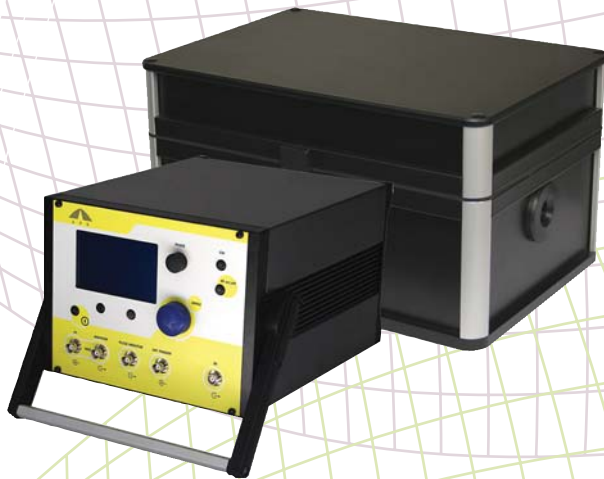


# PULSE SELECT



A P E

## SINGLE PULSE SELECTOR



**PulseSelect** is an acoustooptical single pulse selector developed for the special demands of fs-technology. Pulse distortion is minimized by the low dispersion design and the use of reflective optics. The employment of an acoustooptical selection element offers the possibility of high repetition rates and high contrast ratio without the requirement for additional optical elements.

The pulse repetition rate can be reduced by using an adjustable internal frequency divider or by external triggering. With the **APE PulseSelect**, low division ratios down to  $f_{REP}/2$  are possible. It has an integrated RF power limitation and protection circuit to prevent modulator damage. For highest stability the phase of the RF carrier frequency is locked to the seed pulses.

Besides the standard version suited for fs or ps modelocked Ti:Sa lasers, custom specific wavelength ranges in the VIS and UV are available.

For improved contrast ratio of above 6000:1 APE offers the double stage version **PulseSelect DUAL**.

Reduction of the repetition rate of modelocked lasers

Low dispersion

Suitable for fs or ps modelocked lasers

Division ratios down to  $f_{REP}/2$  possible

Ultrafast Pulse Diagnostics

Spectral Analysis

Acoustooptics

Pulse Management

Wavelength Conversion

**Your Partner in Ultrafast**

# PULSE SELECT

## SPECIFICATIONS

|   |   |
|---|---|
| Wavelength                                  | 500 ... 1000 nm (other ranges optional)   |
| Diffraction efficiency                      | > 60% (TeO <sub>2</sub> ) <sup>1)</sup><br>> 50% (SiO <sub>2</sub> ) <sup>1)</sup>  |
| Contrast ratio                              | > 500 : 1 <sup>2)</sup>   |
| Max. optical input power (P <sub>AV</sub> ) | 440 mW (TeO <sub>2</sub> ) <sup>3)</sup><br>1500 mW (SiO <sub>2</sub> ) <sup>3)</sup>   |
| Input frequency (f <sub>REP</sub> )         | 70 ... 85 MHz<br>(to be specified with ± 0.5 MHz accuracy)  |
| Division ratio                              | f <sub>REP</sub> / 20 ... f <sub>REP</sub> / 5000<br>or externally triggered<br>(f <sub>REP</sub> / 2 ... f <sub>REP</sub> / 260000 optional) |

1) Percentage of pulse energy incident into the Bragg cell in diffracted pulse, measured at 800 nm and division ratio f<sub>REP</sub> / 20. At division ratio f<sub>REP</sub> / 2 the efficiency is typically around 25% (TeO<sub>2</sub>) and around 10% (SiO<sub>2</sub>), respectively.

2) > 500:1 applies for non-adjacent pulses. Main pulse to adjacent pulse contrast ratio is > 75:1 (@ 800 nm, f<sub>REP</sub> / 20)

3) These values depend on the laser spot diameter in the crystal and thus apply only for a certain system configuration. Please consult our technical staff to determine the maximum input power level applicable for your laser system.

## OPTIONS

High Power Ti:Sa optics (680 ... 1080 nm, 4 W)

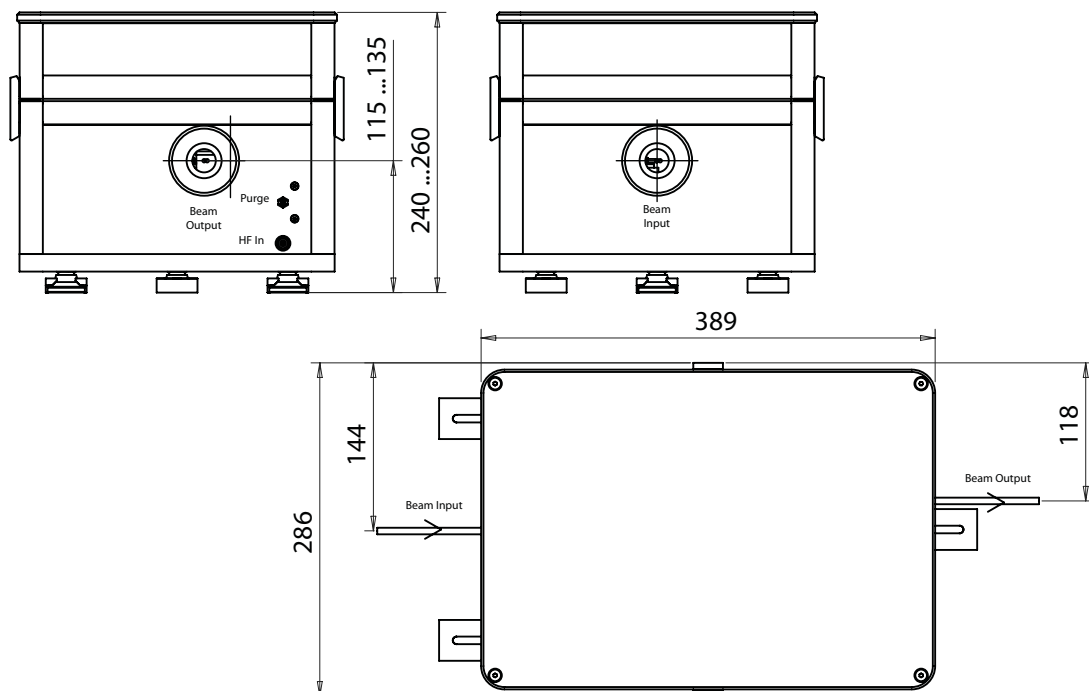
Double stage version Pulse Select DUAL

## DIMENSIONS

Control Electronics (W\*L\*H in mm)

267 x 312 x 180

Optics Unit



Distributors  
see APE website