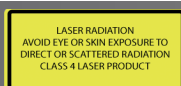
RELIABILITY

The Lumibird range of fiber laser are manufactured with tested components and are submitted to several inspections during the manufacturing process under a rigorous quality management certified in accordance with the ISO 9001:2015 standard. Our all-in-fiber systems offer maintenance-free operation. Countless units are continuously running in demanding environments with no failure.

GUARANTEE

Our fiber systems are under 1 full year parts and labor warranty.
We offer a warranty extension of 1 or 2 years. Please contact us.

For ordering information and custom solutions, please contact us : websales@keopsys.com



Lumibird undertakes a continuous and intensive product development program to ensure that its products perform to then highest technical standards. As a result, the specifications in this document are subject to change without notice.

Lumibird has locations across the globe that are available to provide support for any product, service or inquiry. Visit www.lumibird.com to connect with any of our global sites.

