

DM Nd: YLF UV Series

DM Nanosecond Lasers

Diode Pumped Multimode, Q-Switched Lasers

As the pioneer of intracavity harmonic lasers and AIO efficient, compact/simple packaging, Photronics Industries has been setting the standard for multimode performance and reliability for over two decades since 2002.

Photronics Industries' DM Series Nd: YLF UV nanosecond lasers deliver up to 60mJ @ 1kHz, over 100W @ 3kHz at 351nm based on its patented technologies, in a compact, durable design. Ideal for semiconductor annealing, Laser lift off, wafer dicing, UV laser ablation, and excimer laser replacements, these lasers combine high energy with efficiency in a space-saving form.



APPLICATIONS

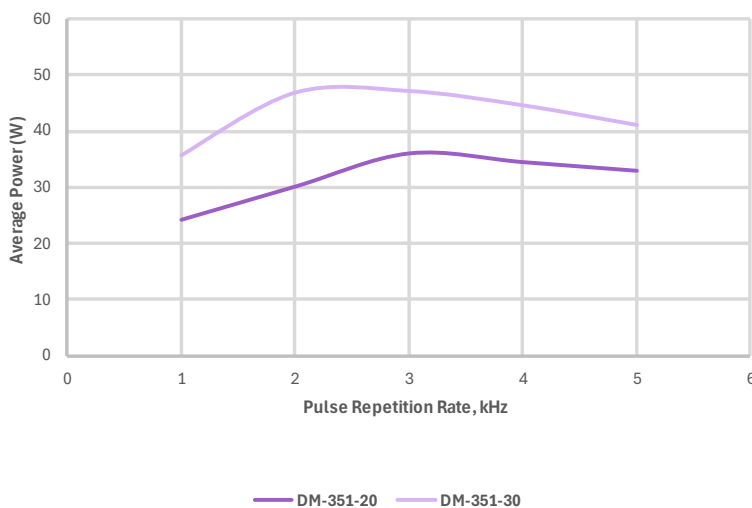
- Semiconductor annealing
- Laser Lift-off for OLED displays
- Particle Image Velocimetry (PIV)
- High Power cutting, drilling, welding, marking, patterning
- Laser Induced Fluorescence (LIF)
- Semiconductor Lithography
- Surface Cleaning and Ablation
- Wafer Processing
- Laser-Induced Breakdown Spectroscopy (LIBS)

FEATURES

- UV 351nm
- Up to ~60mJ @ 1kHz, 100W@3kHz
- Pulse width from <30ns to 100s ns
- Multimode Output
- Robust & Compact Form Factor
- Dynamic **P**ulse **E**nergy **C**ontrol - **PEC**
- Power Monitoring and Auto-attenuation
- Unmatched Reliability

Specifications – DM Nd: YLF UV Series		
	DM-351-20	DM-351-30
Wavelength	351nm	
Average Power @3kHz	30W	45W
Pulse Energy @1kHz	20mJ	30mJ
Pulse Width @ 1kHz	~50+/-10ns	50+/-10ns
PULSE WIDTH @3KHz	70+/-20ns	70+/-20ns
Pulse repetition rate ²	Single shot to 6 kHz	
Pulse-to-pulse stability ³	<1.0% rms	
Long-term power stability ⁴	<0.5% rms	
Beam spatial mode	Multimode M ² _x 22+/-3 M ² _y 12+/-2	
Beam divergence (nominal)	X:~6.0+/-1.0 Y:~2.8+/-0.5 mrad	X:~6.0+/-1.0 Y:~2.3+/-0.5 mrad
Beam diameter at exit	X:~3.7+/-0.5; Y: 2.6+/-0.5 mm	X:~2.7+/-0.5; Y: 2.2+/-0.5 mm
Beam pointing stability	<25 urad	
Polarization ratio	Horizontal; 100:1	
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	100-240 V AC	
Line frequency	50-60 Hz	
Power consumption ⁵	0.8kW	1kW
Laser Head Dimensions	26 x 9.5 x 4.25in [660 x 241.3 x 108mm]	
Power Supply Dimensions ⁶	15 x 19 x 3.5 in	
Weight	~85lbs	
Environmental Requirements		
Ambient temperature	Ambient 15°C to 30°C (59°F to 86°F) Operating Range	
	Relative humidity 0% to 80% max, non-condensing	
Storage conditions	-10°C to 40°C; sea level to 12000 m	
	0% to 80% relative Humidity, non-condensing	
Cooling system	Water-Cooled	

