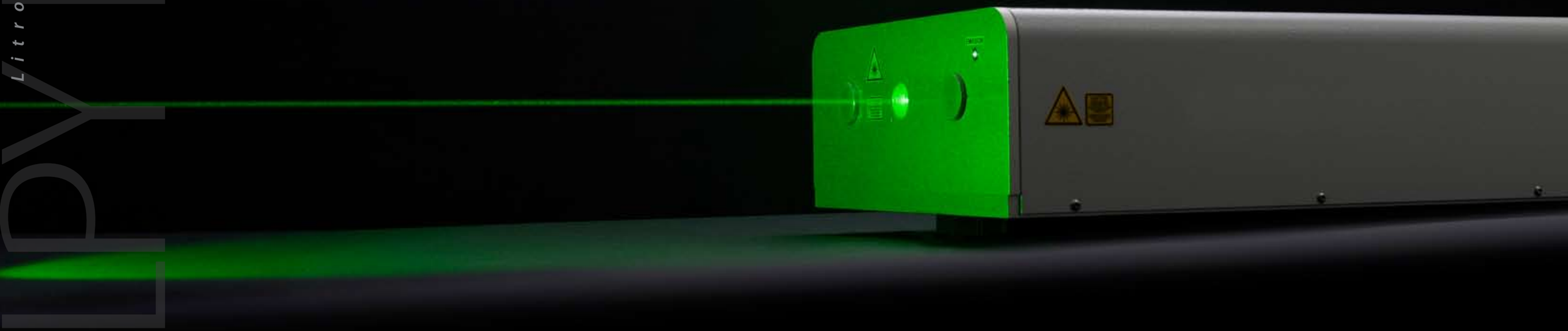
Litron Total Laser Capability

LPY Lasers

LPY600/700 Series
High Energy Pulsed Nd:YAG Lasers

Product Range Specification



LPY 6/700

Litron Lasers

LPY Range Specification Stable and Stable Telescopic Resonators

Model	LPY704-10	LPY 706-10	LPY664-10	LPY674-10	LPY764-10	LPY704-20	LPY706-20	LPY664-20	LPY674-20	LPY764-20	LPY704-30	LPY706-30	LPY764-30
Repetition Rate (Hz)	**10**	**10**	**10**	**10**	**10**	**20**	**20**	**20**	**20**	**20**	**30**	**30**	**30**
Output Energy (mJ)													
1064nm	420	650	850	1000	1250	380	600	800	850	1000	380	550	900
532nm	210	325	425	500	675	190	300	400	425	500	190	225	450
355nm (1)	80	100	130	160	200	70	85	110	130	140	50	80	150
266nm	50	70	95	110	120	50	65	75	80	90	45	60	80
Pulse Stability (±%)													
1064nm	2	2	2	2	2	2	2	2	2	2	2	2	2
532nm	3	3	3	3	3	3	3	3	3	3	3	3	3
355nm	4	4	4	4	4	4	4	4	4	4	4	4	4
266nm	6	6	6	6	6	6	6	6	6	6	6	6	6
Parameter													
Beam Diameter (mm)	6.5	8	8	9.5	8	6.5	8	8	9.5	8	6.5	8	8
Beam Divergence (mrad) (2)	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
M^2 @ 1064nm	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5			
Pulse Length @1064nm (ns)	6-10	6-10	6-10	6-10	6-10	6-10	6-10	6-10	6-10	6-10	8-10	8-10	8-10
Pointing Stability (µrad) (3)	<70	<70	<70	<70	<70	<70	<70	<70	<70	<70	<70	<70	<70
Lamp Life (pulses) (4)	$5x10^7$	$5x10^7$	$5x10^7$	$5x10^7$	$5x10^7$	$5x10^7$	$5x10^7$	$5x10^7$	$5x10^7$	$5x10^7$	$5x10^7$	$5x10^7$	$5x10^7$
Timing Jitter (ns) (5)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Services													
Voltage(6) (VAC)	220-250	220-250	220-250	220-250	220-250	220-250	220-250	220-250	220-250	220-250	220-250	220-250	220-250
Frequency(7) (Hz)	47-63	47-63	50 or 60	50 or 60	50 or 60	50 or 60	50 or 60	50 or 60	50 or 60	50 or 6z	50 or 60	50 or 60	50 or 60
Power Phase	Single	Single	Single	Single	Single	Single	Single	Single	Single	Single	Single	Single	Single
Water Temp Max. (˚C)	Air Cooled(8)	Air Cooled(8)	20	20	20	Air Cooled(8)	20	20	20	20	20	20	20
Inlet Pressure (bar)	n/a	n/a	2-5	2-5	2-5	n/a	2-5	2-5	2-5	2-5	2-5	2-5	2-5
PSU Type	LPU1000	LPU1000	16U Rackmount	16U Rackmount	16U Rackmount	LPU1000	16U Rackmount	16U Rackmount	16U Rackmount	16U Rackmount	16U Rackmount	16U Rackmount	16U Rackmount

