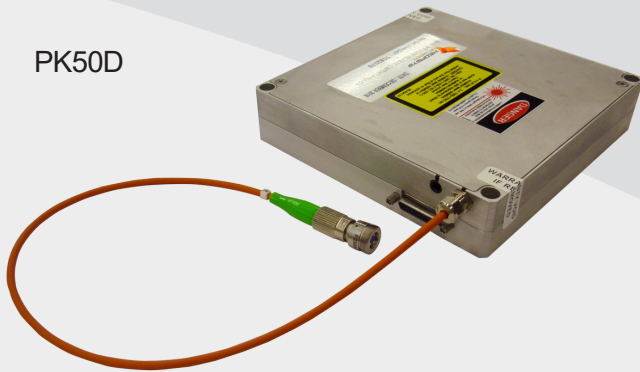


PYFL-KULT

Pulsed Ytterbium Fiber Laser Ultra-compact Laser Transmitter



PK50D



PK26D



MAIN FEATURES

- 1064 nm operating wavelength
- Energy per pulse up to 25 μ J
- Peak power up to 25 kW
- Pulse duration 1 ns to 3 ns
- Pulse repetition frequency from 5 to 130 kHz
- Continuously pulsed or burst operation
- Linear or random polarization
- Diffraction limited output beam
- Low power consumption
- Wide operating temperature range (-35°C to $+65^{\circ}\text{C}$)
- Compact and rugged module

MAIN APPLICATIONS

- HARMONIC GENERATION
- TELEMETRY
- RANGE-FINDING
- 3D SCANNING
- MAPPING
- OPTICAL PUMPING
- SUPERCONTINUUM GENERATION

“

The PYFL-KULT series is a range of 1 μ m 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) making them suitable for a variety of high-accuracy systems. Compact pulsed laser transmitters are commonly used in applications such as 3D scanning, mapping, telemetry, and also optical pumping and harmonic generation.

The all-in-fiber design requires no maintenance. Some models of the PYFL-KULT series have been tested under vibrations and shocks conditions in accordance with military standards (MIL-STD-810G, RTCA-DO-160G...) allowing operations in the most demanding environments.

The laser modules incorporate a microcontroller for internal controls, alarms, and RS232/USB communication, making the laser widely compatible. Pulses are triggered by an external signal supplied by the user system.

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Many options and configurations are available. Please contact Lumibird to find the best match for your needs and compatibility between options.

PYFL-KULT

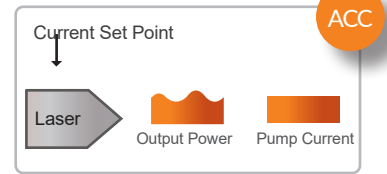
Pulsed Ytterbium Fiber Laser Ultra-compact Laser Transmitter



SPECIFICATIONS

	PYFL-KULT
Mode of operation	Pulsed
Operating wavelength (nm)	1064 +/-2
Wavelength excursion over T° range (nm)	< 0.3
Pulse duration (FWHM, ns)	From 1 to 3
Energy per pulse (µJ)	Up to 25
Peak power (kW)	Up to 25
Pulse repetition frequency (kHz)	Up to 130
Average power (W)	Up to 2
Polarization	Random or linear (PER > 15 dB)
Seed tap (option)	1 m +/- 10 % pigtail length, SMF, FC/APC > 0.1 mW peak power
Pigtail length (cm)	32 +/- 2
Fiber type	LMA fiber
Output termination	FC/APC or collimator
Beam quality, M ²	< 1.1 or < 1.3 depending on the model

Mode of operation



ACC (Automatic Current Control)

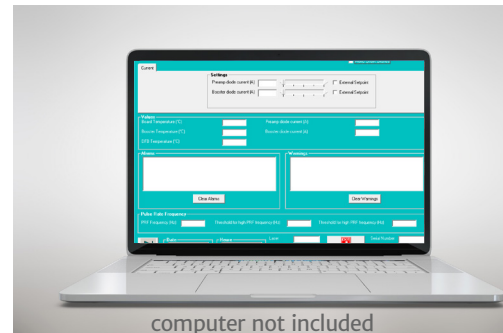


EASY TO INTEGRATE !



