

JLab FEL Accelerator Capabilities

	Near Term Capability, Dec. 2013	Full Capability	Internal Target (Near Term)
	external target	external target	internal target
E (MeV)	80-320	80-610	80-165
P_{\max} (kW)	100	300	1650
I (mA)	0.31-1.25	0.5-3.75	10
f_{bunch} (MHz)	750 / 75	750 / 75	750 / 75
Q_{bunch} (pC)	1.67-0.4 / 16.7-4	5-0.67 / 50-6.7	13.5 / 135
$\epsilon_{\text{transverse}}$ (mm-mrad)	~1 / ~3	~2 / ~5	~3 / ~10
$\epsilon_{\text{longitudinal}}$ (keV-psec)	~5 / ~15	~10 / ~25	~15 / ~50
Polarization	No	Up to 600 μA	No
	750 MHz drive laser; single F100	12 GeV RF drive; three F100s	12 GeV RF drive; three F100s