AOMI

Turnkey laser diode seeder with AOM modulation



AeroDIODE

www.aerodiode.com

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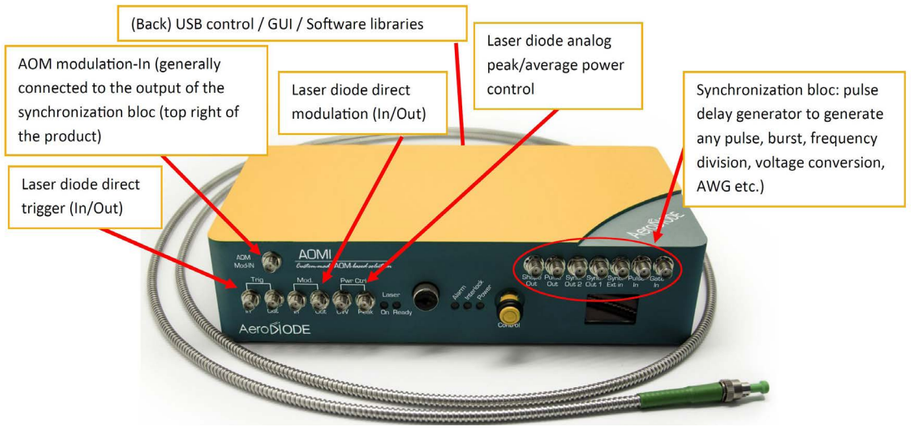
Laser diode seeder externally modulated with a fiber-coupled AOM (Acousto Optic Modulator). Complete turnkey solution offered between 780 and 1650 nm.



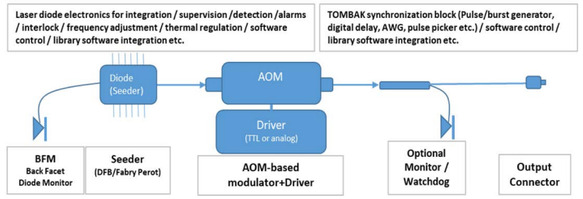
AeroDIODE AOMI Series include an efficient low noise fiber-coupled laser diode with its driver and an acousto-optic modulator (AOM) which modulates externally the light coming from the laser diode seeder. It also includes a special synchronization electronics (Tombak) which allows to generate any pulse, burst, divided signal, special AWG pulse waveform etc. from any internal or external trigger signal. It is compatible with the weak voltage trigger signals coming from a photodiode.

Key features:

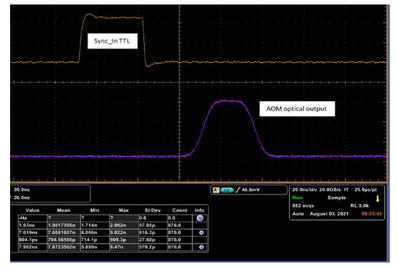
- More than10 wavelengths available : 785 nm, 808 nm, 850 nm, 940 nm, 976 nm 1030 nm, 1053 nm, 1064 nm, 1310 nm and 1550 nm. - contact AeroDIODE for other wavelengths
- The modulated output lights keeps the narrow spectal performance of the seeder laser diode in CW or pulse mode
- Max average power up to 750 mW
- Output pulse repetition rate from single shot up to 200 MHz
- Extinction ratio up > 55 dB
- SMF or PM Fibers (key aligned to slow axis)
- No timing constraint on input pulse width for triggering down to 10 fs
- Adjustable voltage level threshold for input pulse triggering down to 5 mV
- 100's of synchronization configurations accessible with the embedded flexible electronics and its dedicated GUI (pulse generator, burst generator, digital delay, frequency divider, pulse picker etc.) - see the dedicated product webpage (TOMBAK Pulse delay generator)to understand all the synchronization possibilities - or contact AeroDIODE for special synchronization needs.
- All software integration libraries available on demand : LabVIEW, Python (Linux compatible), DLLs, Hexa etc.



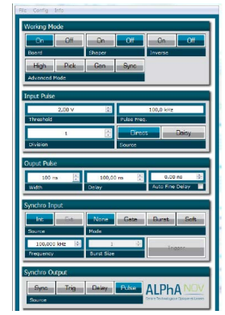
Technical description and specifications



The product combines the best of AeroDIODE technology. The table and configuration choice below is indicative - contact us to build your own AOMI turnkey modulated seeder.



Example of a 20 ns output pulse keeping the narrow linewidth performances of a DFB laser diode at 1064 nm (the emission spectrum is shifted by the AOM RF frequency)



A dedicated GUI allows to control all synchronization parameters

AOMI Modules performances (examples*):

Nominal Wavelength*	785 nm		808 nm		850 nm		940 nm		976 nm		1030 nm		1053 nm		1064 nm		1310 nm		1550 nm	
Version type	stan-dard	high speed	stan-dard	high speed	stan-dard	high speed	stan-dard	high speed	stan-dard	high speed	stan-dard	high speed	stan-dard	high speed	stan-dard	high speed	stan-dard	high speed	stan-dard	high speed
Laser Diode technology	Fabry-Pérot with FBG		Fabry-Pérot with FBG		Fabry-Pérot with FBG		Fabry-Pérot with FBG		Fabry-Pérot with FBG		DFB		Fabry-Pérot with FBG		DFB		DFB		DFB	
Typical laser diode emission linewidth**	0.1 nm		0.1 nm		0.1 nm		0.1 nm		0.1 nm		< 500 kHz		0.1 nm		< 500 kHz		200 kHz		200 kHz	
Output power (up to)	150 mW	100 mW	150 mW	100 mW	150 mW	100 mW	150 mW	100 mW	750 mW	500 mW	150 mW	100 mW	400 mW	350 mW	150 mW	100 mW	100 mW	40 mW	100 mW	50 mW
Min rise/fall time of modulated pulses (10-90%)	50 ns	10 ns	50 ns	10 ns	50 ns	10 ns	50 ns	10 ns	50 ns	10 ns	50 ns	10 ns	50 ns	10 ns	50 ns	10 ns	50 ns	10 ns	50 ns	10 ns
Internal RF Frequency (special frequencies available on demand)**	100 MHz	200 MHz	100 MHz	200 MHz	100 MHz	200 MHz	100 MHz	200 MHz	100 MHz	200 MHz	100 MHz	200 MHz	100 MHz	200 MHz	80 MHz	200 MHz	80 MHz	200 MHz	80 MHz	200 MHz
Fiber: type / coating / connector**	PM780 / 900 µm / FC-APC								PM980 / 900 µm / FC-APC								PM1550 / 900 µm / FC-APC			

* The table above is indicative - scroll down the website dedicated page to see all standard configurations and prices or contact AeroDIODE to build your own AOMI version

** Other performance are available on demand. Contact AeroDIODE for special needs

Classification:

Name	xxxxAOMI-
Laser diode seeder version	785 ; 808 ; 850 ; 940 ; 976 ;1030 ; 1053 ; 1064 ; 1310 ; 1550 ; ...
AOM version	1 : Standard 2 : High speed
AOM Driver version	1 : TTL 2 : Analog

Ordering information:

AOMI: 1064AOMI - [_] - [_]

- Nominal Wavelength: 785 ; 808 ; 850 ; 940 ; 976 ; 1030 ; 1053 ; 1064 ; 1310 ; 1550 ; Other...
- AOM Version: 1 : standard; 2 : high speed
- AOM Driver: 1 : TTL; 2 : Analog



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