

# Baltic HP

## SERIES

## INDUSTRIAL High Power Nanosecond Q-switched DPSS Laser

### FEATURES

- Up to 20 W at 1064 nm
- 100 kHz repetition rate
- Version with 532 nm output wavelength available
- **Robust** and sealed cavity
- **Low operating costs**
- Electro-optical Q-switching
- First pulse suppression
- Internal output **power monitoring**
- Internal/external triggering
- Processor control via **USB/CAN**
- Remote control via keypad
- No external cooling water

### APPLICATIONS

- Marking
- Engraving
- Micromachining
- Ablation
- Drilling
- Cutting
- Structuring
- Trimming
- Mask repair
- Cleaning
- Your application is welcome...



Baltic HP series diode pumped solid state Nd:YVO<sub>4</sub> lasers offer optimum power at high repetition rates. The innovative electro-optical Q-switch used in this series supports a generation of record-short pulses for such high power nanosecond lasers. The excellent beam quality, together with short pulse duration and high output power, make these lasers a versatile tool for processing most materials used in the semiconductor and solar industries. The rugged aluminum body and sealed cavity ensure stable and reliable operation in diverse conditions from laboratory to factory environments.

Baltic HP series lasers are equipped with an intelligent control system that continuously monitors critical laser parameters including output power and also accommodates easy integration of the laser into high throughput production systems. The short pulse durations, high repetition rate and robust design make these lasers an attractive tool for processing applications within a wide range of materials, including polymers, semiconductors, composites and dielectrics.

## TYPICAL PERFORMANCE RATES

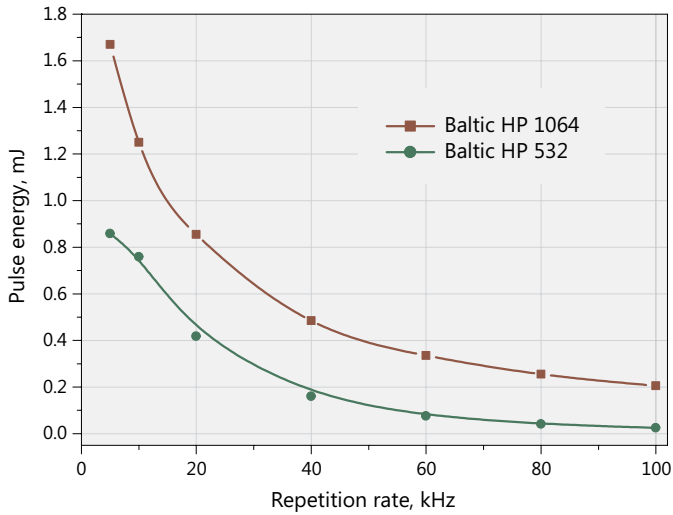


Fig. 1. Typical performance of Baltic HP series lasers. Pulse energy vs. repetition rate

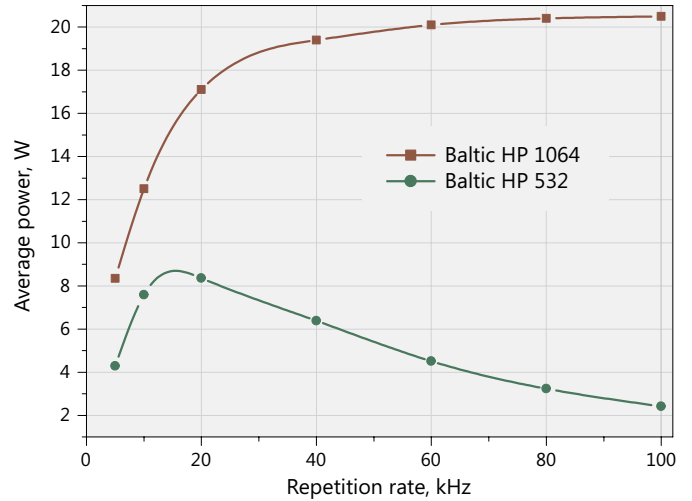


Fig. 2. Typical performance of Baltic HP series lasers. Average power vs. repetition rate

