DP Max Series - *Defined by the future, not the past.*

Diode Pulse Pumped-Q-Switched Nanosecond Lasers

Introducing the new DP MAX Series of Diode Pulse Pumped high pulse energy lasers.

The DP MAX Series are based on two new dedicated industrial monolithic laser head platforms.

The DPM 200mJ-100 delivers up to 200mJ at 100Hz with options to 400Hz at 1064nm
The DPM 3J-10 delivers up to 3J at 10Hz or 1J @ 30Hz at 1064nm
These options cover many key high pulse energy industrial and scientific applications.

The DPM Series represents a completely new form factor for diode pulse-pumped lasers. With order(s) of magnitude more efficiency than the Pulse Lamp pumped laser, DPM series produces better and more stable mode, more stable pulse energy, a compact package, much lower heat removable requirement, 100 times longer lifetime.

Key Unique Features:

- M^2 4~ 6 beam circular beam quality,
- Motorized 1064nm attenuation is standard on all models
- Fully integrated harmonics - 532nm, 355nm, 266nm and 213nm as required.
- Harmonics' auto-tune function as standard
- Wall power efficiency up to 10%, and low heat removable requirement.
- Extended diode lifetimes > 10 Billion Pulses – low long-term cost of ownership.
- Fully sealed and protected monolithic laser head..
- Fully detachable umbilical for easy integration.
- Dynamic Real-Time Pulse to Pulse Power Control (PWC Mode) – LIFT Mode
- Optional Direct Access Mode (Jitter <1ns)
- Optional Beam Mode monitoring

APPLICATIONS

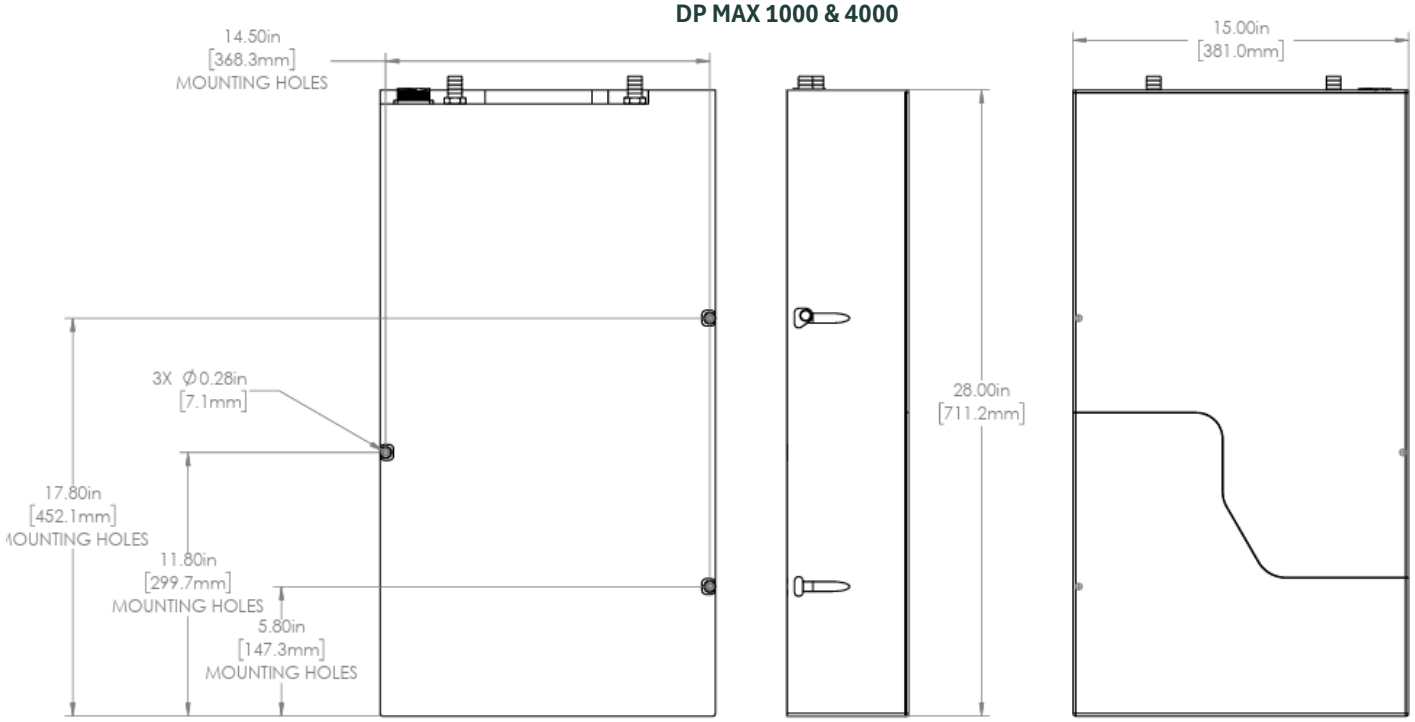
- Semiconductor Annealing
- Semiconductor Inspection
- Pulsed Laser Deposition (PLD)
- Shock Peening & Material Ablation
- Laser Induced Forward Transfer (LIFT)
- Laser Lift-Off (LLO) and Debonding
- LIBS /TOF Realtime spectroscopy
- Plasma and Quantum Physics
- Laser Cleaning
- OPO, DYE Laser and Ti:Sa Pumping
- Satellite Ranging & LIDAR

