DM YAG Green Series

Features

- Power: 60W to 200W
- Simple, compact, monolithic
- Pulse rates from 1 to 50kHz
- Superior pulse to pulse stability
- Dual head option*
- Twin pulse option†
- Uniform beam profile
- Diode lifetime of > 10,000 hours

Applications

- Particle Image Velicometry (PIV)
- Annealing or “Bleaching”:
  - changing material properties without material removal
- Pumping Ti:Sa Ultrafast Amplifier Systems
- High power or pulse energy drilling or cutting of hard materials

Owing to its intra-cavity patented technologies, the DM YAG Green Series diode pumped laser has the simplest, most efficient design in a monolithic platform, while producing high power at 532 nm (up to 200W from single head and up to 400W from dual head) at kHz repetition rates.

In addition to its simple, efficient design, the outstanding thermal management allows the user to change repetition rate from 1 to 30kHz on lower power models and 1 to 50kHz on higher power models as desired. It is the best choice for high repetition rate pumping Ti:sapphire laser amplifiers and Particle Image Velocimetry (PIV) applications. The single head DM lasers offer a dual pulse feature and have proprietary driving electronics to control pulse separation and delay. In addition, the laser can be configured in the dual head option for sub µs pulse separations and even higher output powers.

*All models can be configured as Dual Head, please see DM Dual Head series.

† PI’s patented twin pulse mode provides double 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

System Specifications

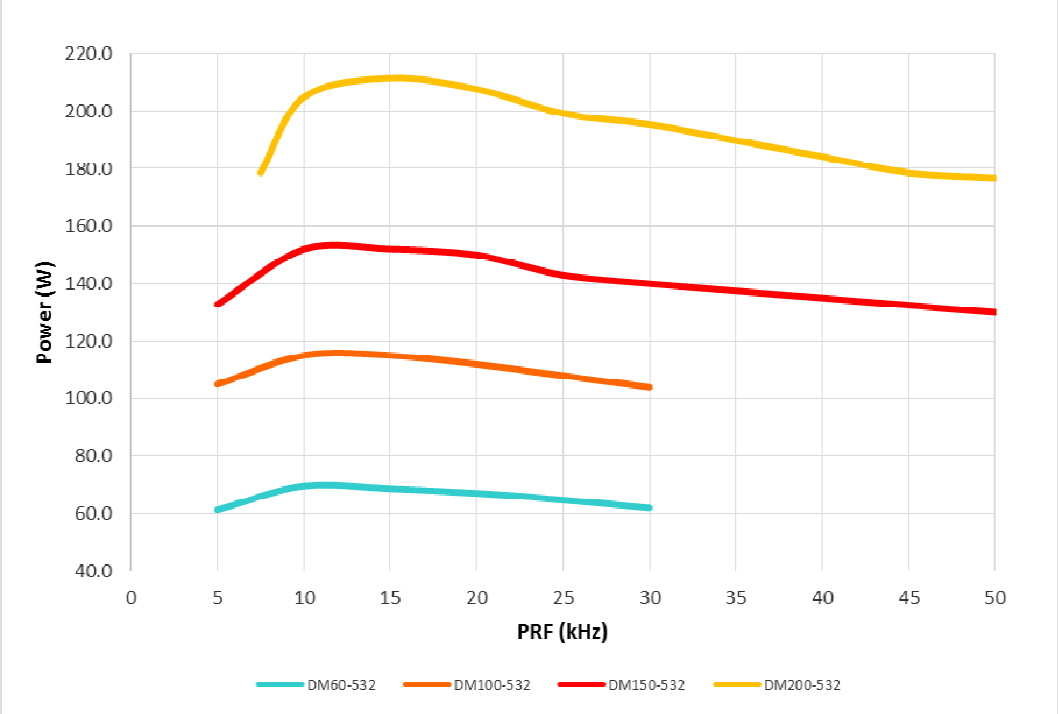
Model		DM60-532	DM100-532	DM150-532	DM200-532
Wavelength		532			
Average Power (W) @ 10kHz		60	100	150	200
Pulse Energy (mJ) @ 10kHz		6	10	15	20
Pulse Width (ns) @ 10 kHz (nominal)		~150	~190	~200	~120
Repetition Rate*		1 to 30 kHz		1 to 50 kHz	
Pulse to Pulse Stability		< 1% rms			
Polarization Ratio		Horizontal; 100:1			
Beam Diameter (nominal)		2 mm		4.5 mm	
Beam Divergence		< 10 mrad			
Beam Circularity		> 85%			
Spatial Mode (M2)		~ 15	~ 20 to 25**	~ 15	
Beam Pointing Stability		< 25 urad			
Long Term Stability		<0.5% rms			
Interface		RS 232/External TTL Triggering/GUI Software Included			
Warm-up Time		< 5 min from standby or cold start			
Electrical Requirement		100-240V		200-240V	
Power Consumption (excluding chiller)		1.1 kW	1.5 kW	2.1 kW	2.5 kW
Dimensions (W x H x L)	Laser Head	6.5 in x 26 in x 4.6† in		12 in x 26 in x 4.6† in	
	Controller	19 in x 15 in x 5.25 in (3U)			
Weight	Laser Head	49 lbs		84 lbs	
	Controller	~24 lbs			
Umbilical Length		3 m			
Ambient Temperature		15 to 30 °C			

