

DC & DS Series

1064nm Nd:YAG IR Lasers



Features

- 1064nm output
- Compact, Rugged Design
- TEM00 Beam with $M2 < 1.2$
- Pulse Rates from Single Shot to 50 kHz
- RS232 Computer Control
- External TTL Triggering
- Low Power Air-Cooled
- High Power Closed Loop Chiller

Optional Features

- Pulse Energy Control to Vary Output from 10% to 98%
- Beam Expander from 2 mm up to 10 mm
- Output Power Monitor

Applications

- LCD Repair
- Wafer Marking
- Lidar
- Solar Cell Scribing/ Production
- Stereo lithography–Rapid Prototyping
- Mass Spectrometer
- MALDI-TOF
- Semiconductor Processing
- Interferometry
- Non-Contact Inspection
- Fluorescence
- Holography Micro-Marking
- Laser Marking, Scribing
- Via Hole Drilling
- Laser Singulation
- OPO, Ti: Sapphire Pumping
- High Speed PIV
- Laser Micromachining
- Rapid Prototype-Stereo Lithography
- Fiber Bragg Grating Manufacturing



1064nm System Specifications

DC Series - 1W to 4W



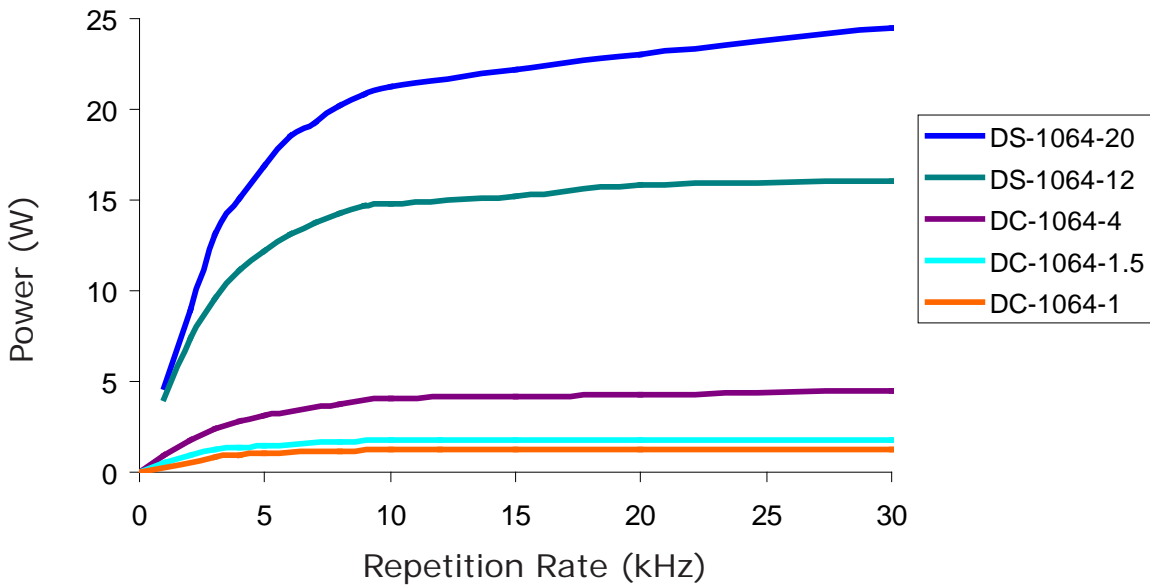
Model	DC-1064-1	DC-1064-1.5	DC-1064-4
Average Power @ 10 kHz	1 W	1.5 W	4 W
Pulse Width @ 10 kHz (nominal)	40 ns	60 ns	35 ns
Pulse Energy @ 10 kHz	0.1 mJ	0.15 mJ	0.4 mJ
Beam Mode	TEM00 - M2 < 1.2	TEM00 - M2 < 1.3	
Beam Diameter @ exit (nominal)	0.8mm	1.0mm	1.0mm
Divergence (nominal)	<4mRad	<2.5mRad	<3.0mRad
Polarization Ratio	100:1 Horizontal		
Pulse-to-Pulse Instability	<3% rms		
Long-Term Instability (8h +/-3deg.C)	+/- 3%		
Pointing Stability	< 50 urad		
Pulse Repetition Rate	1 Hz to 50 kHz		
Laser Head (WxLxH)	102mm, 253mm, 114mm		
Controller Dimensions (WxLxH)	356mm, 311mm, 89mm		
Electrical Requirement	100 to 120V, 200 to 240 V @ 50/60 Hz		
Relative Humidity	Non condensing, 90% Max		
Ambient Temperature	15° to 35°C (59° to 95°F) Operating Range		
Umbilical Length	3 meter (10 feet)		