Model	LPY704-50	LPY742-50	LPY702-100	LPY704-100	LPY742-100	LPY702-150	LPY732-150	LPY702-200	LPY732-200	LPY604T-10	LPY604T-20	LPY642T-10	LPY642T-20	LPY642T-30
												True TEM_{00} Output		
Repetition Rate (Hz)	**50**	**50**	**100**	**100**	**100**	**150**	**150**	**200**	**200**	**10**	**20**	**10**	**20**	**30**
Output Energy (mJ)														
1064nm	300	450	100	230	400	90	280	70	200	80	70	350	300	250
532nm	150	225	50	115	200	45	140	35	100	40	35	175	150	125
355nm (1)	40	80	20	20	70	12	30	10	30	20	15	80	70	65
266nm	20	35	10	15	20	7	18	6	10	15	10	40	30	25
Pulse Stability (±%)														
1064nm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
532nm	3	3	3	3	3	3	3	3	3	3	3	3	3	3
355nm	4	4	4	4	4	4	4	4	4	4	4	4	4	4
266nm	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Parameter														
Beam Diameter (mm)	6.5	6.5	6.5	6.5	6.5	5	5	6	6	6.5	6.5	6.5	6.5	6.5
Beam Divergence (mrad) (2)	2.5	2	2.5	2.5	2	2.5	2	3	2.5	0.8	0.8	0.8	0.8	0.8
M^2 @ 1064nm										<1.3	<1.3	<1.3	<1.3	<1.3
Pulse Length @1064nm (ns)	8-10	8-10	10-12	15-18	15-18	15-18	15-18	15-18	15-18	6-10	6-10	6-10	6-10	6-10
Pointing Stability (µrad) (3)	<70	<70	<100	<100	<100	<100	<100	<100	<100	<70	<70	<70	<70	<70
Lamp Life (pulses) (4)	$1.5x10^8$	$1.5x10^8$	$1.5x10^8$	$1.5x10^8$	$1.5x10^8$	$1.5x10^8$	$1.5x10^8$	$1.5x10^8$	$1.5x10^8$	$>10^7$	$>10^7$	$>10^7$	$>10^7$	$>10^7$
Timing Jitter (ns) (5)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Services														
Voltage(6) (VAC)	220-250	220-250	220-250	220-250	220-250	220-250	220-250	220-250	220-250	220-250	220-250	220-250	220-250	220-250
Frequency(7) (Hz)	50 or 60	50 or 60	50 or 60	50 or 60	50 or 60	50 or 60	50 or 60	50 or 60	50 or 60	50 or 60	50 or 60	50 or 60	50 or 60	50 or 60
Power Phase	Single	Single	Single	Single	Single	Single	Single	Single	Single	Single	Single	Single	Single	Single
Water Temp Max. (˚C)	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Inlet Pressure (bar)	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5
PSU Type	16U Rackmount	16U Rackmount	16U Rackmount	16U Rackmount	16U Rackmount	16U Rackmount	16U Rackmount	16U Rackmount	16U Rackmount	16U Rackmount	16U Rackmount	16U Rackmount	16U Rackmount	16U Rackmount

(1) Higher conversion efficiency into 3rd harmonic available using Type 1 doubler.

(2) Full angle for 90% of the output energy.

(3) Full angle.

(4) Typical lifetime.

(5) Jitter is measured with respect to the Q-switch trigger input.

(6) 110VAC option requires autotransformer to be specified on order.

(7) 50 or 60Hz to be specified on order.

(8) Ambient Temperature 5-35˚C. (0-80% non condensing atmosphere.)

LPY•6/700

All LPY700 series systems feature a birefringence compensating twin rod oscillator design.
The LPY600 series are single rod oscillator/oscillator-amplifiers.

