

# DC & DS Series

## 355nm Nd:YAG UV Lasers



### Features

- 355nm UV Laser Radiation
- 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

- 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



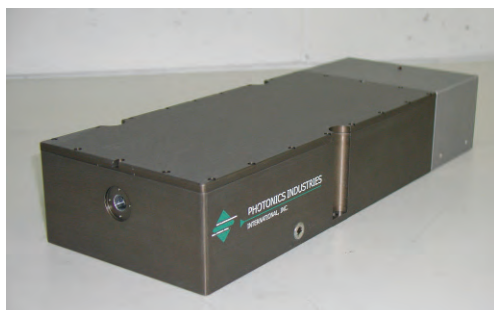
# 355nm System Specifications

## DC Series - 300mW to 1500W



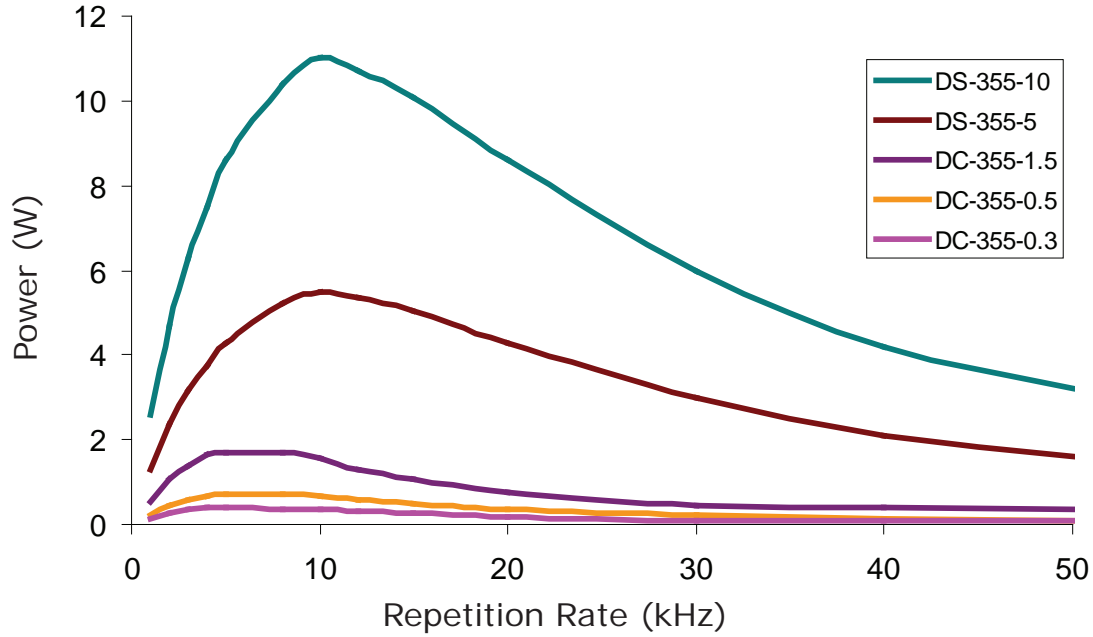
Model	DC-355-0.5	DC-355-1.5
Average Power @ 10 kHz	500 mW	1.5 W
Pulse Width @ 10 kHz (nominal)	35 ns	35 ns
Pulse Energy @ 10 kHz	50 $\mu$ J	150 $\mu$ J
Beam Mode	TEM00 - M2 < 1.2	
Beam Diameter @ exit (nominal)	<0.4mm	
Divergence (nominal)	<2.5mRad	
Polarization Ratio	100:1 Horizontal	
Pulse-to-Pulse Instability	<3% rms	
Long-Term Instability (8h +/-3deg.C)	+/- 3%	
Pointing Stability	< 50 $\mu$ rad	
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 - 5W to 10W

