

Electron beam

Parameter	Value	Unit
Macro rep. rate	1–10	Hz
Micro rep. rate	0.040–3	MHz
Bunch charge	50–800	pC
Energy	400–1250	MeV
Bunch length	50–6000	fs rms
Chirp	-0.5–+0.5	% rms
Transverse emittance	1–3	mm mrad rms proj.
Focal spot size	5 x 5 (spec.), 30 x 30 (meas.)	$\mu\text{m} \times \mu\text{m}$
Energy resolution	0.02	%

Laser beam

Parameter	Value	Unit
Nominal energy	550	mJ
Peak power	25	TW
Pulse length	> 30	fs
Wavelength range	770–830	nm
Focal length (ionis. & trans.)	18, >0.5	m
Time jitter (w/ 2020 upgrade)	~100 (~10)	fs
Polarisation	linear/circular	

Plasma sources

Parameter	Value	Unit
Gas flow	< 20	mbar l/s
Gas species	variable and mixed	
Density range (windowless, w/ end caps)	< 5×10^{17} , < 1×10^{20}	cm^{-3}
Cell length and diameter	< 500, < 10	mm
Transverse ionis. injection length	~10	μm
Ignition methods	laser, high voltage discharge	
Discharge,	25, 400, 4.1	kV, ns, nF