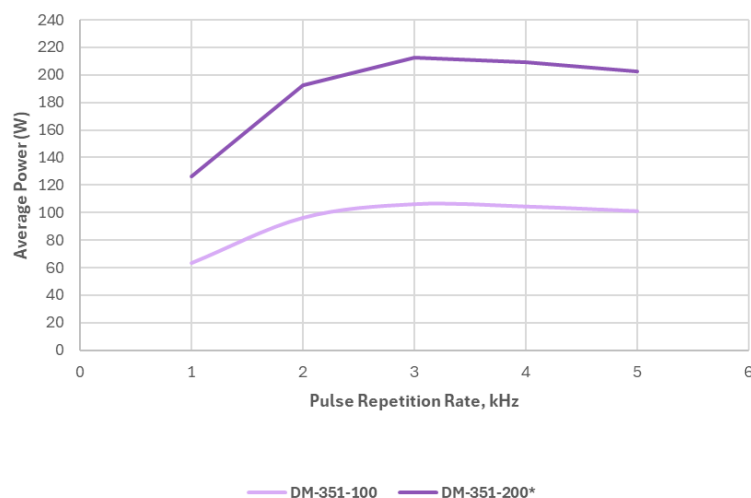
[2.] Lower pulse repetition rates (down to < 1 kHz) performance achieved by pulse energy capping [3] Measured at ambient temperature ± 2°C [4] Measured over 8 hours ± 1°C [5] Power consumption data does not include an external chiller's power consumption [6] Total width with rack mount option is 19 in. Please note the height in rack units is 2U.

Power Vs. PRF.


Specifications – DM Nd: YLF UV Series		
	DM-351-100	DM2-351-100
Wavelength	351nm	
Average Power @3kHz	100W	200W (Combined power)
Pulse Energy @1kHz	60mJ	120mJ (Combined energy)
Pulse width @1kHz	30+/-10ns	
Pulse Width @ 3kHz	~50+/-10ns	
Pulse repetition rate ²	1kHz to 5kHz	1kHz to 10kHz
Pulse-to-pulse stability ³	<1.0% rms	
Long-term power stability ⁴	<0.5% rms	
Beam spatial mode	Multimode M ² _x 16+/-3 M ² _y 7.5+/-1.5	
Beam divergence (nominal)	X:~5.0mrad Y:~2.0mrad	
Beam diameter at exit	~ X: 3+/-0.5; Y: 2.2+/-0.5 mm	
Beam pointing stability	<25 urad	
Polarization ratio	Horizontal; 100:1	
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	200-240 V AC	
Line frequency	50-60 Hz	
Power consumption ⁵	<2kW	>2kW
Laser Head Dimensions	26 x 9.5 x 4.25in [660 x 241.3 x 108mm]	26 x 16 x 4.25in [660 x 406.4 x 108mm]
Power Supply Dimensions ⁶	15 x 19 x 3.5 in	16 x 19 x 3.5 in
Weight	~85lbs	~110lbs
Environmental Requirements		
Ambient temperature	Ambient 15°C to 30°C (59°F to 86°F) Operating Range	
	Relative humidity 0% to 80% max, non-condensing	
Storage conditions	-10°C to 40°C; sea level to 12000 m	
	0% to 80% relative Humidity, non-condensing	
Cooling system	Water-Cooled	

[2.] Lower pulse repetition rates (down to < 1 kHz) performance achieved by pulse energy capping [3] Measured at ambient temperature ± 2°C [4] Measured over 8 hours ± 1°C [5] Power consumption data does not include an external chiller's power consumption [6] Total width with rack mount option is 19 in. Please note the height in rack units is 2U.