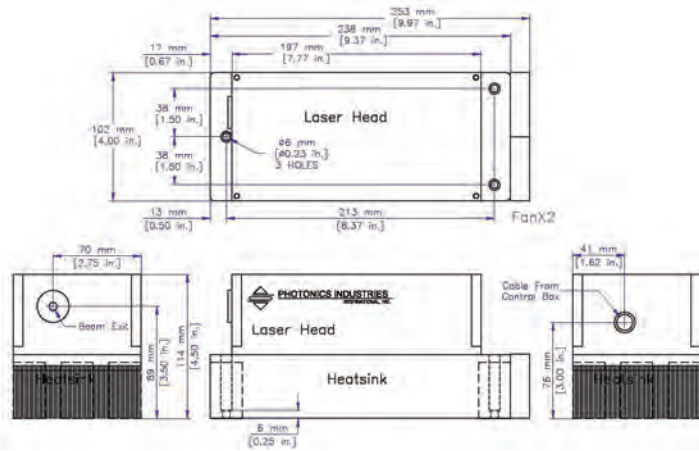


	DS-355-5	DS-355-10
Wavelength	355 nm	355 nm
Average Power @ 10 kHz	5 Watts	10 Watts
Pulse Width @ 10 kHz (nominal)	30 ns	25ns
Pulse Energy @ 10 kHz	0.5 mJ	1 mJ
Beam Mode	TEM00 - M2 < 1.2	
Polarization Ratio	100:1 Horizontal	
Beam Diameter @ exit (nominal)	<0.8 mm	
Beam Divergence	<1.3 mrad	
Pulse-to-Pulse Instability	<2% rms	
Long-Term Instability (8h +/-3deg.C)	+/- 2%	
Pointing Stability	< 25 $\mu$ rad	
Pulse Repetition Rate	Single shot to 50 kHz	
Laser Head (WxLxH)	190.5 mm, 558.8 mm, 95.25mm	
Controller Dimensions (WxLxH)	(DSH-355-5,8) 356mm, 311mm, 89mm (DSH-355-15) 483 mm, 343 mm, 133 mm	
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