* Laser performance specifications only apply at the optimized PRF unless stated otherwise.

† Includes height of desiccant (0.35'')

** M2 ~ 15 option is available

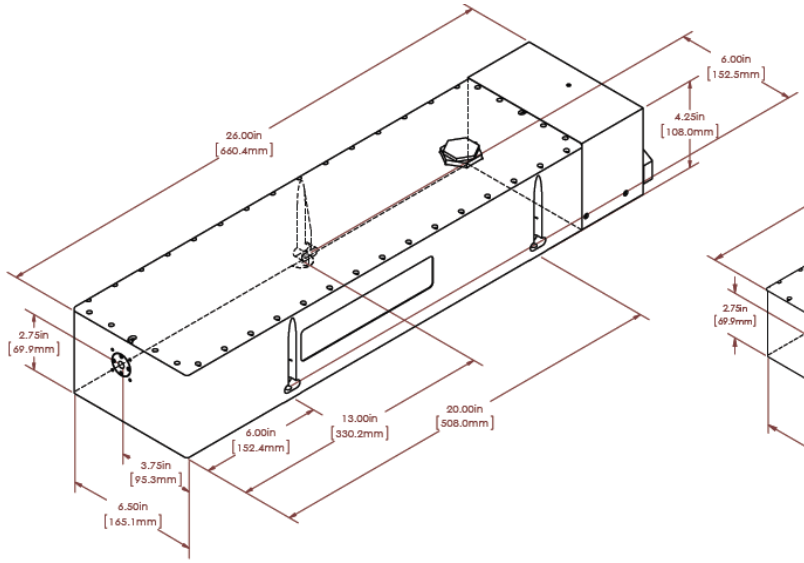
Performance Curves



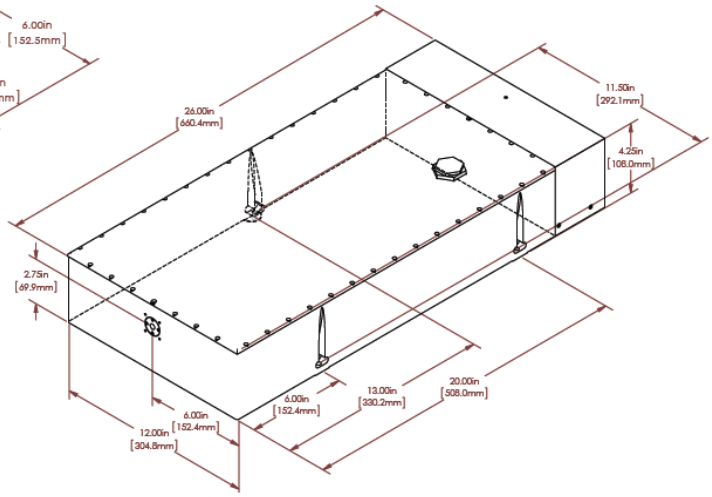
Dimensional Drawings

Dimensional Drawings

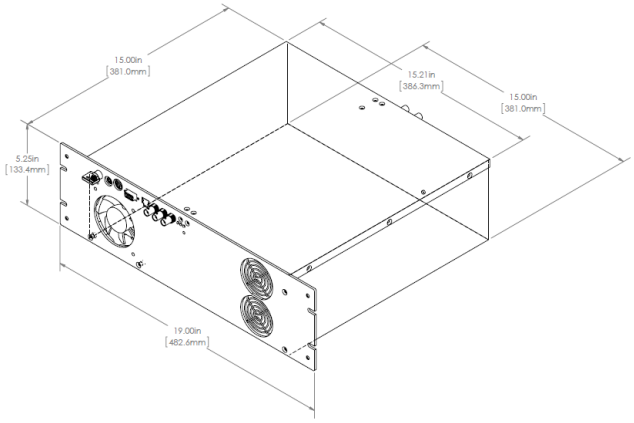
DM60 & 100-532 Laser Head



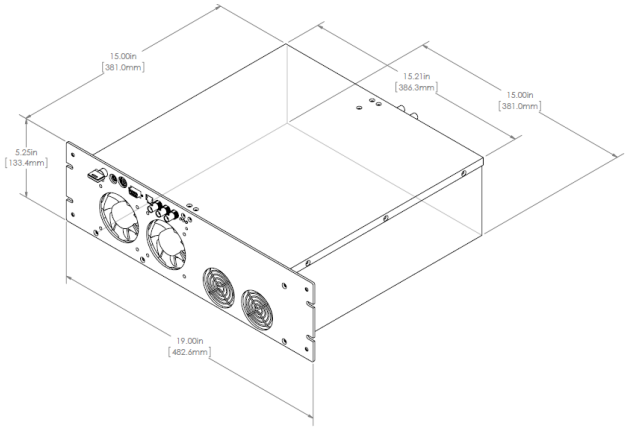
DM150 & 200-532 Laser Head



DM60 & 100-532 Controller



DM150 & 200-532 Controller



United States
PI Main Headquarter Office
1800 Ocean Ave, Ronkonkoma
NY 11779, USA
Website: www.photonix.com
Tel: +1-631-218-2240
Fax: +1-631-218-2275
Email: info@photonix.com

Korea
PI Korea Branch Office (PIK)
703 Sogong Bldg, 352-5 Gugal-Dong
Giheung-gu, Yongin City
Gyeonggi-Do, 446-569 Korea
Tel: +82-31-284-9520
Fax: +82-31-284-9521
Email: kimsm@photonix.com

Japan
PI Japan Branch Office (PIKK)
Rokusan Bldg. 9F, Funamachi 7
Shinjuku-ku, Tokyo 160-0006, Japan
