

PYFL-MIRVISION SERIES

PULSED YTTERBIUM FIBER LASER

1.0 μm HIGH POWER LASER TRANSMITTER



KEY FEATURES

- Energy per pulse up to 100 μJ
- Peak power up to 25 kW
- Choice of pulse duration from 1 ns to 200 ns
- Pulse repetition frequency from 10 kHz to 1 MHz
- Linear or random polarization
- High output-beam quality
- Low power consumption
- Wide operating temperature range (-35 $^{\circ}\text{C}$ to +65 $^{\circ}\text{C}$)
- Rugged and compact package

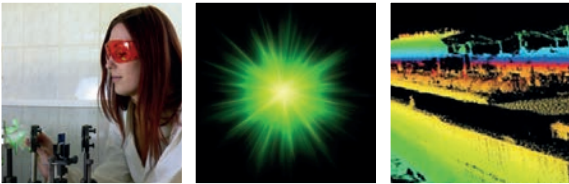
Description

Keopsys proposes PYFL-MIRVISION series. This pulsed Ytterbium fiber doped laser provides pulses from 1 to 200 nm over a wide range of repetition rates (10 kHz to 1 MHz).

Thanks to our patented VSP technology, these lasers deliver an energy per pulse up to 100 μJ and a high peak power up to 25 kW with a high beam quality ($M^2 < 1.3$). These laser come with two compacts and rug-ged modules platforms. Each module incorporates a microcontroller for internal controls, alarms, and RS232/USB communication. It requires an external TTL signal to trig the optical pulses.

Without any optical part to realign, the maintenance-free and light-weight package, make PYFL-MIRVISION ideal for OEM integration in hard environment, for example in airborne.

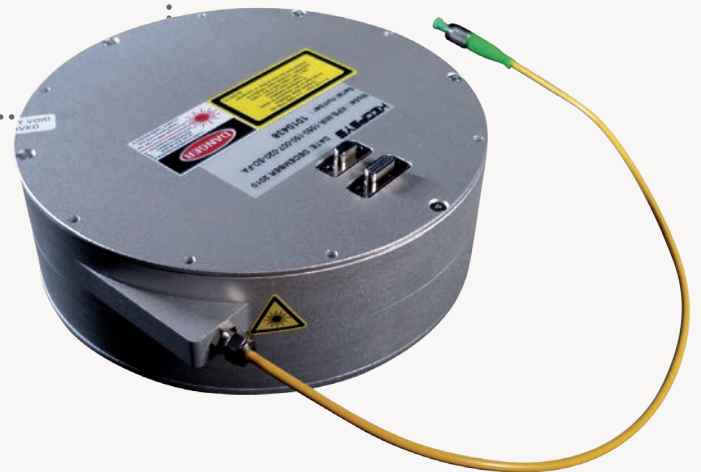
APPLICATIONS



- Telemetry,
- Range-finding / Obstacle detection
- Airborne survey
- Mapping / 3D scanning
- Harmonic generation
- Bathymetry

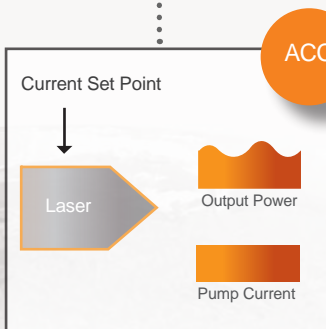
2 Platforms

PM 2D / PM 3D



Mode of operation

The devices offer one mode of operation :



ACC

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

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Optical Specifications @ 25 °C

	PYFL-MIRVISION
Mode of operation	Pulsed
Operating wavelength	1064 +/-2 nm
Wavelength excursion over T range	<0.3 nm
Energy per pulse	From 25 to 60 μJ
Peak power	From 15to 25 kW
Average power	From 3 to 10 W
Pulse repetition frequency	From 50 to 400 kHz
Pulse duration (FWHM)	From 1 to 4 ns
Fiber type	LMA / LMA PANDA (20 μm , 0.08 NA)
Polarization	Random or Linear
Beam quality, M^2	<1.3
Output termination	FC/APC or Collimator
Seed tap (option)	1 m pigtail length, SMF, FC/APC

The PYFL-MIRVISION series lasers are available as OEM module for an easily integration.

RELIABILITY

The Keopsys range of fiber lasers 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 9001:2008 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 guarantee. We offer a warranty extension of 1 or 2 years. Please contact us.

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1 μm HIGH POWER LASER TRANSMITTER

Optical Specifications

@ 25 °C

	PYFL-MIRVISION*		
	M01	M02	M03
Mode of operation	Pulsed		
Operating wavelength	1064 +/-2 nm		
Wavelength excursion over T range	<0.3 nm		
Energy per pulse	60 μJ	25 μJ	
Peak power	15 kW	25 kW	
Average power	3 W	5 W	10 W
Pulse repetition frequency	50 kHz	200 kHz	400 kHz
Pulse duration (FWHM)	4 ns	1 ns	
Pigtail length	42 +/-2 cm		
Seed tap (option)	1 m pigtail length, SMF, FC/APC		
Fiber type	LMA/LMA PANDA (20 μm , 0.08 NA)		
Random or Linear (15 dB) polarization	RP or LP		
Beam quality, M ²	<1.3		
Output termination	FC/APC or Collimator		
Power consumption	<60 W	<80 W	<150 W
Associated platform	PM2D		PM3D

Platform Specifications

	Platform type	
	PM2D	PM3D
DC voltage	18 to 32 V	
Control Interface	RS232, USB	
External trigger signal	TTL	
Warm-up time	<5 min	
Dimensions (D x H)	160x50 mm	200x50 mm
Weight	<1.5 kg	<1.8 kg
Operating case temperature	0 °C to +50 °C (-35 °C to +65 °C optional)	
Storage temperature	-40 °C to +85 °C	

* For each model, other sets for energy, pulse duration and repetition rate are possible

Ordering information

