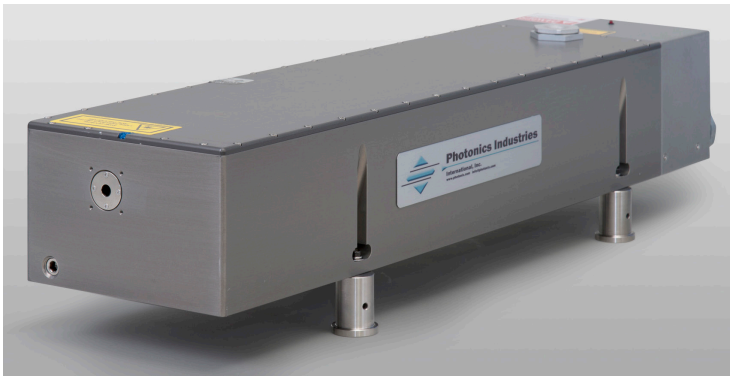
DM-527 Series

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 and 60 mJ
- Double 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.

Photonics Industries International, Inc.

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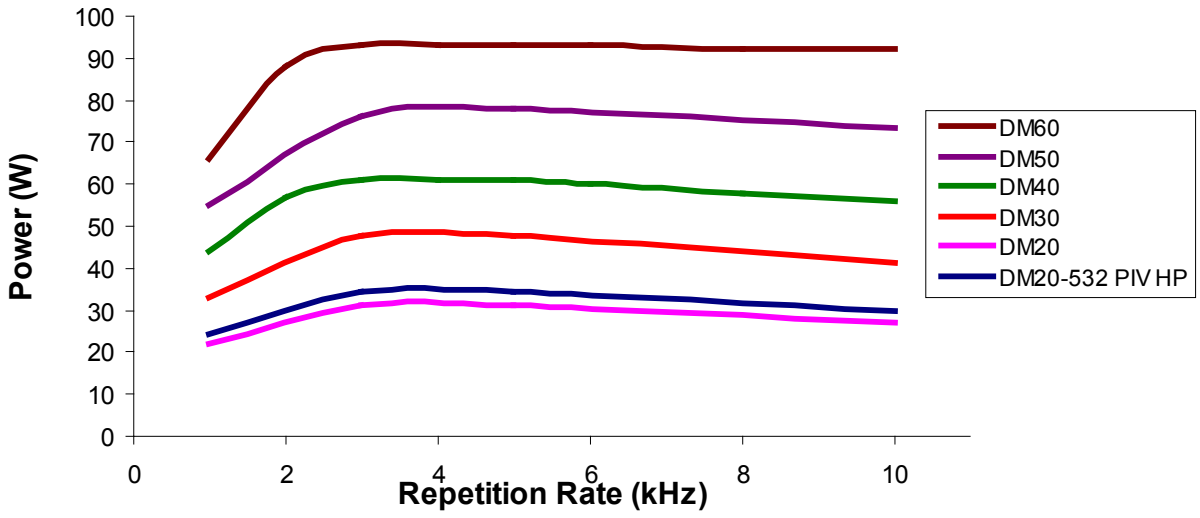
DM Nd:YLF System Specifications

Model	DM20-527-PIV	DM20-527	DM30-527	DM40-527	DM50-527	DM60-527
Wavelength (nm)	527					
Pulse Energy (mJ) @ 1kHz	22.5	20	30	40	50	60
Average Power (W) @ 3kHz	33.3	30	45	60	75	90
Pulse Width (ns) @ 1kHz	~170	~170	~150	~130	~120	~120
Repetition Rate	Single shot to 10 kHz					
Pulse to Pulse Instability	<0.5% rms					
Polariazation Ratio	Vertical; 100:1					
Beam Diameter (nominal)	5.0 mm					
Beam Divergence	8.0 mrad ± 15%					
Beam Circularity	>85%					
M^2	10 to 15					
Beam Pointing Stability	<25 urad					
Long Term Stability	±1%					
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
Dimensions: Laser Head (W x L x H)	6.5” x 26.0” x 4.6”					
Dimensions: Controller (W x L x H)	19.0” x 13.5” x 3.5”					
Weight: Laser Head	49 lbs					
Weight: Controller	24 lbs					
Umbilical Length	3 m					
Ambient Temperature	15 to 30 °C					

