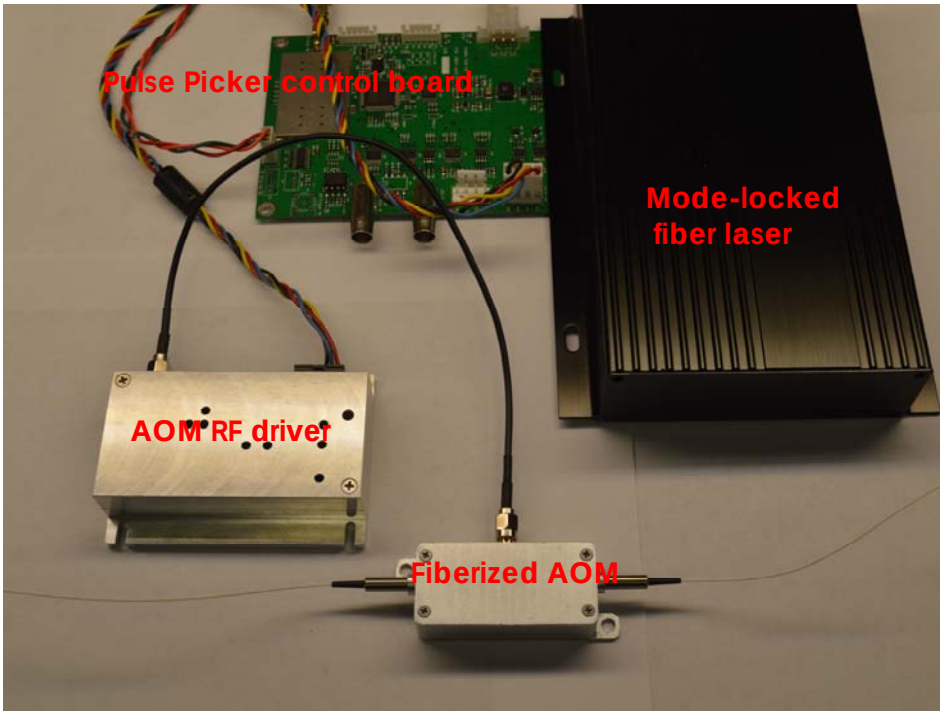
WaveSource Photonics, Inc

Acousto-Optic Pulse Picker

For extracting pulses from fast laser pulse trains

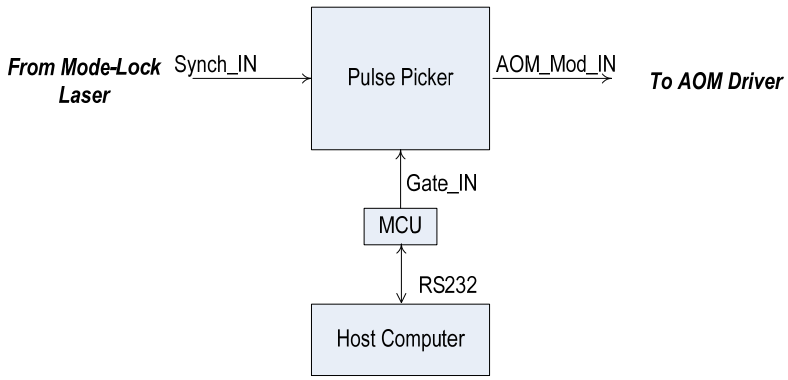
A pulse picker is an electrically controlled ultra-fast optical switch used to extract desired number of pulses from a high repetition laser pulse train. Ultrashort pulses are often generated by a mode-locked laser in the form of a pulse train with a pulse repetition rate in the range of 20 to 80 MHz. For practical applications, it is often necessary to pick certain pulses from such high repetition pulse train, i.e. to transmit only certain pulses and block all the others. This can be done with a pulse picker, which is essentially an electrically-controlled optical gate.

Our pulse picker is designed with the purpose to offer the highest possible performance yet to push down prices for OEM users. It works with our 80MHz Q-switch RF driver AOD22 or AOD30, or any other Q-switch RF drivers, such as those made by G&H.



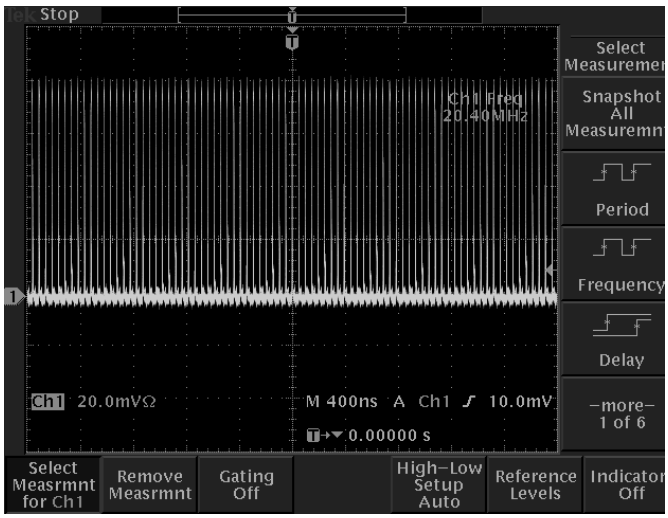
Pulse Picker Working Diagram:

Pulse Picker Working Diagram

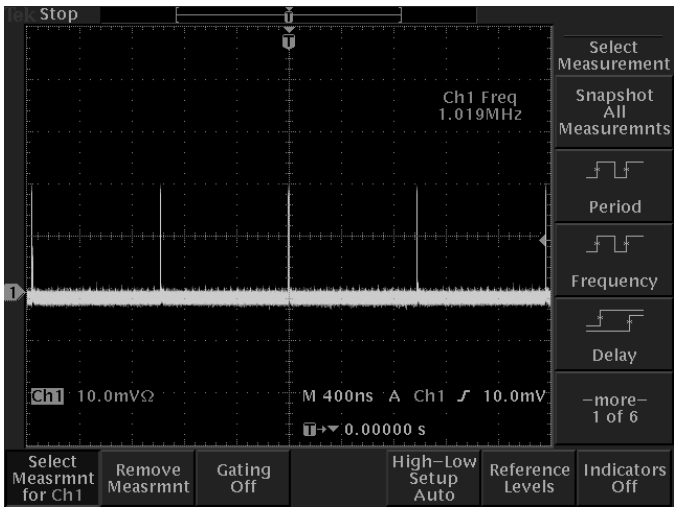


WaveSource Photonics, Inc, 81 Palm Drive, Union City, California, USA, salesatwsp@gmail.com
www.wsphotonics.com

Mode-locked fiber laser output 20.4MHz



After pulse-picker: 1.019MHz



Features:

- High stability with pulse-to-pulse stability within 5%
- For 20-80MHz repetition lasers.
- Precision pulse picking timing & delay control
- Build-in synchronous output
- OEM package
- ROHS2 compliant

Applications:

- Pulse picking for mode-locked lasers
- Extraction of circulating pulses from cavity dump lasers
- Pulse injection & extraction for regenerative amplifiers

Signals & Controls in Pulse Picker:

Signals and Controls in Pulse Picker		
No.	**Nomenclature**	**Description**
1	Sync_IN	Electrical signal synchroneous to mode-locked laser output pulses
2	AOM Mod_IN	AOM analog modulation input
3	M	The division of Sync Input, controlled by host command, to generate output Mod_In pulse
4	N	The ratio of Mod_In pulse, i.e. the number of Sync_IN pulse passes
5	D	The alignment of Mod_IN to the Sync In

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