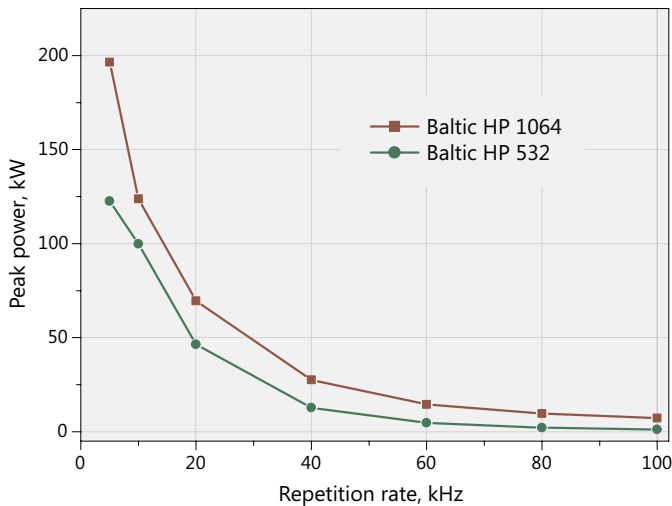


Fig. 3. Typical performance of Baltic HP series lasers. Peak power vs. repetition rate

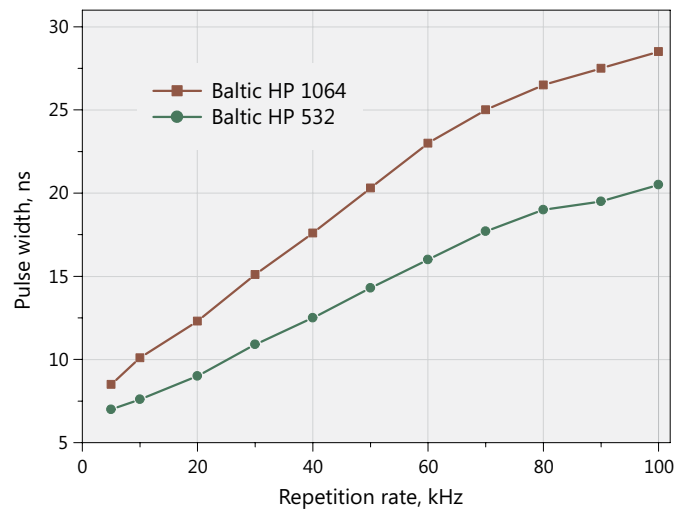


Fig. 4. Typical performance of Baltic HP series lasers. Pulse width vs. repetition rate