Control box

- Control box and cables delivered with the module for easy evaluation
- Available as an option



computer not included

Remote control

- RS232 interface
- Serial command set provided for easy integration
- GUI available

Reliability



All our fiber lasers and fiber amplifiers are manufactured according to our ISO certified quality management system, which places the needs and values of customers and partners at the heart of our organization. Throughout the manufacturing process, our components and systems are subjected to rigorous tests and inspections, which guarantees their robustness and reliability in the most demanding environments. Countless units operate continuously without maintenance around the world. The ISO 9001 certificates can be downloaded from our website.



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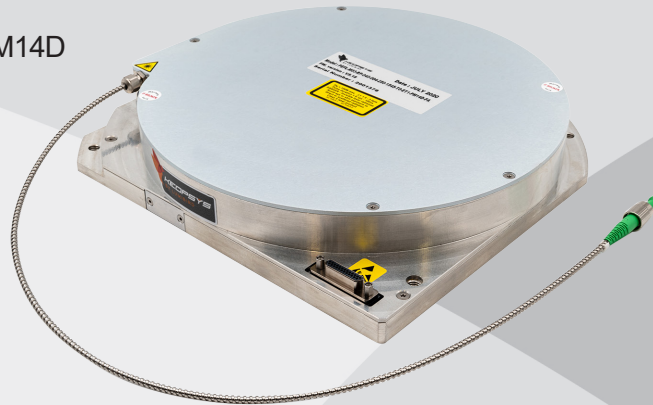
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PYFL-MIRVISION

Pulsed Ytterbium Fiber Laser
High power laser transmitter



PM14D



MAIN FEATURES

- 1064 nm standard operating wavelength
- Energy per pulse up to 60 μ J
- Peak power up to 25 kW
- Pulse duration from 1 to 4 ns
- Pulse repetition frequency from 50 to 400 kHz
- Linear or random polarization
- High beam quality ($M^2 < 1.3$)
- Low power consumption
- Wide operating temperature range ($-35\text{ }^{\circ}\text{C}$ to $+65\text{ }^{\circ}\text{C}$)
- Rugged and compact package

MAIN APPLICATIONS

- **TELEMETRY**
- **RANGE-FINDING**
- **OBSTACLE DETECTION**
- **AIRBORNE SURVEY**
- **MAPPING**
- **3D SCANNING**
- **BATHYMETRY**

“

The PYFL-MIRVISION series is a range of 1 μ m pulsed fiber laser transmitters, delivering high peak power and high energy per pulse in compact modules for long-range 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) making them suitable for a various of high-accuracy systems. Compact pulsed laser transmitters are commonly used in applications such as airborne survey, scanning, mapping, obstacle detection and range finding.

The all-in-fiber design requires no maintenance. Some models of the PYFL-MIRVISION series have been tested under vibrations and shocks conditions in accordance with military standards (MIL-STD-810G, RTCA-DO-160G...) allowing operations in most demanding environments.

The laser modules incorporate a microcontroller for internal controls, alarms, and RS232/USB communication, making the laser widely compatible. Pulses are triggered by an external signal supplied by the user system.

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PYFL-MIRVISION

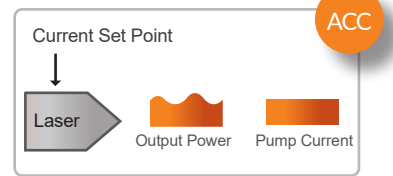
Pulsed Ytterbium Fiber Laser High power laser transmitter



SPECIFICATIONS

	PYFL-MIRVISION
Mode of operation	Pulsed
Operating wavelength (nm)	1064 +/-2
Wavelength excursion over T°C range (nm)	< 0.3
Pulse duration (FWHM, ns)	From 1 to 4
Energy per pulse (µJ)	Up to 60
Peak power (kW)	Up to 25
Pulse repetition frequency (kHz)	Up to 400
Average power (W)	Up to 10
Polarization	Random or linear (PER > 15 dB)
Seed tap (option)	1 m +/- 10% pigtail length, SMF, FC/APC > 0.1 mW peak power
Pigtail length (cm)	32 +/- 2
Fiber type	LMA fiber (20 µm core, 0.08 NA)
Output termination	FC/APC or collimator
Beam quality, M ²	< 1.3

