PEFL-EOLA SERIES

PULSED ERBIUM FIBER LASER

1.5µm LONG PULSE FIBER LASER

1.5µm

FEATURES

- Eye-safe 1.5µm operating wavelength
- Energy per pulse up to 10µJ
- Peak power up to 50W
- Pulse duration from 100 to 500ns
- Pulse repetition frequency from 10kHz to 20kHz
- Narrow linewidth available down to 3kHz
- Low RIN and low phase noise
- Linear Polarization
- Fourier transform limited linewidth operation
- Diffraction limited or $M^2 < 1.1$
- Wide operating temperature range from 0°C to +70°C
- Highly integrated design

Description

The PEFL-EOLA series are eye-safe, linearly polarized fiber lasers delivering Fourier transform limited pulses. These lasers have excellent RIN and phase noise characteristics.

Pulsewidth ranges from 100 to 500 ns. The laser delivers energy per pulse up to 10µJ. Output beam is diffraction-limited (output fiber with $M^2 < 1.1$).

The laser system is highly integrated, saving space and cost of integration, which makes it ideal for Doppler heterodyne LIDAR systems.

PE 13D

APPLICATIONS



Aerosol detection / 2D/3D wind profiler
Weather monitoring / Pollution monitoring

PE 11A / PE 12A

3 Platforms

KEOPSYS
THE LIGHT TOUCH

PEFL-EOLA SERIES

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Optical Specifications

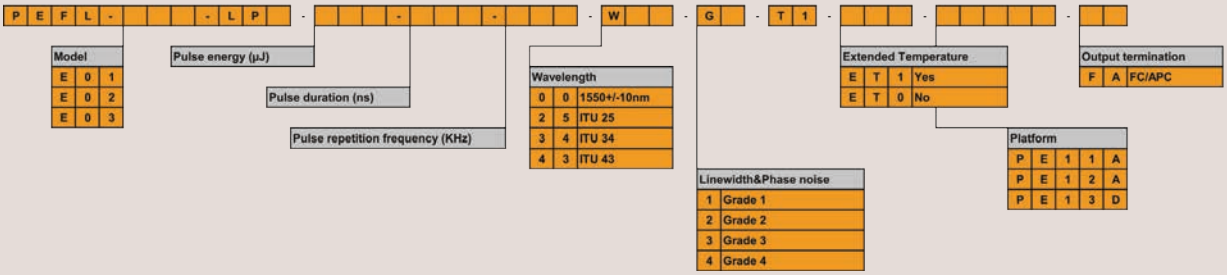
@ 25°C	Model[1]					
	E01		E02		E03	
Mode of operation	Pulsed					
Operating wavelength[2]	1550+/-10nm or ITU channel					
Energy per pulse	0,8nJ	1,6nJ	10nJ	20nJ	5µJ	10µJ
Peak power	8mW		25mW		50W	
Pulse repetition frequency	10kHz	20kHz	10kHz	20kHz	10kHz	20kHz
Pulse duration	100ns	200ns	100ns	200ns	100ns	200ns
Average output power	8µW	32µW	100µW	400µW	50mW	200mW
Spectral linewidth[3]	Grade 1: 3kHz, Grade 2: 5kHz, Grade 3: 15kHz, Grade 4: <1MHz					
Relative intensity noise	<-110dB/Hz above 2kHz, shot noise limited above 500 kHz					
Pulse delay jitter[4]	1ns					
Polarization	Linear with PER>20dB				Linear with PER>17dB	
Beam quality, M^2	<1.1					
CW seed tap	>1mW power on Panda, 100 +/-5cm, 3mm PVC					
Output fiber type	Panda, 3mm PVC					
Output fiber length	100 +/-5cm				35 +/-2cm	
Tap and output termination	FC/APC					
Power consumption	<50W				<60W	
Associated platform	PE11A		PE12A		PE13D	

Platform Specifications

	Platform type		
	PE11A	PE12A	PE13D
DC voltage	24V		
Control interface	ON/OFF switch button		RS232
	External trigger input, 0 to 1V on BNC, 50 Ohms + External TTL trigger input on BNC, 4.7 kOhms		
Warm-up time	<15min		
Dimensions	200x200x45mm		200x200x70mm
Weight	<2000g		
Operating case temperature	+10°C to +50°C (0°C to +70°C optional)		
Storage temperature	-40°C to +85°C		

[1] For each model, other sets for energy, pulse duration and repetition rate are possible
[2] Selected standard ITU channels : ITU25 is 1557.36nm, ITU34 is 1550.12nm - Other wavelengths on special request
[3] Measured at -20dB and fitted with Lorentzian model
[4] Deviation delay between electronical (pulse trigger) to optical leading edge medians

Ordering information



All products comply with IEC 60825-1 and FDA (21 CFR Subchapter J) laser safety standards.

Keopsys undertakes a contunuous 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.