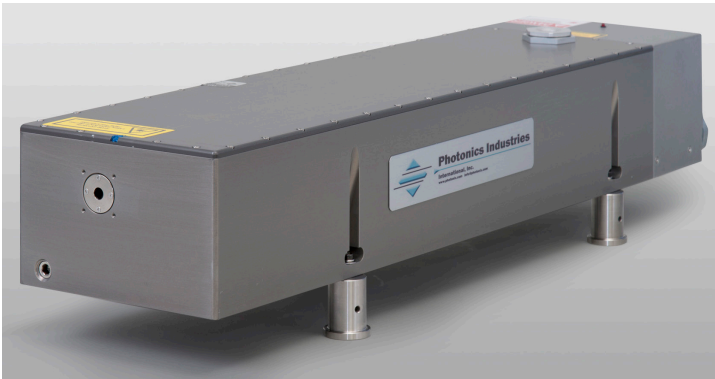


DM-527 Series

High Pulse Energy Green Nd:YLF Lasers

Features

- Patented highest pulse energy green laser
- Simplest, most efficient compact monolithic laser head
- Optimized for pumping Ti:Sapphire amplifiers and PIV
- Available in: 20 mJ, 30 mJ, 40 mJ, 50 mJ, 60 mJ and 100 mJ
- Proprietary twin pulse option available for all DM lasers
- Dual head option available for all models (up to 200 mJ per pulse)
- Pulse rates from 1 to 10kHz (variable in the field, no factory pre-set)
- Uniform beam profile
- Diode Lifetime of >10,000 Hours
- Excellent pulse to pulse stability (typical 0.5% RMS)



Owing to its patented technologies, the DM Series Nd:YLF diode pumped laser has the simplest, most efficient design in a monolithic platform, while producing the highest pulse energy at 527 nm (100 mJ/pulse from single head and up to 200mJ from dual head) at kHz repetition rate. In addition to its simple, efficient high pulse energy design, the outstanding thermal management allows the user to change repetition rate from 1 to 10kHz as desired, in contrast to the competition, where the user must select a single repetition rate at purchase. With 6 standard models available, it is the most competitive product on the market, and the best choice for pumping Ti:sapphire laser amplifiers and Particle Image Velocimetry (PIV) applications. In addition to its technological superiority, its reliability has been verified by less than a 1% service call request during the warranty period in the latest 24 months statistics.

For even higher pulse energy or sub microsecond pulse separation PIV applications, each of these 5 models can be built into a dual head laser which will produce twice as much pulse energy as its single head counterpart.



DM Nd:YLF System Specifications

Model	DM20-527	DM30-527	DM40-527	DM50-527	DM60-527	DM100-527
Wavelength (nm)	527					
Pulse Energy (mJ) @ 1kHz	20	30	40	50	60	100
Average Power (W) @ 3kHz	30	45	60	75	90	150
Pulse Width (ns) @ 1kHz	~170	~150	~130	~120	~120	~100
Repetition Rate	Single shot to 10 kHz					
Pulse to Pulse Instability	<0.5% rms					
Polarization Ratio	Vertical; 100:1					
Beam Diameter (nominal)	5.0 mm					
Beam Divergence	8.0 mrad \pm 15%					
Beam Circularity	>85%					
M ²	10 to 16					
Beam Pointing Stability	<25 urad					
Long Term Stability	<1% rms					
Interface	RS 232 / External TTL Triggering / GUI software included					
Warm-up Time	<5 min from standby or cold start					
Operating Voltage	100 - 240 V			200 - 240 V		
Line Frequency	50 to 60 Hz					
Power Consumption (excluding chiller)	0.8 kW	1.0 kW	1.6 kW	1.7 kW	1.8 kW	3.5 kW
Dimensions: Laser Head (W x L x H)	6.5 in x 26 in x 4.6 [†] in					12 in x 26 in x 4.6 [†] in
Controller	19 in x 13.25 in x 5.25 in (3U)					19 in x 17 in x 5.25 in (3U)
Weight: Laser Head	49 lbs			84 lbs		
Controller	24 lbs			40 lbs		
Umbilical Length	3 m					
Ambient Temperature	15 to 30 °C					