DS Series - 12W to 20W

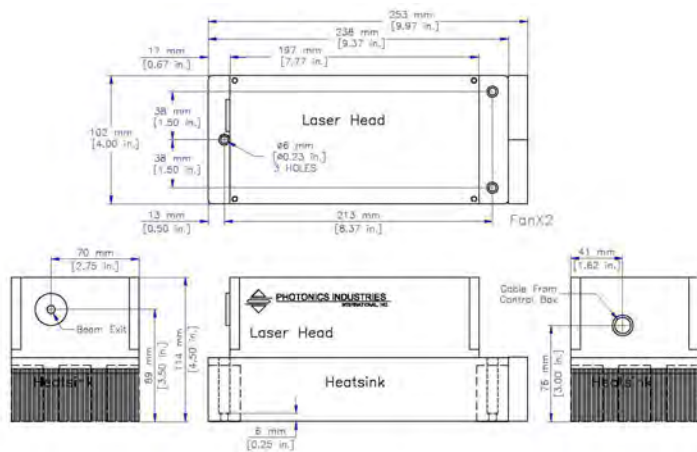


	DS-1064-12	DS-1064-20
Avg. Power @ 10 kHz	12 W	20 W
Pulse Width @ 10 kHz (nominal)	40 ns	35ns
Pulse Energy @ 10 kHz	1.2mJ	2 mJ
Beam Mode	TEM00 - M2 < 1.1	
Polarization Ratio	100:1 Horizontal	
Beam Diameter @ exit (nominal)	<1.0 mm	
Beam Divergence	<2.5 mrad	
Pulse-to-Pulse Instability	<2% rms	
Long-Term Instability (8h +/-3deg.C)	<+/- 2%	
Pointing Stability	< 25 μrad	
Pulse Repetition Rate	Single shot to 50 kHz or CW	
Laser Head (WxLxH)	190.5 mm, 558.8 mm, 95.25mm	
Controller Dimensions (WxLxH)	356mm, 311mm, 89mm	
Electrical Requirement	100 to 120V, 200 to 240 V @ 50/60 Hz	
Relative Humidity	Non condensing, 90% Max	
Ambient Temperature	15° to 35°C (59° to 95°F) Operating Range	
Umbilical Length	3 meter (10 feet)	