Litron Lasers

LPY Range Specification Gaussian Coupled Resonators

Model	LPY704G-10	LPY 706G-10	LPY707G-10	LPY674G-10	LPY764G-10	LPY776G-10	LPY787G-10	LPY704G-20	LPY706G-20	LPY707G-20	LPY674G-20	LPY764G-20	LPY776G-20	LPY787G-20
Repetition Rate (Hz)	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**20**	**20**	**20**	**20**	**20**	**20**	**20**
Output Energy (mJ)														
1064nm	400	650	850	1000	1250	1600	2000	380	600	800	850	1000	1400	1800
532nm	200	325	425	500	675	800	1000	190	300	400	425	500	700	900
355nm (1)	80	110	150	180	225	320	400	70	90	130	150	140	280	380
266nm	50	70	95	110	125	160	195	45	65	75	80	90	140	180
Pulse Stability (±%)														
1064nm	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
532nm	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
355nm	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
266nm	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Parameter														
Beam Diameter (mm)	6	8	9.5	9.5	9.5	9.5	12.5	6	8	9.5	9.5	9.5	9.5	12.5
Beam Divergence (mrad) (2)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
M^2 @ 1064nm	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Pulse Length @1064nm (ns)	6-9	6-9	6-9	6-9	6-9	6-9	6-9	6-9	6-9	6-9	6-9	6-9	6-9	6-9
Pointing Stability (µrad) (3)	<70	<70	<70	<70	<70	<70	<70	<70	<70	<70	<70	<70	<70	<70
Lamp Life (pulses) (4)	>5x10^7	>5x10^7	>3x10^7	>3x10^7	>3x10^7	>3x10^7	>3x10^7	>5x10^7	>5x10^7	>3x10^7	>3x10^7	>3x10^7	>3x10^7	>3x10^7
Timing Jitter (ns) (5)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Services														
Voltage(6) (VAC)	220-250	220-250	220-250	220-250	220-250	220-250	220-250	220-250	220-250	220-250	220-250	220-250	220-250	220-250
Frequency(7) (Hz)	47-63	47-63	47-63	50 or 60	50 or 60	50 or 60	50 or 60	50 or 60	50 or 60	50 or 60	50 or 60	50 or 60	50 or 60	50 or 60
Power Phase	Single	Single	Single	Single	Single	Single	Single	Single	Single	Single	Single	Single	Single	Single
Water Temp Max. (˚C)	Air Cooled(8)	Air Cooled(8)	Air Cooled(8)	20	20	20	20	Air Cooled(8)	20	20	20	20	20	20
Inlet Pressure (bar)	n/a	n/a	n/a	2-5	2-5	2-5	2-5	n/a	2-5	2-5	2-5	2-5	2-5	2-5
PSU Type	LPU1000	LPU1000	LPU1000	16U Rackmount	16U Rackmount	16U Rackmount	16U Rackmount	16U Rackmount	16U Rackmount	16U Rackmount	16U Rackmount	16U Rackmount	16U Rackmount	16U Rackmount

Model	LPY704G-30	LPY706G-30	LPY764G-30	LPY774G-30	LPY787G-30
Repetition Rate (Hz)	**30**	**30**	**30**	**30**	**30**
Output Energy (mJ)					
1064nm	380	550	900	1200	1500
532nm	190	225	450	600	750
355nm (1)	50	80	150	260	300
266nm	45	60	80	120	150
Pulse Stability (±%)					
1064nm	<2	<2	<2	<2	<2
532nm	<4	<4	<4	<4	<4
355nm	<6	<6	<6	<6	<6
266nm	<10	<10	<10	<10	<10
Parameter					
Beam Diameter (mm)	6	8	9.5	9.5	9.5
Beam Divergence (mrad) (2)	0.5	0.5	0.5	0.5	0.5
M^2 @ 1064nm	<2	<2	<2	<2	<2
Pulse Length @1064nm (ns)	6-9	6-9	6-9	6-9	6-9
Pointing Stability (µrad) (3)	<70	<70	<70	<70	<70
Lamp Life (pulses) (4)	>3x10^7	>3x10^7	>3x10^7	>3x10^7	>3x10^7
Timing Jitter (ns) (5)	<0.5	<0.5	<0.5	<0.5	<0.5
Services					
Voltage(6) (VAC)	220-250	220-250	220-250	220-250	220-250
Frequency(7) (Hz)	47-63	50 or 60	50 or 60	50 or 60	50 or 60
Power Phase	Single	Single	Single	Single	Single
Water Temp Max. (˚C)	Air Cooled(8)	20	20	20	20
Inlet Pressure (bar)	n/a	2-5	2-5	2-5	2-5
PSU Type	LPU1000	16U Rackmount	16U Rackmount	16U Rackmount	16U Rackmount

All LPY700 series systems feature a birefringence compensating twin rod oscillator design.
The LPY600 series are single rod oscillator/oscillator-amplifiers.

