

PULSE PICKER – MP1

Features

- Pulse picking rate up to 1 MHz
- Fast Amplitude Modulation version available

MP1 pulse picker consists of built-in fast driver and a Pockels cell. This unit is able to select pulses at up to 1 MHz rate. MP1 is operated by pMaster 4.2 generator which provides sync pulses for driver control and has built-in HV power supply. MP1 can be synchronized with a laser generating pulse train with max 60 MHz repetition rate for single pulse picking task when it is in setup with pMaster 4.2 generator.

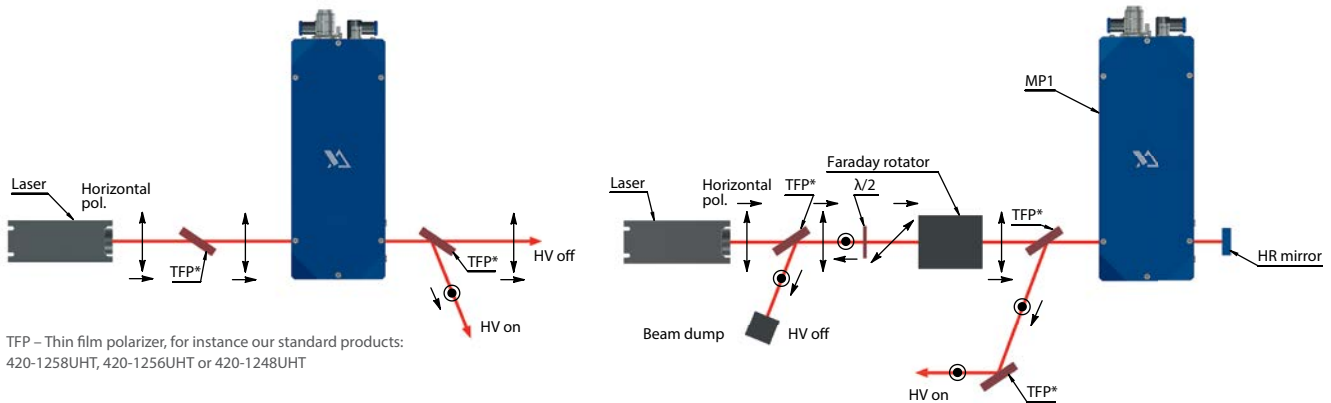


Samples of suggested MP1 pulse picker configurations

PULSE PICKER	MP1-DKDP-11	MP1-BBO-5.8	MP1-BBO-2.5	MP1-FAM-KTP-5.5
Built-in-driver, max operating rate	up to 5 kHz	up to 250 kHz	up to 1 MHz	up to 500 kHz
Max laser repetition rate for single pulse picking	40 MHz	60 MHz		10 MHz
HV power supply	provided in pMaster 4.2			
Operation	quarter-wave, $\lambda/4$			0 to $\lambda/2$
HV pulse duration	30 – 3000 ns	15 – 1000 ns	15 – 250 ns	70 – 1000 ns
HV pulse rise time, typical	< 7 ns			< 26 ns
HV pulse fall time, typical	< 7 ns			< 13 ns
Pockels cell contrast ratio, VCR	1 : 500			
Pockels cell transmission	> 97 % at 1064 nm	> 98 % at 1064 nm		
Clear aperture	Ø11 mm	Ø5.8 mm	Ø2.5 mm	Ø5.5 mm
Cooling	conductive	water		
Dimensions (L × W × H)	230 × 90 × 69 mm			

MP1 can be set for operation at standard laser wavelengths (1064 nm, 1030 nm, 800 nm) or at any specific laser wavelength in the range from 500 to 2000 nm.

Suggested operation schemes



Single pass (half-wave) operation scheme

Double pass (quarter-wave) operation scheme

Suggested configurations

CODE	DESCRIPTION
MP1-DKDP-11 + pMaster 4.2	Ultrafast pulse picker for up to 5 kHz operating rate, DKDP clear aperture Ø11 mm, $\lambda/4$ operation at 1064 nm. Pulse synchronization and delay generator, 4 output channels for trigger pulses with built-in High Voltage supply
MP1-BBO-5.8 + pMaster 4.2	Ultrafast pulse picker for up to 250 kHz operation, BBO clear aperture Ø5.8 mm, $\lambda/4$ operation at 1064 nm. Pulse synchronization and delay generator, 4 output channels for trigger pulses with built-in High Voltage supply
MP1-BBO-2.5 + pMaster 4.2	Ultrafast pulse picker for up to 1 MHz operation, BBO clear aperture Ø2.5 mm, $\lambda/4$ operation at 1064 nm. Pulse synchronization and delay generator, 4 output channels for trigger pulses with built-in High Voltage supply