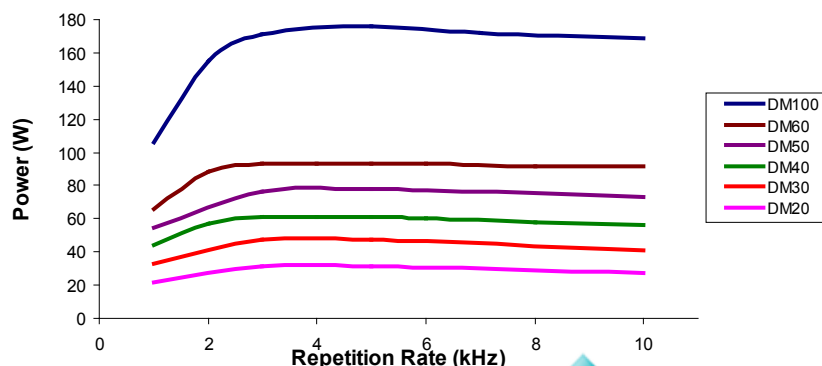
[†]4.6" includes height of desiccant

Each of these 5 models can be configured as a Dual Head. Please see DM Dual Head brochure.

Twin Pulse Option – PI's patented Twin Pulse Mode provides double (twin) pulses from a single trigger signal from the single laser head. Energy ratio of the twin pulses and pulse separation between the twin pulses is user programmable.

IR versions of our Nd:YAG and Nd:YLF laser are also available. Please contact the factory for more information.