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

Performance Curve



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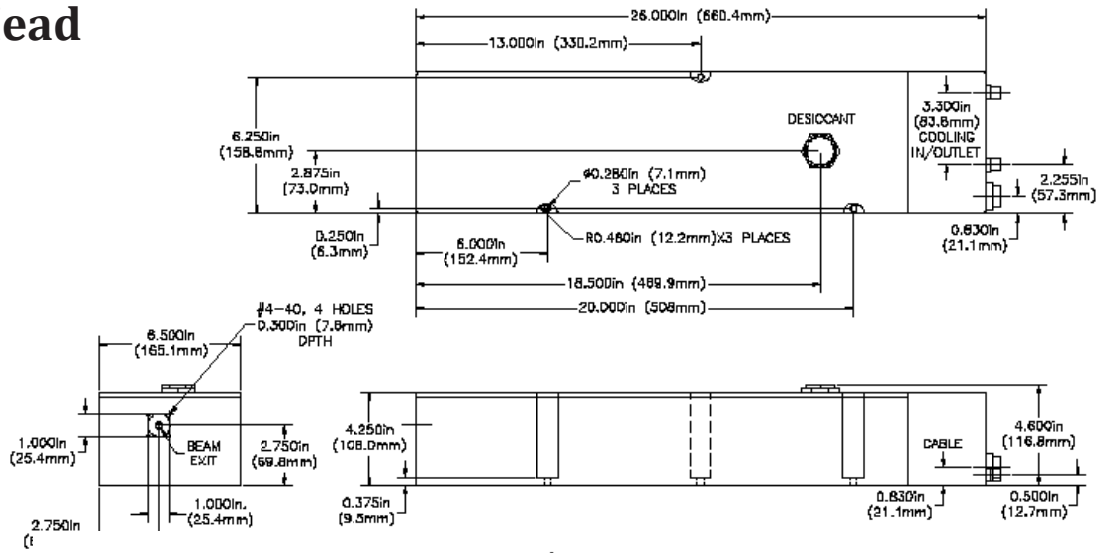
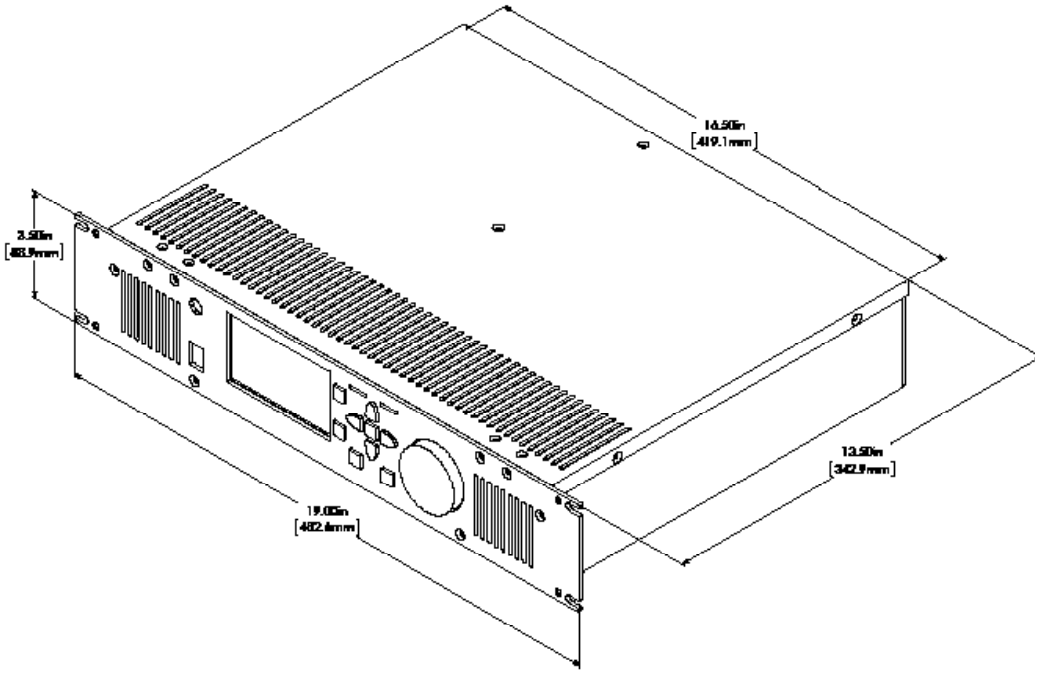
Dimensional Drawings

Laser Head



Controlle



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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