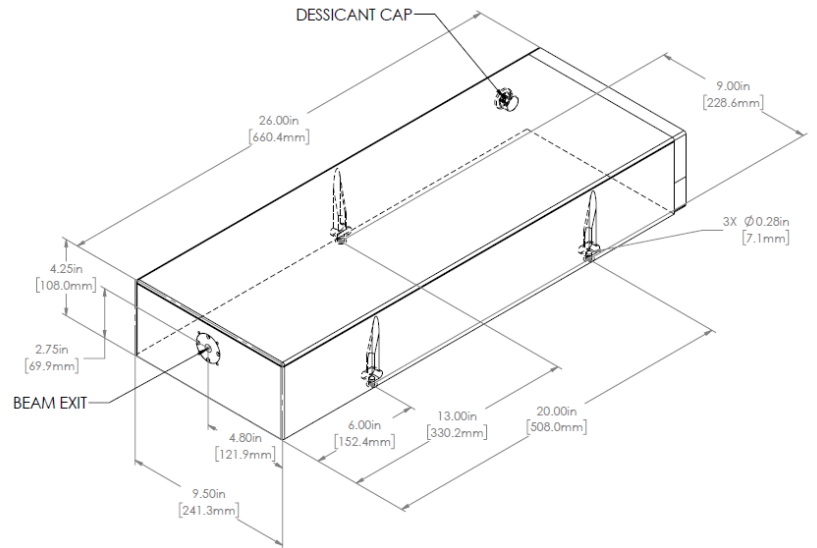
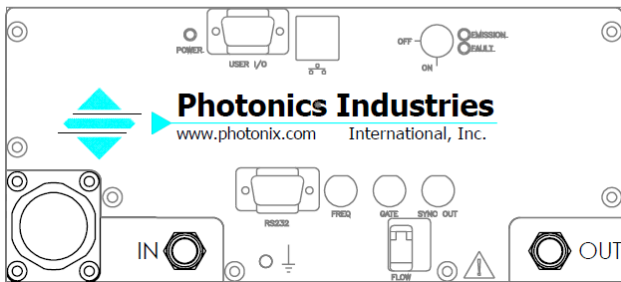
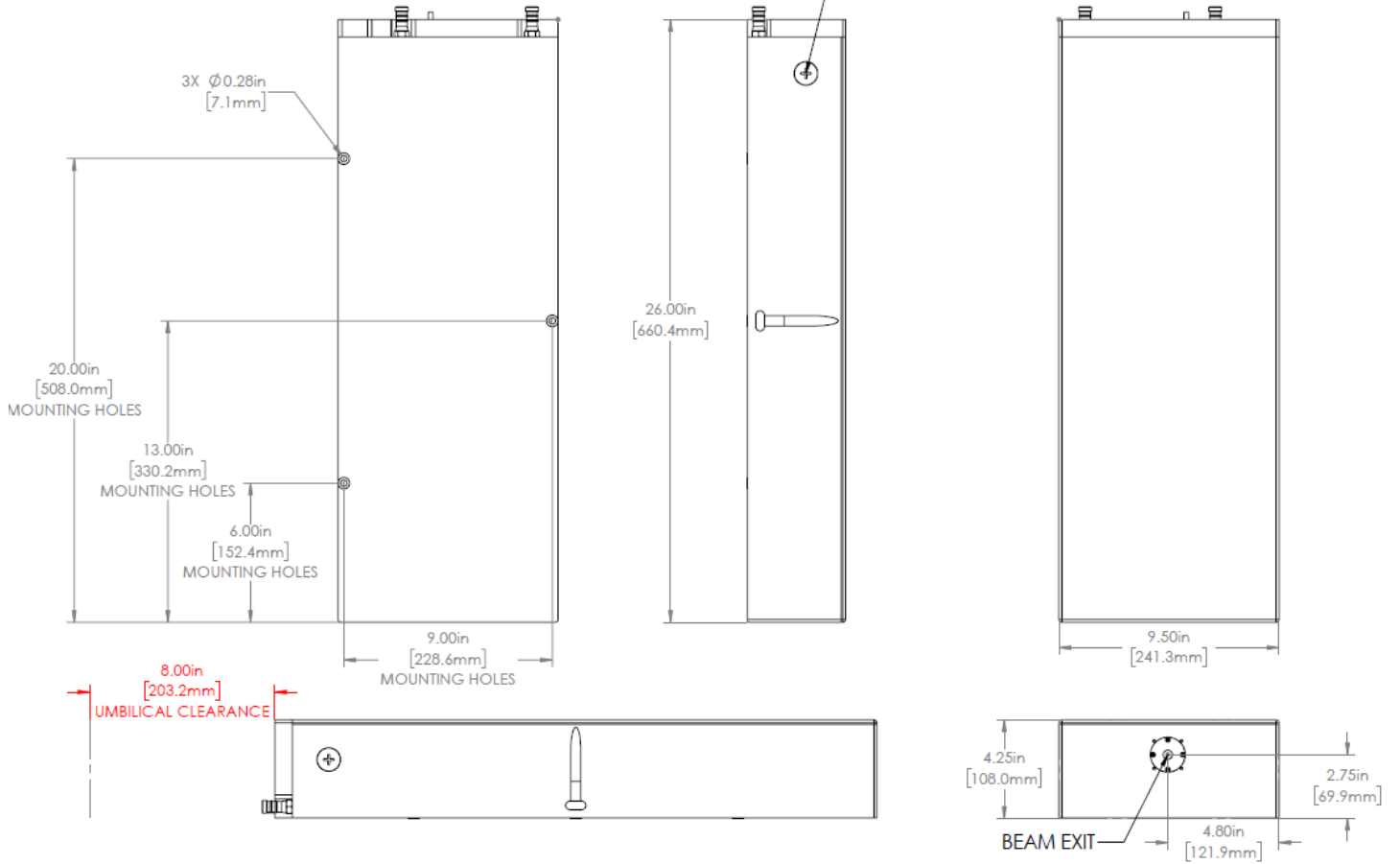
Power Vs. PRF.