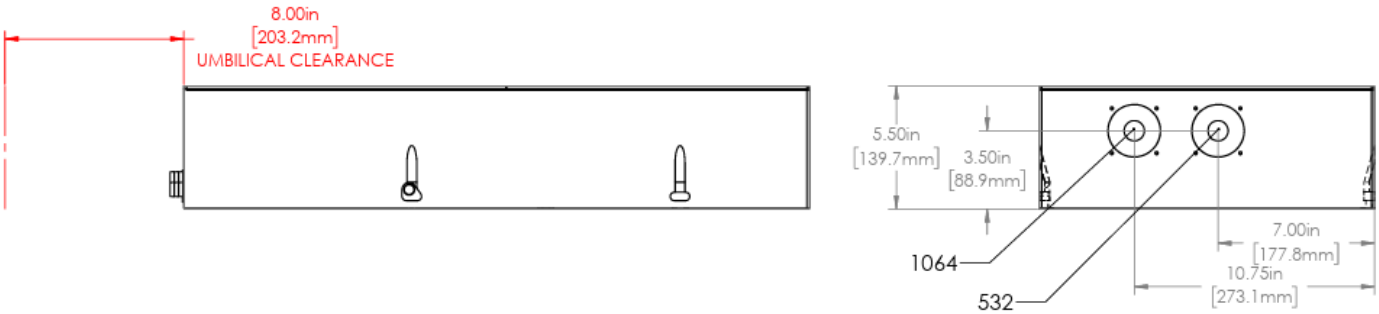
Specifications – **DP MAX Series** - Preliminary Specifications						
		DPM-200-100	**DPM-100-200**	**DPM 50-400**	**DPM-1000-20**	**DPM-3000-10**
Pulse Repetition Frequency (Hz)[1]		100	200	400	20	10
Max Pulse Energy (mJ)[2,3]*	1064 nm	200	100	50	1500	3000
	532 nm	100	50	25	750	2000
	355 nm	70	35	15	400	Contact PI
	266nm[4]	15	8	5	90	
Pulse Width Range (ns)[5]		~8 -15				
Pulse-to-pulse stability at 1064nm (RMS %)		<0.2			<0.8	<1
Long-term power stability at 1064nm (RMS %)		<2				
Beam spatial mode at 1064nm		Multimode M^2 < 8				
Beam diameter at exit (nominal) (mm)		~6			~10	~11
Beam roundness (%)		>90				
Beam pointing stability (µrad)		<25				
Polarization ratio: [§]		>100:1 - 1064nm & 355nm =Vert. | 532nm & 266nm = Hor.				
		Operational Specifications and Characteristics				
Interface		RS232, Ethernet, Software GUI, External TTL Triggering				
Warm-up time		< 5 minutes from standby, <10 minutes from cold start				
Electrical requirement AC (V, Hz)		200-240V AC				
Power consumption (W)		< 500W			<500 W	<500W
Dimensions		14 x 7 x 5.5 [355.6 x 176.7 x 108 mm]			28 x 15 x 5.5in [711.2 x 304.8 x 139.7mm]	
Weight		~ 8 Kg (~18 lbs)			~ 40 Kg (~88 lbs)	~ 45 Kg (~100 lbs)
2U PSU – Included		16 x 19 x 3.5in [406 x 483 x 89mm]			16 x 19 x 3.5in [406 x 483 x 89mm]	
Cooling:		Water ~22 °C ~ 500 W Load			Water ~22 °C ~ 500W Load	Water ~22 °C ~ 500W Load
		Environmental Requirements				
Ambient temperature Operational Conditions		Ambient 15°C to 30°C (59°F to 86°F)				
		Relative humidity 0% to 80% max, non-condensing				
Ambient temperature Storage conditions		-10°C to 40°C; sea level to 12000 m				
		0% to 80% relative Humidity, non-condensing				