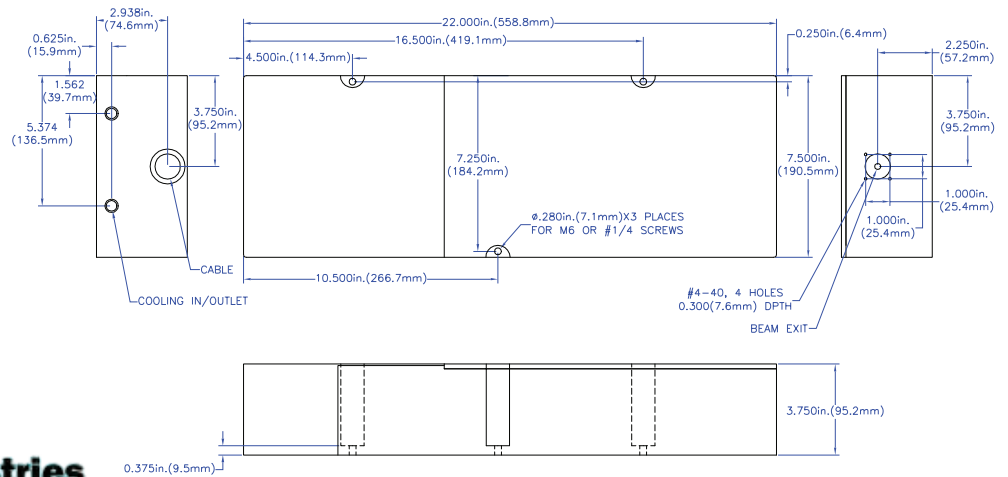


# Dimensional Drawings



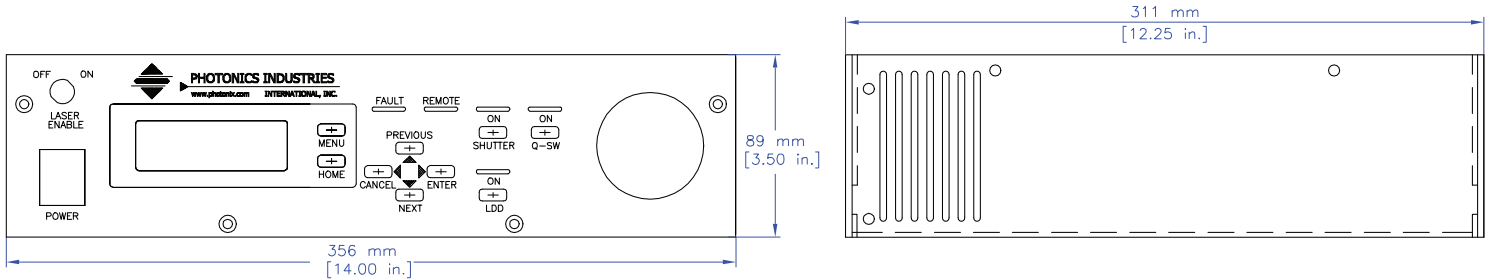
**DC Laser Head**

**DS Laser Head**

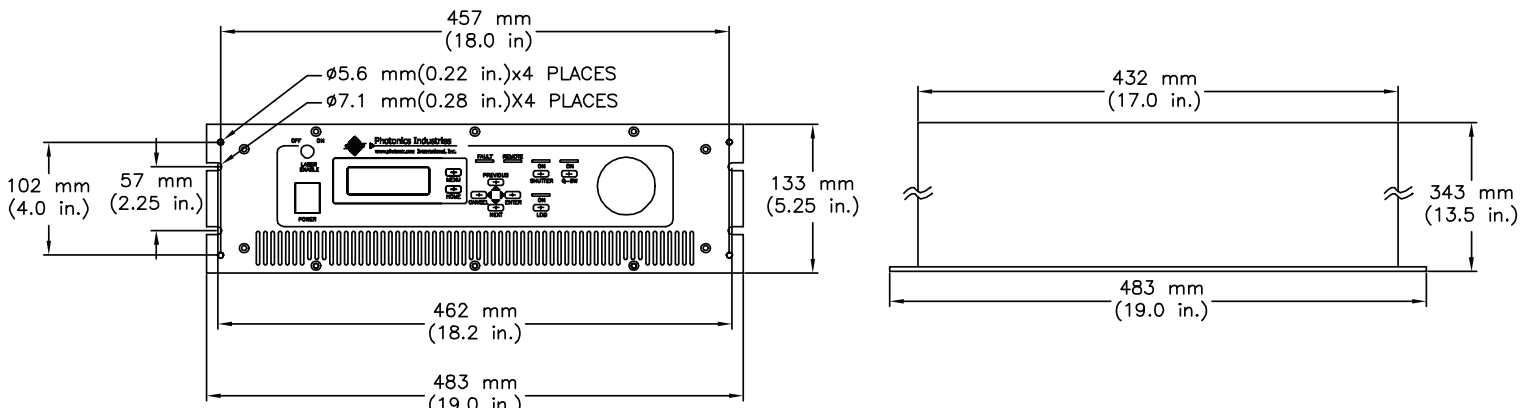


# Dimensional Drawings

## DC/DS Controller



## High Power DS Controller



### US Main Office

390 Central Ave, Bohemia, NY,  
11716  
Phone: 631-218-2240  
Fax: 631-218-2275  
E-Mail: info@photonix.com  
Website: www.Photonix.com

### 脉动科技有限公司

中国代理商

北京总部 地址: 海淀区中关村东路89号 恒兴大厦9C, 100190 电话: 010-62565117 010-84413925 传真: 010-62565117 邮箱: info@pulsepower.cn 官网: www.pulsepower.cn  
上海办事处 021-32070812 西安办事处 029-87307077 深圳办事处 0755-27528760



**Photronics Industries**  
International, Inc.

### Japan Office

Rokusan Bldg. 9F, Funamachi 7  
Shinjuku-ku, Tokyo 160-0006, Japan  
Tel: [81] 03-6423-1805  
Fax: [81] 03-6423-1806  
Email: kseitea@photonix.co.jp

### Korea Office

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  
Contact: Sang-Moon Kim  
Email: kims@photonix.com

### China Office

Room 1401, B8  
No 208 XingHai Street, Suzhou Industrial  
Park  
Suzhou 215021, P. R. China  
Tel: 86-512-6763 5761  
Fax: 86-512-6763 5762  
Email: china@photonix.com  
Website: http://www.photonix.com.cn/

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

Photronics 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

Copyright © 2011 by Photronics Industries International, Inc.