Dimensional Drawings

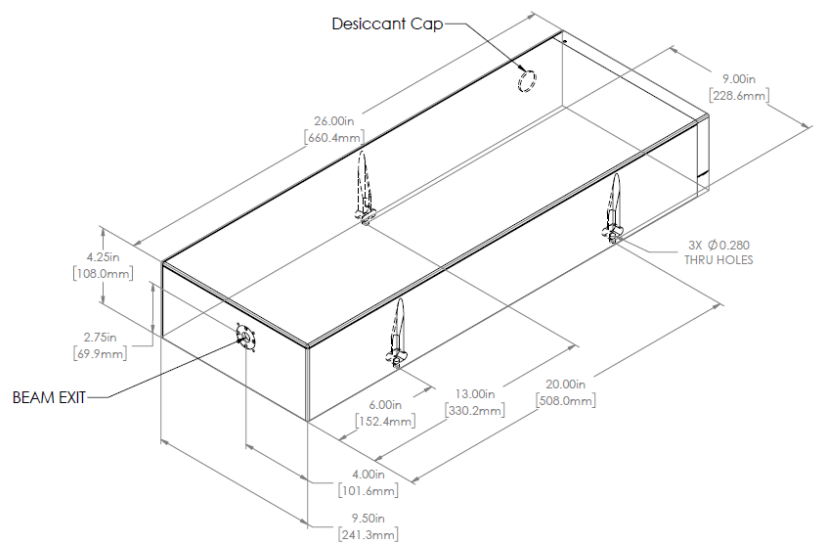
