

KINOS PULSED SEED LASER (OEM)

APPLICATIONS

SCIENCE

SENSING

FREQUENCY-DOUBLING

FIBER LASER SEEDING



KEY FEATURES

- 1064 nm wavelength
- High pulse energy up to 30 nJ
- 40 ps pulse duration
- Single-mode beam quality
- Compact size (187 mm x 150 mm x 39.5 mm)
- Cost-effective design
- Narrow linewidth ideal for sensing applications or nonlinear frequency conversion
- Computer controllable via USB and RS232 interfaces

DESCRIPTION

The Kinos is a versatile picosecond OEM fiber laser at 1064 nm comprising a gain-switched distributed feedback (DFB) laser diode and an efficient fiber amplifier in a single package. Optimized for operation around 1 MHz repetition rate, it is ideally suited as a seed laser for industrial applications where high pulse energy is desired, for example combined with Ampliconyx tapered gain modules. The DFB seed's narrow linewidth also makes Kinos excellent for sensing applications and efficient nonlinear frequency conversion. The diode-based seed together with polarization-maintaining design guarantee maintenance-free long-term operation. The laser includes a narrow ASE filter and an output isolator to limit feedback from successive components or amplifiers.

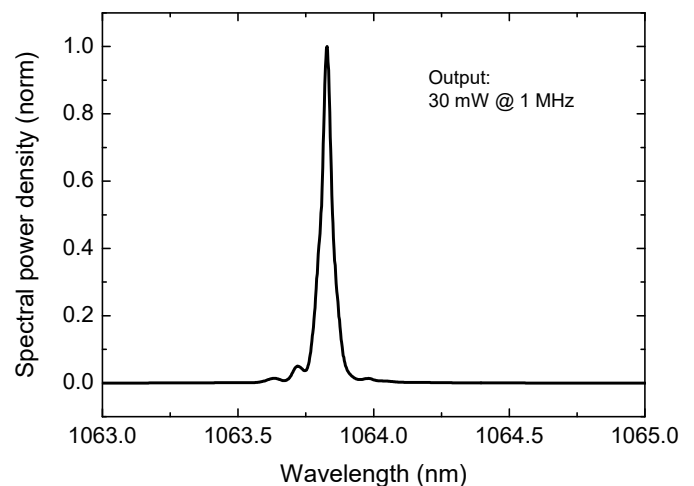
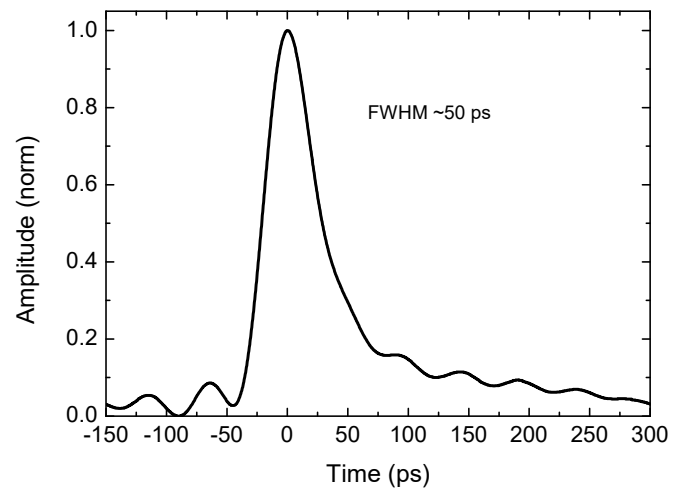
The Kinos is rated for operation between 0.5-10 MHz repetition frequencies where in-band ASE from the fiber amplifier is negligible. Other repetition frequencies are accessible by using external triggering. There are two models with different pulse durations available, both with > 500 W peak power at 1 MHz. Model A has a pulse duration of 40+/-15 ps while Model B has longer pulse duration of 60+/-15 ps but, on the other hand, offers narrower spectrum and higher average power.

The Kinos is computer-controllable via USB and RS232 interfaces by using either Ampliconyx GUI or command library. The passively cooled, extremely compact < 1.2 liter housing allows the cost-efficient Kinos to be easily integrated into larger optical systems.

Ask us for further information and customizations!

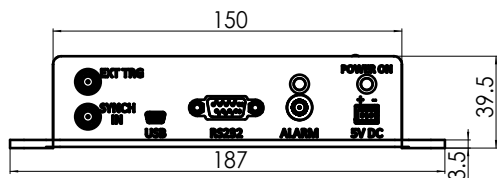
PERFORMANCE

See below for the output pulse shape and the corresponding spectrum of Kinos - 1064 - B at 1 MHz.

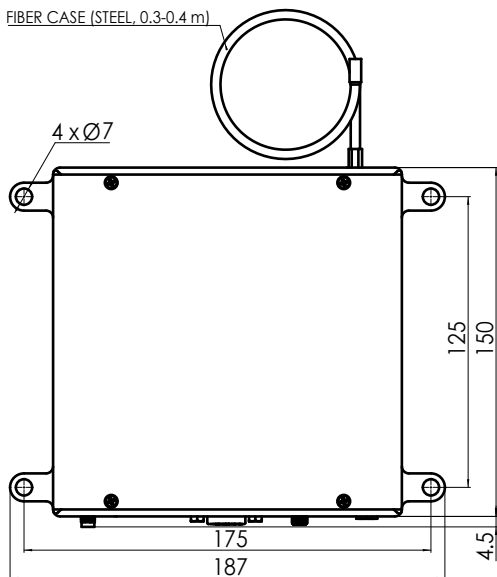


SPECIFICATIONS, DIMENSIONS

DIMENSIONS



FIBER CASE (STEEL, 0.3-0.4 m)



ORDERING INFORMATION

KINOS - 1064 - Model:
A
B

SPECIFICATIONS

	Model A	Model B
OPTICAL SPECIFICATIONS		
Mode of operation	Pulsed	
Center wavelength	1064 ± 2 nm	
Avg. output power (@ 1 MHz)	>20 mW	> 30 mW
Pulse energy (@ 1 MHz)	>20 nJ	> 30 nJ
Repetition rate	0.5 MHz - 10 MHz*	
Pulse duration	40 ± 15 ps	60 ± 15 ps
Spectral FWHM	< 0.3 nm	< 0.1 nm
Output polarization	Linear	
Polarization extinction ratio	> 18 dB	
Beam quality	M ² < 1.1	
Laser output	FC/APC connector (PM 980 fiber)	
Output isolation	≥ 22 dB	
MECHANICAL / ELECTRICAL		
Laser dimensions	187 x 155 x 40 mm	
Laser weight	< 1.3 kg	
Supply voltage	4.8 ... 5.2 VDC	
Power supply current	≤ 3 A	
Power consumption	≤ 15 W	
Operation temperature	+10 ... +50 C	
Storage temperature	-20 ... +70 C	
Cooling	Passive	
Operating humidity	<85 %	
Storage humidity	<95 %	
External trigger output	2 ... 3.3 VDC	
External trigger input	3.3 ... 5 VDC (50 Ω)	
Control interfaces	USB, RS232	
CONNECTORS		
Power "5VDC"	2-pin terminal block	
External trigger output	SMA Jack (73251 - 1350 Molex)	
External trigger input	SMA Jack (73251 - 1350 Molex)	
Interface connector "USB"	Mini-USB	
Interface connector "RS232"	D-SUB9	

* Other repetition rates are available with external triggering.

sales@ampliconyx.com
www.ampliconyx.com

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