FEMTOSECOND

Femtosecond fibre laser systems

Amplified femtosecond systems with free-space output and optional dispersion control.

Applications to discuss: Multiphoton microscopy; Two-photon polymerization; Optical metrology.

Selection points
780-1560 nm selected options / <200 fs in listed standard configurations / Wavelength-specific average-power entries

Configuration options

Centre wavelength	Pulse duration	Repetition rate	Average power	Spectral width
780 nm	<200 fs	10-80 MHz	>1 W	>3 nm
920 nm	<200 fs	10-80 MHz	>1 W	>10 nm
1030-1080 nm	<200 fs	10-100 MHz	>2 W	>10 nm
1100-1300 nm	Custom; confirm	Custom; confirm	Custom; confirm	Custom; confirm
1178 nm	<200 fs	30-100 MHz	>1.5 W	>10 nm
1560 nm	<200 fs	10-80 MHz	>1 W	>10 nm

Each row is a separate configuration. Limits from different rows must not be combined.

Technical details

Parameter	Specification or condition
Output delivery	Free space
Beam propagation factor	M^2 <1.1, typical
Polarization extinction ratio	>20 dB, typical

Integration and delivery

Item	Configuration detail
Laser head	329 x 215 x 81.5 mm
Rack unit	248 x 436 x 83 mm; built-in supply; air cooled
Unit separation	2 m

Conditions and configuration notes

• The repetition rate and pulse duration are fixed choices within the stated intervals; those intervals are not a claim of user adjustment on every unit.

• Average power depends on wavelength, repetition rate and pulse settings. Maxima from different options must not be combined into one operating point.

• The 1100-1300 nm option has custom pulse, repetition-rate, bandwidth and power values; no standard numerical limits are assigned.

• Optional dispersion compensation and acousto-optic pulse picking must be specified separately.