Name	JLabFEL	CEBAF-ER	ERL DEMO	IR ERL Upgrade	UV FEL	ER@CEBAF	eIC cooler	cERL	EUV Source	ALICE	bERLinPro	CBETA	Cornell Light Source	S-DALINAC	MESA	test ERL	eRHIC ERL	CeC @ RHIC	LHeC	PERLE	ARIEL ERL	APS ERL	IHEP ERL	Peking ERL-FEL	PAPS	ERL	FEL
Institute	JLab	JLab	JLab	JLab	JLab	JLab	JLab	KEK	KEK	STFC	HZB	Cornell	Cornell	U Darmstadt	U Mainz	BNL	BNL	BNL	CERN	LAL Orsay	TRIUMF	Argonne	IHEP	IHEP	SINUP IHEP	BINP	BINP
Main application: Test Facility [TF], Light Source [LS], User Facility [UF], Physics Application [PA]	LS	TF	TF	LS	LS	TF		TF	LS	TF, UF	TF	TF	LS	TF & PA	PA	TF	PA	TF	PA	TF & PA	UF						
Commissioning Start		2003	1997		2001			2018	2013	In planning 2017	2005	2017-2019	2017	2017 (ERL mode)	Study		2014	Study	Study	In planning	In planning						
Operation End		2003	2001					2018	2016		2016	tbd	tbd	tbd	n.a.		2015										
# Re-Circulations	1	1	1	1	1	5		1	1	1	1	1	4	1	3	2	0	6		3	3	1					3
RF type	SC	SC	SC	SC	SC	SC		SC	SC	SC	SC	SC	SC	SC	SC	SC	SC	SC		SC	SC	SC			SC	SC	SC	NC	NC
RF Frequency [GHz]	1.5	1.5	1.5	1.5	1.5	1.50		1.3	1.3	1.3	1.3	1.3	1.3	3	1.3	0.704	0.647		0.8	0.8	1.3				1.3	0.65	0.18	
Bunch Frequency [MHz]											81.25		325						40	40	650MHz							
Accelerating Voltage ML [MeV / m]		5, 12				5, 12, 20		8.2	12.5 to 15	10 (14)		19	7	16	5		18	18	22.5	18	17.5	10						
Accelerating structure ML		2 linacs in racetrack, 20 CM / linac, 5-cell cavities				2 linacs, racetrack, 25 CM per linac, 5-cell and 7-cell cavities		one cryomodule with 2 9-cell cavities	one cryomojule with 4 9-cell cavities	1 cryomodule with 2 cavities 2	one cryomodule with 3 7-cell cavites	1 cryomodule with 6 7-cell cavities	64 CM with 6 7-cell cavities	4 CM with 2 20-cell cavities each		5-cell cavity cryomodule	2 5-cell cavities / cryomodule		4 5-cell cavities / cryomodule	4 5-cell cavities / cryomodule	2 9-cell cavities					2 2-cell cavities in one cryomodule		
Energy gain / linac [MeV]		500	48			700.00		17	50	24	44	36	5000	30.4	25	0	1500 x 2 linacs		10000	65.5	20						
Accelerating Voltage Injector [MeV / m]																											
Accelerating structure Injector														CM1: 1 2-cell plus 1 5-cell cavity; CM2: 2 20-cell cavity							650MHz						
Bunch charge @ inj [pC]	135	0.07	60	135	60	0.20		0.77 to 40		60	80	77	123	77	0.007	7.7	500	5300	1000 to 5000	400	375	15.4			60	240		
Bunch length [ps]		0.7		0.15		0.70		0.2 to 3	0.05 to 2		1	2	3	2	5	4.3	8.5, 22	10				1						
Energy spread (extraction)		0.0001 (%)		0.5	0.5	0.0001 (2-3%)		1.2×10^{-4}	1×10^{-3}	5 keV		0.005	4.00E-04	2.00E-04	1.20E-04		no data	0.001	0.001			0.10%						
Transverse emittance [gamma mm mrad]		0.5		15	10	0.50		1-1.6 (7.7pC/bunch)	0.8 (60pC/bunch)	5 to 10	0.4 - 0.6		0.5	0.3		1	2.5 / 3.5	20 to 70	0.3	50	6	1						
Av. Current @ inj [mA]	10	0.035	5	9	5	0.10		1	10	0.013	100	40	100	0.013	10	0.02	38		15	20	13		10		20	10	30	
Av. Current @ inj [mA] macro pulse										6.5																		
Injector Energy [MeV]		56		9	9	79.00		2.9	10.5	8.35	6	6	5	7.6	5	1.2	20	1.1	500	5	10					0.5		
Max beam energy @ end of accel [MeV]	160	1050	48	170	210	7079.00		20	800	35	50	150	5	130	105	1.2	18000	14.6	60000	400	50		35		30	50	11	
Max beam power @ end of accel [MW]	1.6	0.03675	0.24	1.53	1.05	0.7079	0	0.02	8	0.000455	5	6	0.5	0.00169	1.05	0.000024	684	0	900	8	0.65	0	0.35	0	0	0.5	0.33	0
Max total current in cavity [mA]	20	0.07	10	18	10	1	0	2	20	0.026	200	320	200	0.078	40	0	456	0	90	120		0	0	0	0	0	180	0
Power on dump [MW]	0	0.00196	0	0.081	0.045	0.0079	0	0.0029	0.105	0.00010855	0.6	0.24	0.5	0.0000988	0.05	0.000024	0.76	0	7.5	0.1		0	0	0	0	0.005	0	0
Power consumption of injector [MW]											3.5	0.75	1.5				2.5											
Power consumption of Facility [MW]								1	10		4.2	0.8	20				24		100									
FEL section		no				no		yes	yes	yes	not planned	no	no	no		no	no		no	No	Yes			yes		Yes		
FEL light type		n.a.				n.a.		Infrared	EUV	IR	n.a.	n.a	n.a.	n.a		n.a.	n.a.		-		UV and Infrared, THz and CSR and Compton backscattering						THz	
Source type		DC Photo Injector	DC Photo Injector	DC Photo Injector				DC gun 450 kV	DC gun 500kV	DC Photo gun with 500kV and GaAs cathode	SRF Photo Injector	DC Photo Cathode, 350kV	DC Photo Cathode, 350kV	Thermionic gun (250keV; tungsten wire) and Photo gun (100keV - 200keV); GaAs		Photocathod SRF gun	Photo Injector				Thermionic 300kV DC gun					Photocathod DC gun 500kV	DC Gun	
Cathode lifetime			n.a.					few month	one week	1 week	n.a.	2.6 days	2.6 days				> 6h											
Polarization		80% no	no	no		80%		No	No	No	No	No	No	85%		No	Yes			No								