

R&D ERL beam parameters

(PARMELA simulation result two operational regimes)

Parameter	Operation regime	High Current	High charge
Charge per bunch, nC		0.7	5
Numbers of passes		1	1
Energy maximum/injection, MeV		20/2.5	20/3.0
Bunch rep-rate, MHz		700	9.383
Average current, mA		500	50
Injected/ejected beam power, MW		1.0	0.15
R.m.s. Normalized emittances ϵ_x/ϵ_y , mm*mrad		1.4/1.4	4.8/5.3
R.m.s. Energy spread, $\delta E/E$		3.5×10^{-3}	1×10^{-2}
R.m.s. Bunch length, ps		18	31