(1) Higher conversion efficiency into 3rd harmonic available using Type 1 doubler.

(2) Full angle for 90% of the output energy.

(3) Full angle.

(4) Typical lifetime.

(5) Jitter is measured with respect to the Q-switch trigger input.

(6) 110VAC option requires autotransformer to be specified on order.

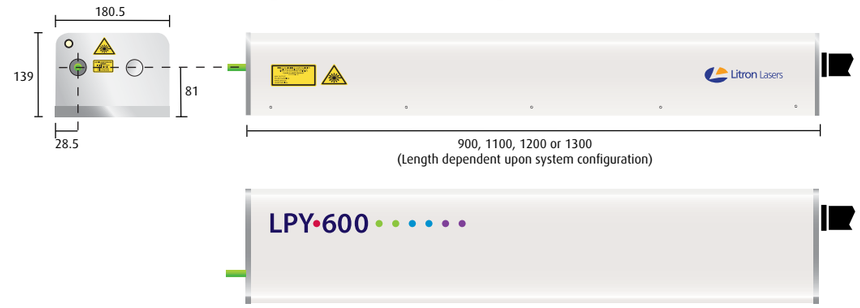
(7) 50 or 60Hz to be specified on order.

(8) Ambient Temperature 5-35˚C. (0-80% non condensing atmosphere.)

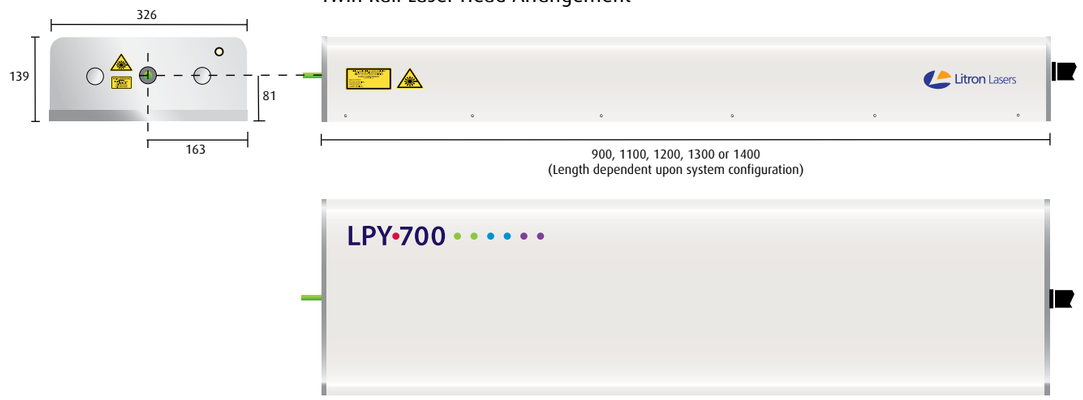
Litron Lasers

LPY Range Dimensions

Single Rail Laser Head Arrangement

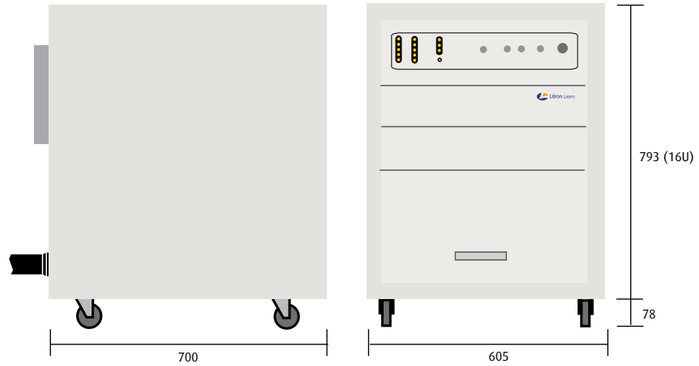


Twin Rail Laser Head Arrangement

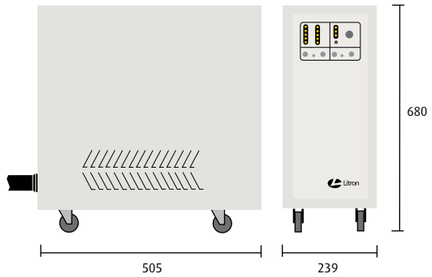


All dimensions shown in mm

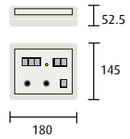
16U Rackmount PSU



LPU1000 PSU



Remote Control Box



Our policy is to improve the design and specification of our products. The details given in this document are not to be regarded as binding.

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