Website: www.photonix.com
Tel: +81-03-6423-1805
Fax: +81-03-6423-1806
Email: asakurazawa@photonix.com

China Suzhou
PI China Branch Office (PIC)
No 2 Rui'en Lane, Xingpu Rd.
Suzhou Industrial Park
Suzhou 215021, P. R. China
Tel: +86-512-6763 5761
Fax: +86-512-6763 5762
Email: joeyu@photonix.com

China Dongguan
Photonics Laser Technology Dongguan
12 East Industrial Road
Songshanhu High Tech Distr.
Dongguan, Guangdong, China
Tel: +86-18682342052
Fax: +86-0769 22897186
Email: joeyu@photonix.com

Taiwan
PI Taiwan Branch Office (PIT)
18F-3, No.77,Sec.1,Xintai 5th Rd.
Xizhi Dist., New Taipei City 221, Taiwan
Website: www.photonix.com.cn
Tel: +886-2-26983620
Fax: +886-2-26983630
Email: bchiang@photonix.com

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: 9,531,147, 8,817,831, 7,869,471, 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, 6,584,134, 6,366,596, 6,356,578, 6,327,281, 6,246,707, 6,229,829, 6,108,356, 6,061,370, 6,028,620, 5,936,983, 5,898,717 and Pending Patents