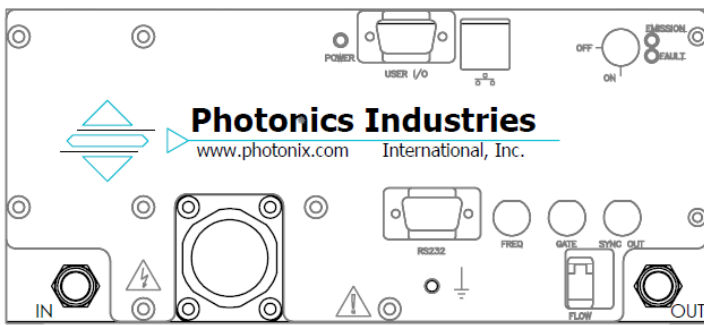
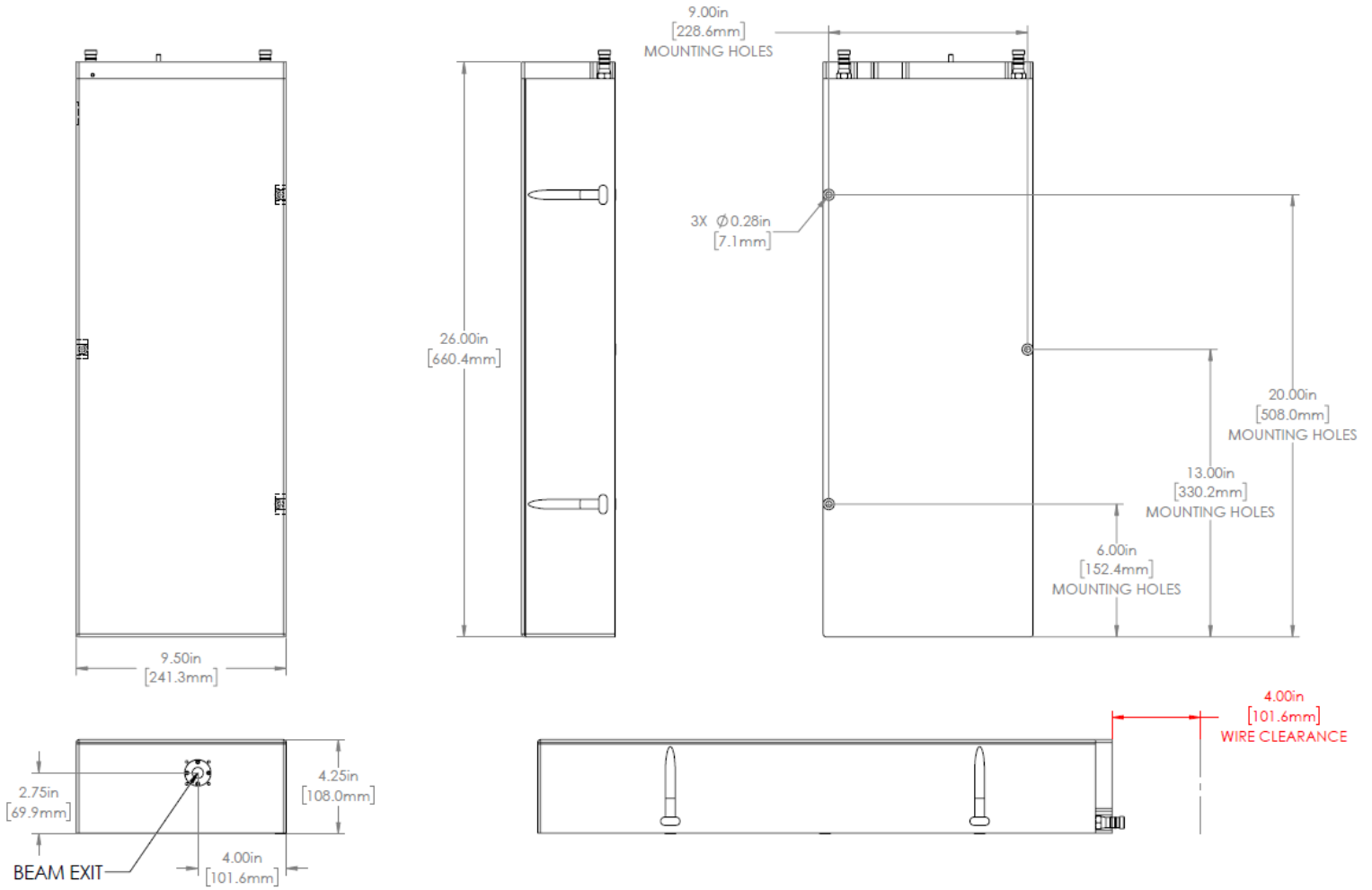
DM-351-20/30

