



## **RX3 Series Picosecond Lasers**

[www.photonix.com](http://www.photonix.com)

Photonics Industries' RX3 Series high power picosecond lasers offer ideal performance, and the smallest overall form factor in the market of industrial picosecond lasers. Photonics Industries is proven, with over a thousand picosecond lasers shipped worldwide, to meet and fulfill precision needs in manufacturing, scientific research, and new, emerging requirements necessitating ever smaller pulse widths in the ultrafast regime.



### **Applications**

- Cutting/Drilling/Scribing Thin Metal/Metal Foil, Ceramic, Glass, Ultra Thin Glass (UTG), Plastic, Glass-reinforced Plastic
- Flat Panel Display, LCD/LED/OLED Cutting
- Brittle Material Microprocessing
- Selective Laser Ablation of Thin-Films
- Medical Stents, Medical Device Laser Microprocessing
- Flexible Printed Circuit Boards (FPCB), Printed Circuit Boards (PCB) Microprocessing
- Hydrophobic Material Manufacturing, Hydrophilic Material Manufacturing, Ultrafast Laser Assisted Etching (ULAE) Systems

### **Features**

- Short pulse laser:  
~10 ps for IR, ~7 ps for Green & UV  
Option up to ~50 ps available
- Wide range of wavelengths:  
1064 nm, 532 nm, 355 nm  
MWB, MWS, & 266 nm options on request
- Smallest, all-in-one (AIO), high power picosecond laser on the market
- High efficiency picosecond laser with low power consumption:  
~1000 W typical
- High repetition rates:  
Up to 8 MHz
- Exceptional and Versatile Pulse Control:  
PEC (Power or Pulse Energy Control)  
PSO (Position Synchronized Output) support for external triggering to any arbitrary PRF while maintaining a constant, stable pulse energy with low jitter  
Burst Mode for individually controllable bursts of up to 10 pulses with a separation of 14 ns  
POD (Pulse-On-Demand) pulse bursts can be triggered internally, externally, or continuously, while maintaining constant pulse energy

Specifications – **RX3 Series Picosecond Lasers**, High Power IR, GRN, & UV Models

	<b>RX3-1064-130</b>	<b>RX3-1064-160</b>
Wavelength	1064 nm	
Average power	130 W at 2 MHz	160 W at 2 MHz
Pulse width	~10 ps	
Pulse repetition rate <sup>1</sup>	Single shot to 2 MHz (option up to 8 MHz)	

	<b>RX3-532-85</b>	<b>RX3-532-100</b>
Wavelength	532 nm	
Average power	-L 85 W at 400 kHz	100 W at 400 kHz
	-M 85 W at 600 kHz	100 W at 600 kHz
	-H 85 W at 1 MHz	100 W at 1 MHz
Pulse width	~7 ps	
Pulse repetition rate <sup>1</sup>	Single shot to 2 MHz (option up to 8 MHz)	

	<b>RX3-355-55</b>	<b>RX3-355-70</b>
Wavelength	355 nm	
Average power	-L 55 W at 400 kHz	70 W at 400 kHz
	-M 55 W at 600 kHz	70 W at 600 kHz
	-H 55 W at 1 MHz	70 W at 1 MHz
Pulse width	~7 ps	
Pulse repetition rate <sup>1</sup>	Single shot to 2 MHz (option up to 8 MHz)	

<b>Operational specifications and system characteristics</b>	
Interface	RS232, Ethernet, Software GUI, External TTL Triggering
Warm-up time	< 20 minutes
Electrical requirement	100-240 V AC; or 32 V DC, 15 A
Line frequency	50-60 Hz
Climate	Ambient 15°C to 30°C (59°F to 86°F) Operating Range, Relative Humidity 90% Maximum, non-condensing
Power consumption <sup>2</sup>	~1000 W
Dimensions (LxWxH) <sup>3</sup>	25.5 x 10 x 3.75 in. (IR, & GRN models) 29.25 x 10 x 3.75 in. (UV models)
Weight	~84 lbs
Vibrational tolerance	Up to 3g
Cooling system	Closed-loop chiller

1. Lower repetition rates, down to single shot, achieved by utilizing PSO or POD features.
2. Power consumption data does not include an external chiller's power consumption.
3. RX Series picosecond lasers are all-in-one (AIO) and do not require a separate controller or utility module. All connections for operation and control of the laser can be found on the back panel of the AIO laser.

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.

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Photonics Industries International is the pioneer of intracavity harmonic lasers and is at the forefront of developing, manufacturing and marketing a wide range of nanosecond, sub-nanosecond, picosecond and femtosecond lasers for industrial, scientific, defense, and medical industries. Check out our [products](#) and see how we can help you [apply](#) our lasers to your needs.



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