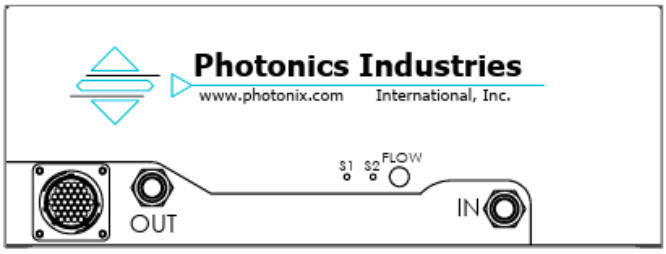
Notes:
[1] Maximum Pulse Repetition Frequency
[2] Pulse energy at max PRF
[3] UV & DUV Pulse energy is reduced by 10% with multi-wavelength output options.
[4] **For 266nm High Power outputs, please contact PI.**
[5] Pulse width is model and wavelength dependent
[§] Polarizations vary for multiwavelength options.

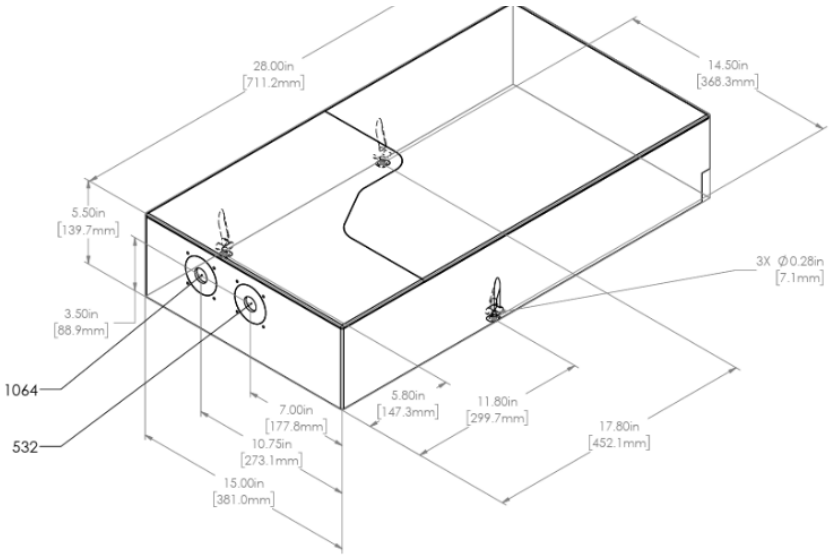
Dimensional Drawings

DP MAX 1000 & 4000



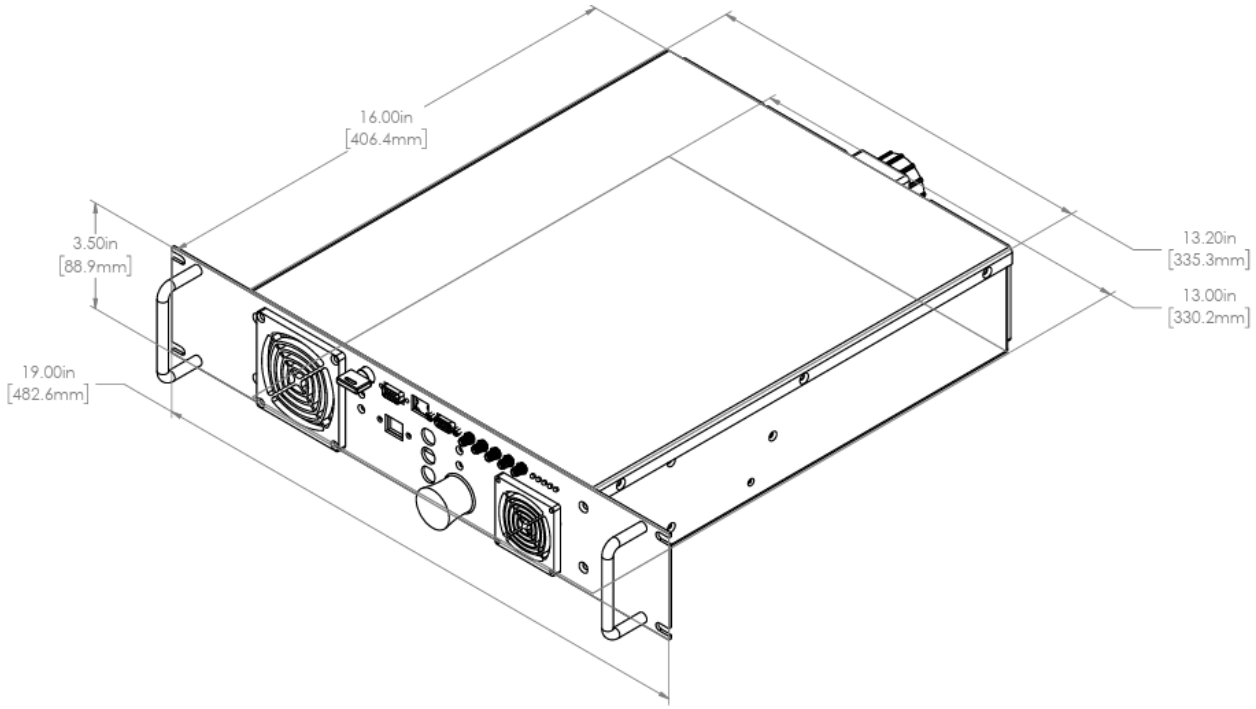


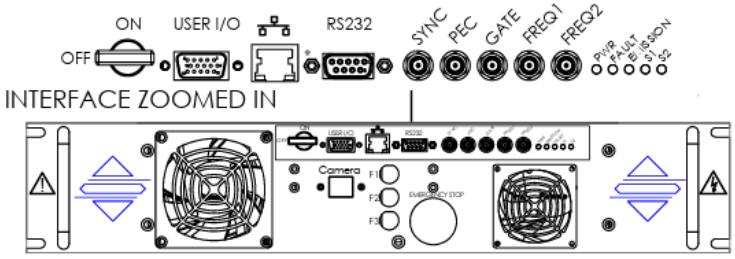


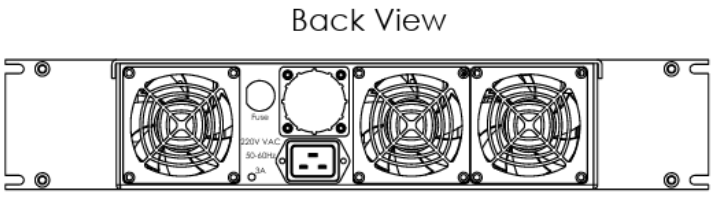


Dimensional Drawings

DP MAX Driver







Our ongoing policy is to improve the design and specification of our products. The information provided is non-binding.

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Photonics Industries International Inc. is the pioneer of intracavity harmonic lasers and is at the forefront of developing, manufacturing, and marketing a wide range of nanosecond, sub-nanosecond, picosecond, and femtosecond lasers for the industrial, scientific, defense and medical industries.

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