

CHAPTER 2 LASERS

PULSED DIODE LASER MODULES



Featuring peak output powers of up to 100W, these pulsed Laser Diode Modules offer pulse widths ranging from 7 to 50ns with fast rise and fall time.

ML Series:

The ML family of pulsed laser modules offers peak output powers of up to 100W at 905nm. These units include the laser diode, focusing lens, and pulse drive electronics and require only a regulated DC input voltage and a TTL timing trigger to operate. ML series pulsers are ideal for applications requiring high peak pulse powers, such as rangefinding and lidar.



ILC & IPC Series

Our ILC and IPC pulsers offer peak pulse currents from 1 to 105A and pulse widths from 7 to 500ns. Available wavelengths include 850, 905, 1064, and 1550nm. ILC family contain an internal power supply that allows for either a built-in trigger pulse or a user-supplied trigger. IPC pulsers do not incorporate an internal power supply, so users must supply a trigger pulse and a bias voltage. Both series are temperature compensated to regulate output power, and both are suitable for any number of applications, including rangefinding, atmospheric communications, lidar and biomedical analysis.

MODULE SPECIFICATIONS	ML20A15	ML40H15	ML60H15	ML100H15
Dimensions, W x L x H, in. / mm	2.12 x 3.40 x 0.58 / 53.85 x 86.44 x 14.73	2.12 x 3.40 x 1.02 / 53.85 x 86.44 x 26.01	2.12 x 3.40 x 1.02 / 53.85 x 86.44 x 26.01	2.12 x 3.40 x 1.02 / 53.85 x 86.44 x 26.01
Peak Output Power (W)	20	40	60	100
Pulse Width (ns)	15	15	15	15
Max. Pulse Repetition Frequency (kHz)	10	10	6	5
Operating Voltage (VDC)	9-14.5	9-14.5	9-14.5	9-14.5
Max. Operating Current (mA)	100	150	120	150
Max. Laser Drive Current (mA)	17000	17000	20000	21000

PULSER SPECIFICATIONS	IL9C	IL10C	IL20C	IL25C	IL30C	IL40C	IL60C	IL75C
Dimensions, φ x L, in. / mm	1.0 x 4.0 / 25.4 x 101.6	1.0 x 4.0 / 25.4 x 101.6	1.0 x 4.0 / 25.4 x 101.6	1.0 x 4.0 / 25.4 x 101.6	1.0 x 4.0 / 25.4 x 101.6	1.25 x 4.0 / 31.75 x 101.6	1.25 x 4.0 / 31.75 x 101.6	1.25 x 4.0 / 31.75 x 101.6
Pulse Current (adjustable, A)	1-9	6-11	11-22	14-27.5	16-33	22-44	33-66	41-82.5
7-50ns Pulse Width	Rise Time (ns, typical) 2	2	3	4	4	5	5	8
	Fall Time (ns, typical) 2	3	5	6	6	7	8	10
51-200ns Pulse Width	Rise Time (ns, typical) 12	14	16	18	28	20	22	24
	Fall Time (ns, typical) 14	16	18	20	20	22	26	28
Max. Pulse Rate External Trigger (kpps)	50	40	30	20	20	20	15	10
Propogation Delay (ns)	10	10	10	10	10	10	10	10
Supply Voltage (VDC)	12-24	12-24	12-24	12-24	12-24	12-24	12-24	12-24
Physical Diode Compatibility	9 & 5.6mm 8:32, 10:32	9 & 5.6mm 8:32, 10:32	9 & 5.6mm 8:32, 10:32	9 & 5.6mm 8:32, 10:32	9 & 5.6mm 8:32, 10:32	9 & 5.6mm 8:32, 10:32	9 & 5.6mm 8:32, 10:32	9 & 5.6mm 8:32, 10:32