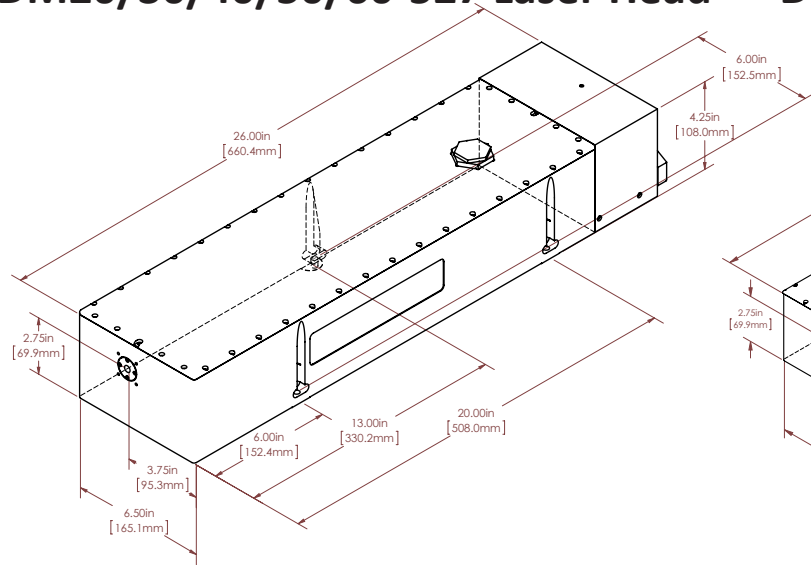
Performance Curve



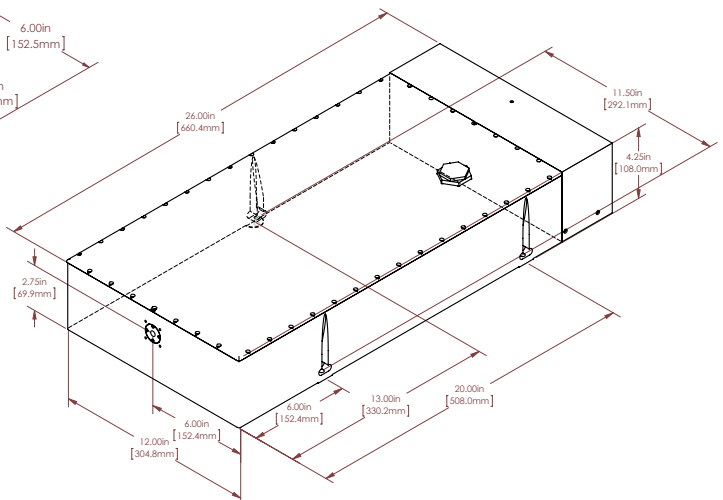
Photronics Industries
International, Inc.

Dimensional Drawings

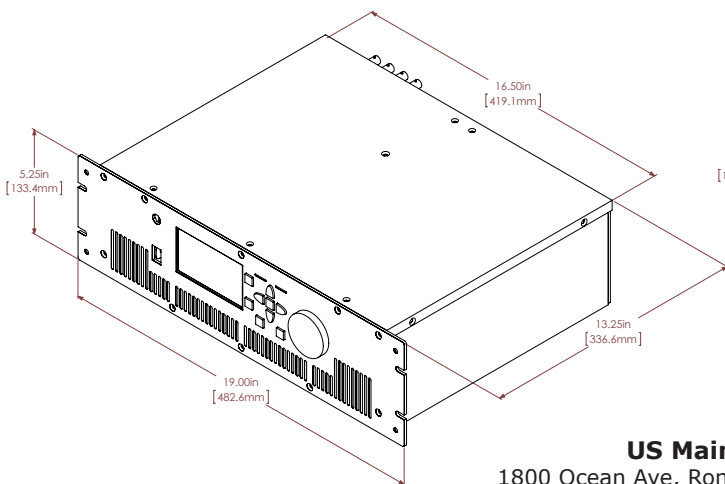
DM20/30/40/50/60-527 Laser Head



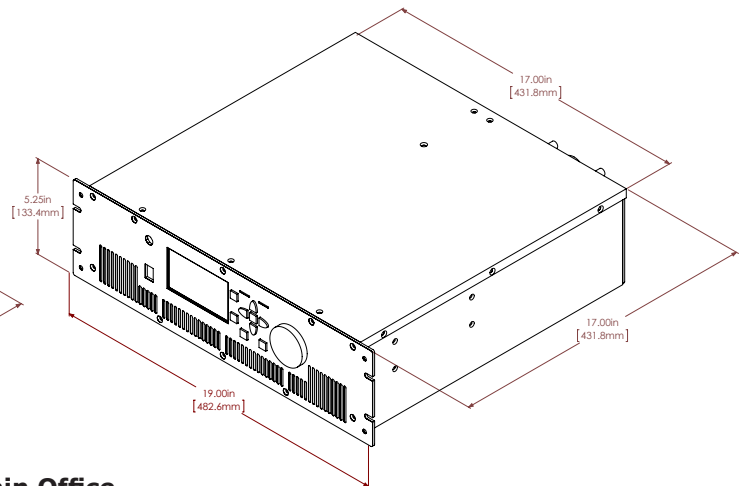
DM100-527 Laser Head



DM20/30/40/50/60-527 Controller



DM100-527 Controller



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Due to Photonics Industries' commitment to continuous product improvement, specifications and drawings are subject to change without notice.

Photonics Industries conforms to provisions of US 21 CFR 1040.10 & 1040.11 and is made under one or more US patents listed below:
7,346,092; 7,082,149; 7,079,557; 6,999,483; 6,980,574; 6,961,355; 6,842,293; 6,762,405; 6,690,692; 6,587,487; 6,584,487; 6,366,596;
6,327,281; 6,356,578; 6,246,707; 6,229,839; 6,108,356; 6,061,370; 6,028,620; 5,936,938; 5,898,717 and Pending Patents

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