DESICCANT CAP



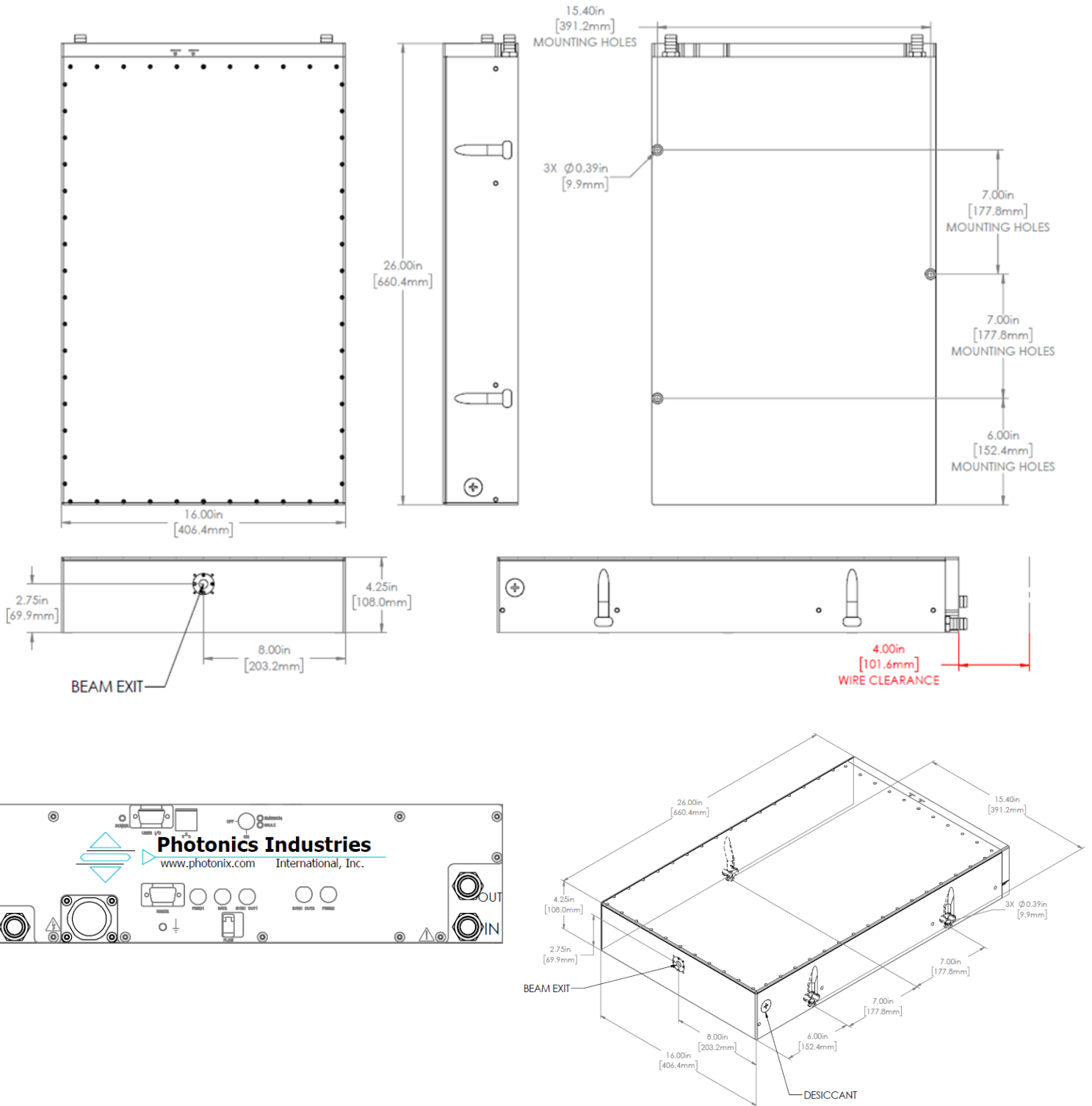
Dimensional Drawings

DM-351-100

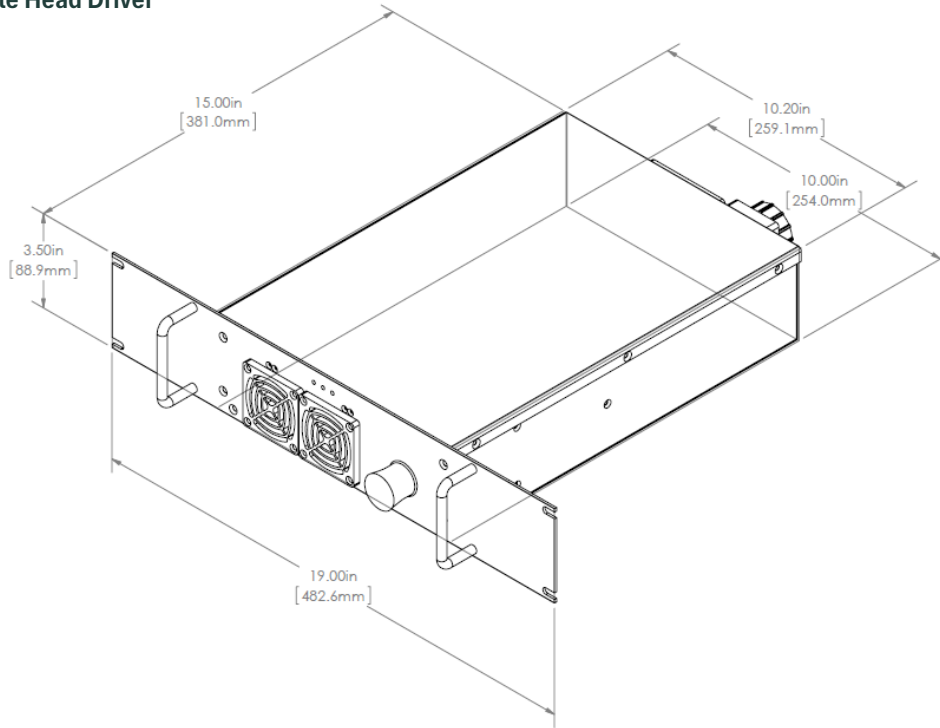


Dimensional Drawings

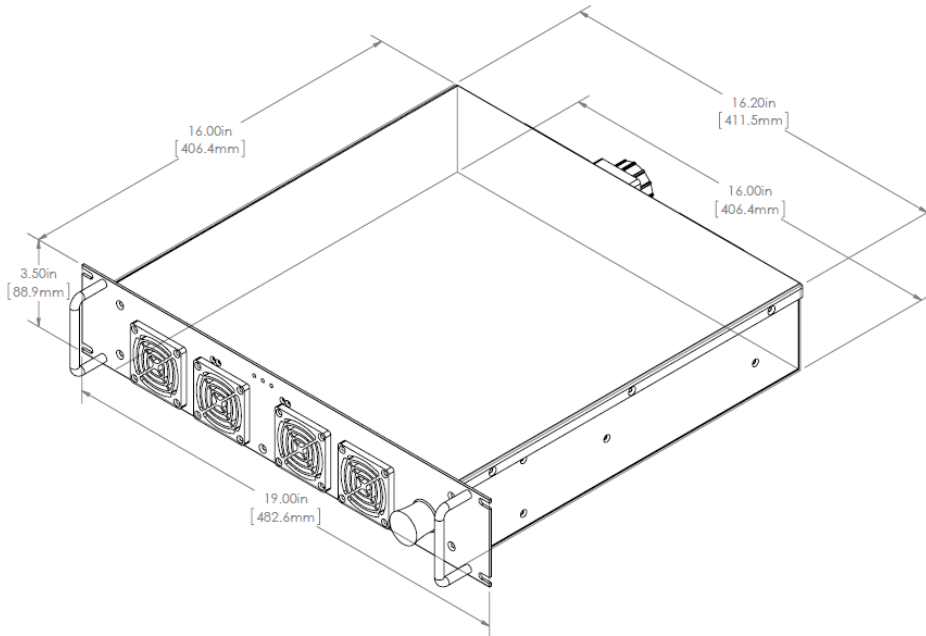
DM2-351-100



DM Single Head Driver



DM Dual Head Driver



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

© 2025 Photonics Industries International, Inc.

Headquarters: 1800 Ocean Ave, Ronkonkoma, New York 11779, United States

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.

For more information www.potonix.com



光と人をつなぐ

Rayture Systems



レイチャーシステムズ株式会社

〒160-0006 東京都新宿区舟町7 ロクサンビル7F

TEL : 03-3351-0717 FAX : 03-3351-6771

URL : <http://www.rayture-sys.co.jp>

E-mail : laser@rayture-sys.co.jp