Performance Curve

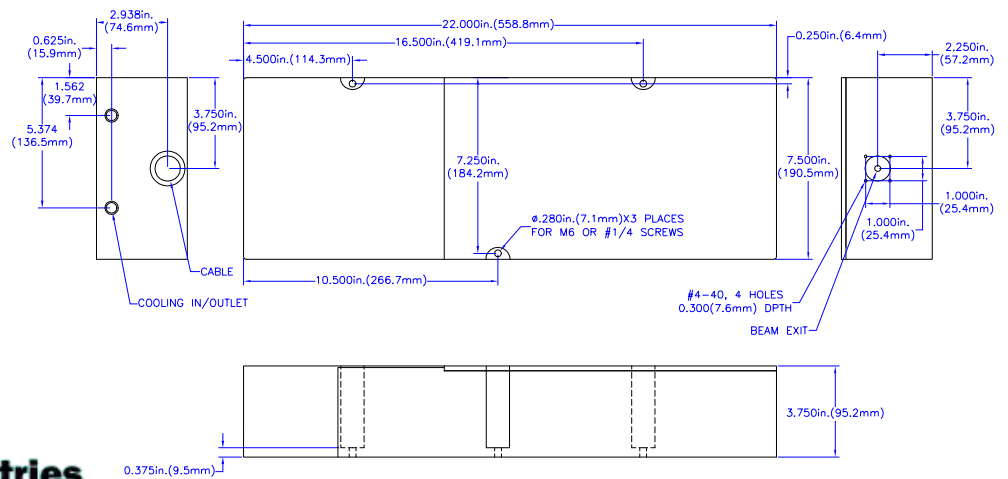


Dimensional Drawings



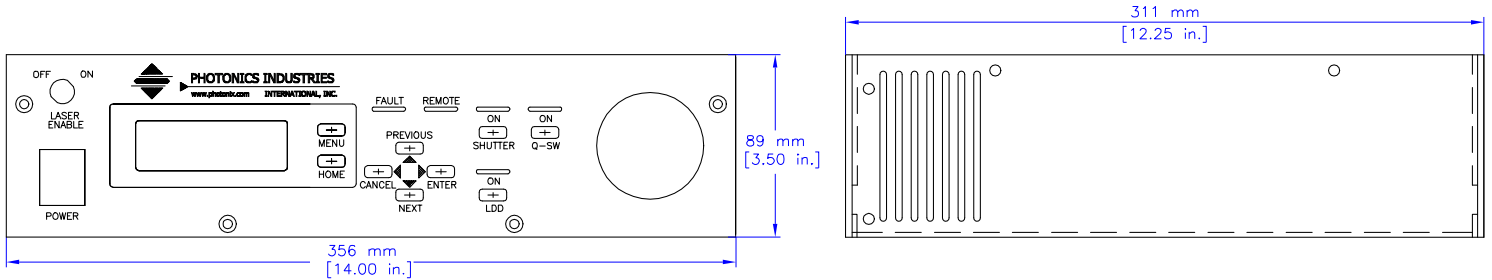
DC Laser Head

DS Laser Head

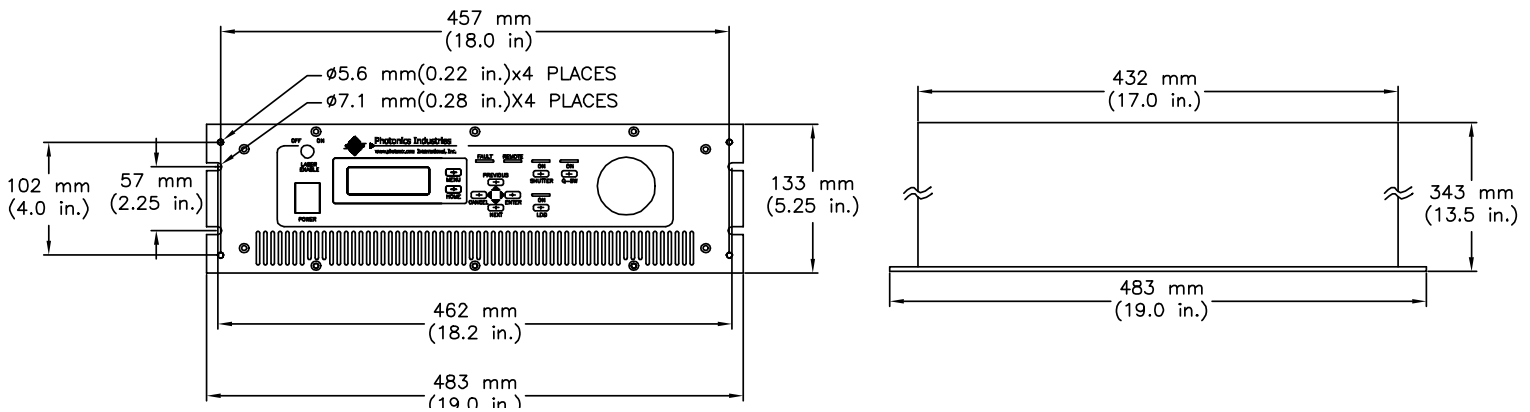


Dimensional Drawings

DC/DS Controller



High Power DS Controller



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 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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