Mode of operation



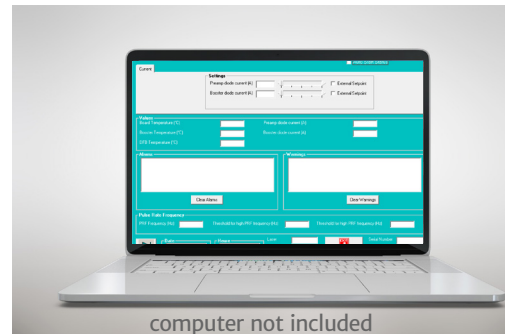
ACC (Automatic Current Control)

EASY TO INTEGRATE !



Control box

- Control box and cables delivered with the module for easy evaluation
- Available as an option



computer not included

Remote control

- RS232 interface
- Serial command set provided for easy integration
- GUI available

Reliability

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PYFL-PICO

Pulsed Ytterbium Fiber Laser
1 μm picosecond pulses



MAIN FEATURES

- 1064 nm operating wavelength
- 100 MHz pulse repetition frequency
- 50 ps typical pulse duration
- Linear polarization
- Diffraction-limited beam

MAIN APPLICATIONS

- **SEED LASER FOR HIGH ENERGY AMPLIFIER**
- **MATERIAL PROCESSING**
- **CONFOCAL MICROSCOPY**
- **RAMAN SPECTROSCOPY**

“

The PYFL-PICO is a picosecond pulsed Ytterbium fiber laser operating at 1064 nm, with a 100 MHz pulse repetition frequency and ~ 50 ps pulse length. The laser can be used as a seeder for high-energy amplifiers in applications such as material processing. The compact laser module can also be integrated into confocal microscopy and Raman spectroscopy systems.

The 10 μm LMA output fiber provides a diffraction-limited beam with excellent beam quality $M^2 < 1.1$ perfectly suited for these applications. For a quick setup, the short-pulse laser is delivered with an interface cable and easy to use control software.

The module incorporates a microcontroller, for internal control and alarms, with RS232 communication making this laser widely compatible. The all-in-fiber design requires no maintenance.

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PYFL-PICO

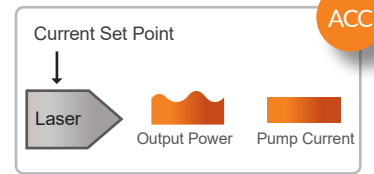
Pulsed Ytterbium Fiber Laser
1 μm picosecond pulses



SPECIFICATIONS

	P01
Mode of operation	Pulsed
Operating wavelength (nm)	1064
Pulse duration (FWHM, ps)	50
Energy per pulse (nJ)	10
Peak power (kW)	0.2
Pulse repetition frequency (MHz)	100
Average power (W)	1
Polarization	Linear
Output fiber type	PANDA LMA 10 μm
Output termination	FC/APC
Beam quality, M^2	< 1.1

Mode of operation



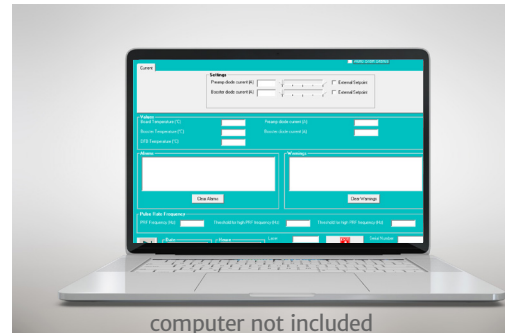
ACC (Automatic Current Control)

EASY TO INTEGRATE !



Interface cables

Cables are delivered with the product to allow easy evaluation



computer not included

Remote control

- RS232 interface
- Serial command set provided for easy integration
- GUI available

Reliability



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