

# PPI

## Fiber-coupled optical Pulse-Picker



AeroDiODE

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AOM-based turn-key solution for selecting optical pulses from an optical pulse train with a high rejection of the input laser light from 700 to 1750 nm.



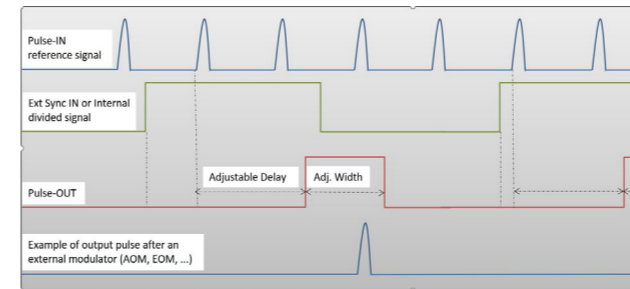
AeroDIODE PPI Series use an acousto-optic modulator (AOM) and a special pulse-picker synchronization electronics to select the output pulse from an optical pulse train whatever its repetition rate up to 200 MHz. The input frequency is detected by an internal photodiode or by using the customer input trigger. 3 Pulse Picker synchronization modes allow to get the output pulses at the desired frequency with a very low insertion loss and an excellent rejection ratio of the input frequency.

### Key features:

- 14 versions over 7 wavelengths ranges : 750-815 nm, 815-915 nm, 915-1020 nm, 1020-1170 nm, 1170-1430 nm, 1430-1600 nm and 1600-1750 nm.
- 3 Pulse-picking synchronization modes : Divider (low Jitter), Synchro (external or internal low frequency triggering) and Burst Shaper (Contact us for special modes)
- Insertion loss down to 1.2 dB
- Gating window adjustable in phase (10 ps step) and duration (2 ns step)
- Max average power up to 5W
- Input pulse repetition rate up to 200 MHz
- Output pulse repetition rate from single shot up to 20 MHz
- 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
- PM Fibers (key aligned to slow axis)
- Extinction ratio up > 55 dB (Note : adjacent pulses extinction ration depends on the input pulse frequency)
- Output synchronization signal (1V, LVTTTL or TTL)
- 100's of synchronization configurations accessible with the pulse picker embedded flexible electronics and its dedicated GUI
- All software integration libraries available on demand : LabVIEW, Python, DLLs, Hexa, Linux compatible etc.



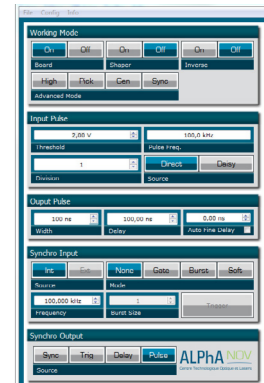
# Technical Specifications



Pulse picking principle (mode : Divider or Synchro).



Example of a 80 MHz repetition rate input light pulse-picking down to 20 MHz.



A dedicated GUI allows to control all synchronization parameters

### PPI Modules performances:

Nominal Wavelength	780 nm		850 nm		940 nm		1064 nm		1310 nm		1550 nm		1650 nm	
	standard	high speed	standard	high speed	standard	high speed	standard	high speed	standard	high speed	standard	high speed	standard	high speed
Wavelength range	750-815 nm*		815-915 nm*		915-1020 nm*		1020-1170 nm*		1170-1430nm*		1470-1600 nm*		1600-1750 nm*	
Max average power	5 W		5W		5 W		5 W		0.5 W		0.5 W		0.5 W	
Max input pulse repetition rate	20 MHz	100 MHz	20 MHz	100 MHz	20 MHz	100 MHz	20 MHz	100 MHz	20 MHz	100 MHz	20 MHz	100 MHz	20 MHz	100 MHz
Insertion loss* (Typical value at nominal wavelength)	1.2 dB	2.5 dB	1.2 dB	2.5 dB	1.2 dB	2.5 dB	1.2 dB	2.5 dB	2.5 dB	4.5 dB	2.5 dB	4.5 dB	2.5 dB	4.5 dB
Rise time (10-90%) - max values	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	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					

\* : See the typical insertion loss curve from the website dedicated product page.

### Classification:

Name	1064PPI
AOM version :	1 : Standard 2 : High speed

### Ordering information:

AOM: 1064PPI - [ ]  
 Nominal Wavelength : 780 ; 850 ; 940 ; 1064 ; 1310 ; 1550 ; 1650  
 Version : 1 : standard ; 2 : high speed



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