

# PS Lasers

## Diode Pumped Picosecond Laser



### PS Series

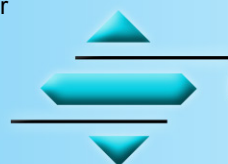
Photronics Industries PICO series (PS) of diode pumped solid state lasers has ~15ps nominal pulse widths. Average power ranges from 200mW to 50W. Our Industrial Grade, Air Cooled or Closed Loop Chilled PICO Series are mode locked with a high rep rate ~80Mhz providing a "quasi cw" type of laser radiation for a variety of industrial and scientific applications

### Applications

- Wafer inspection
- Microstereolithography
- Flow cytometry
- Pump laser for dye lasers
- Pico-Second seeder for regenerative amplifier
- Printing

### Features

- Air cooled up to 5W
- Closed loop chilled up to 50W
- Small form factor, compact laser head
- Industrial grade
- Diode pumped technology
- Excellent beam quality ( $M^2$  typically  $<1.3$ )
- Wide range of powers and harmonic options available:
  - IR 1064nm: up to 50W
  - Green 532nm: up to 25W



**Photronics Industries**

**International, Inc.**

**The Pioneer of Intra-Cavity Solid-State Harmonic Lasers**

# Optical Specifications

Wavelength (nm)	1064nm				
Model Number	PS02-1064	PS10-1064	PS50-1064	PS300-1064	PS500-1064
Average Power*	>200 mW	1 W	5 W	25W	45W
Polarization	Vertical				
Long term stability (8 hour)	1% rms				
Wavelength (nm)	532nm				
Model Number	PS02-532	PS10-532	PS50-532	PS300-532	PS500-532
Average Power*	100 mW	500 mW	2.5 W	13W	25W
Polarization	Horizontal				
Long term stability (8 hour)	2% rms				

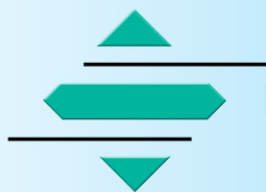
Repetition rate	~80Mhz
Pulse width	20 to 25ps
Spatial mode profile	TEM <sub>00</sub>
M <sup>2</sup>	<1.3 (typical <1.2)
Output Beam Diameter	0.9mm (Nominal)
Beam divergence	5 mrad
Beam Ellipticity	<10%
Beam Point Instability	<50 urad
Ambient Temperature	15 to 30 °C (59 to 86 °F) Operating Range
Relative Humidity	Non condensing, 90% Max

\* For power at 1064nm >50W, 532nm >25W please contact Photonics Industries' factory

# Mechanical Specifications

Cooling	Air Cooled	Closed Loop Chilled			
Laser head dimensions	100mm (W) x 64mm (H) x 200mm (L)	191mm x 127mm x 600mm			
Power supply dimensions	280mm (W) x 89mm (H) x 254mm (D)	484mm x 133mm x 476mm			
Power requirement (100/220V)	10 W Max	25 W Max	80 W Max	300 W Max**	500 W Max**

\*\* Excluding chiller



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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

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