## POWER SUPPLY OUTLINE DRAWING

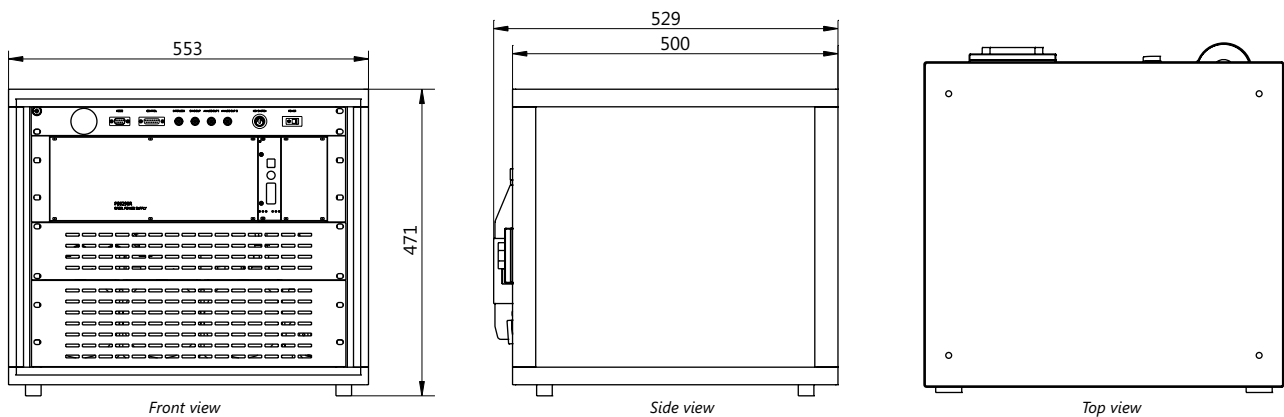


Fig. 5. Power supply PS6290R outline drawing

# LASER HEAD OUTLINE DRAWINGS

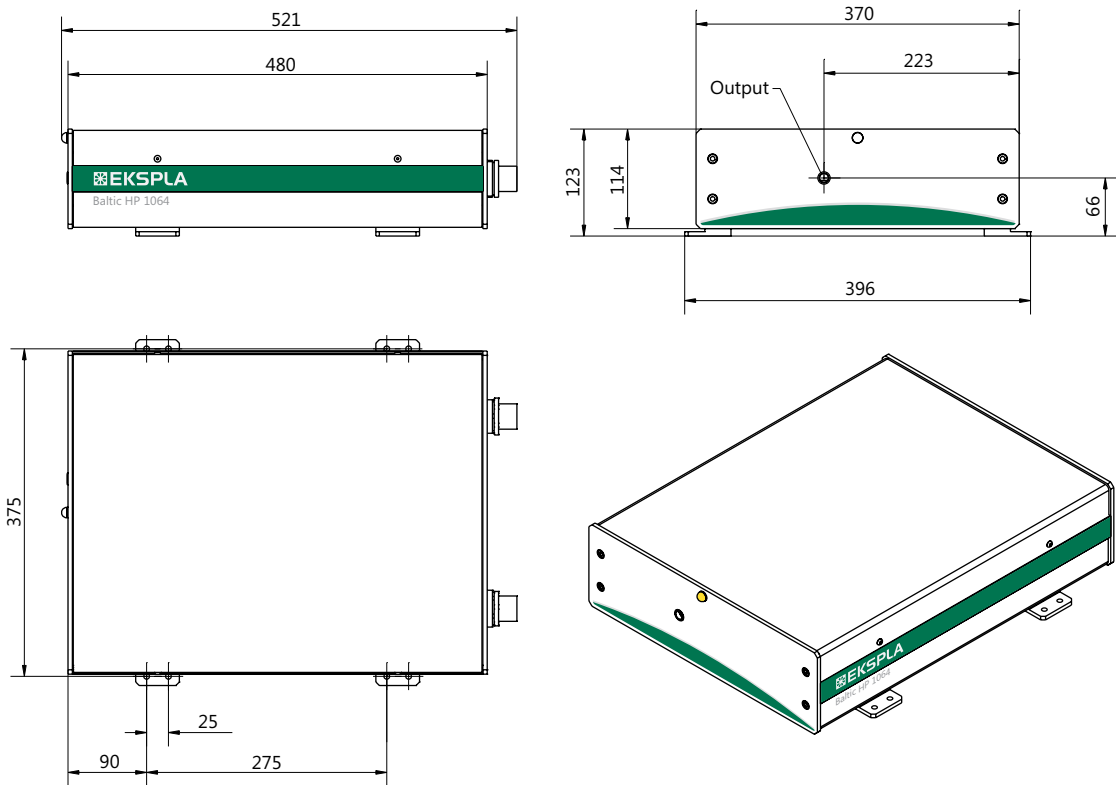


Fig. 6. Baltic HP 1064 laser head outline drawing

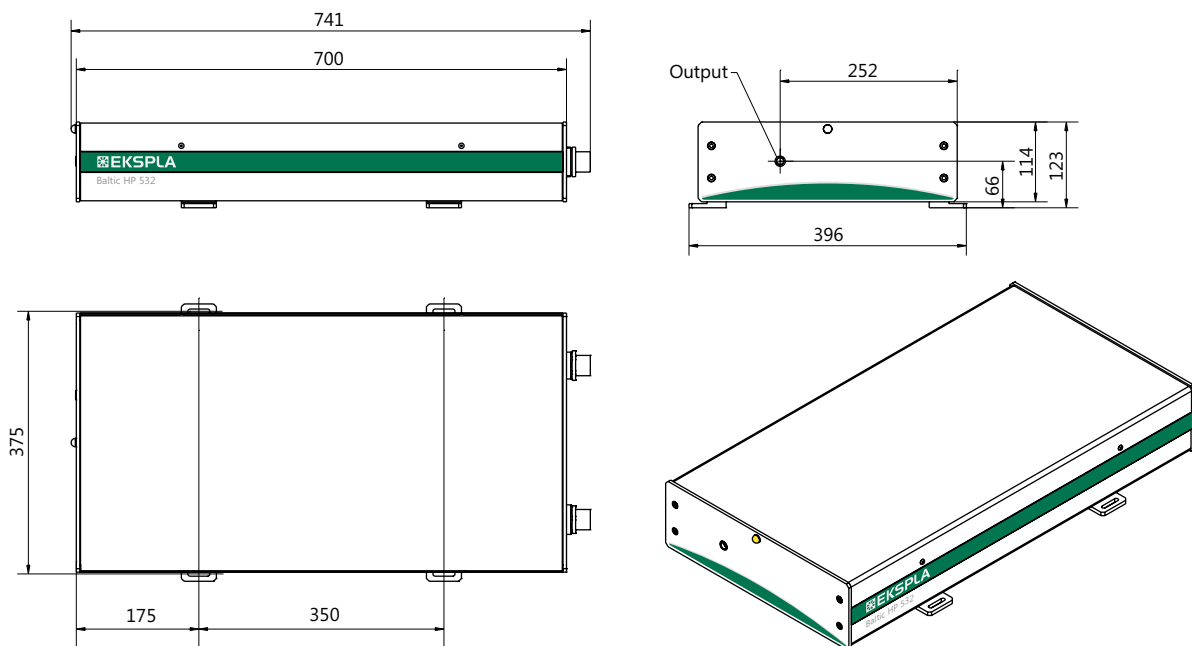


Fig. 7. Baltic HP 532 laser head outline drawing

## SPECIFICATIONS

MODEL	BALTIC HP 1064	BALTIC HP 532
<b>GENERAL SPECIFICATIONS</b>		
Output wavelength	1064 nm	532 nm
Output power	20 W	8 W (at 20 kHz)
Pulse to pulse energy stability (rms) at 20 kHz	<1 %	<2.5 %
Power stability (over 8 hours)	± 2 %	
Pulse duration	10 - 30 ns	8 - 24 ns
Repetition rate	5 - 100 kHz	
Beam diameter at output, mm	~0.7 mm	
Beam profile	TEM <sub>00</sub>	
M <sup>2</sup>	< 1.3	
Beam divergence (full angle)	< 3 mrad	< 1.3 mrad
Beam ellipticity at 20 kHz	> 0.9	>0.85
Polarization	Linear, vertical >100:1	Linear, horizontal >200:1
Timing jitter (rms)	< 0.5 ns at 5-30 kHz	
<b>PHYSICAL CHARACTERISTICS</b>		
Laser head size ( W × H × L)	396 × 123 × 480 mm	396 × 123 × 700 mm
Power supply/pump diode unit ( W × H × L)	553 × 471 × 529 mm	
Umbilical length	2.8 m	
<b>OPERATING REQUIREMENTS</b>		
Ambient temperature	18–27 °C	
Relative humidity (non-condensing)	10–80 %	
Voltage	85–264 VAC, single phase 47–63 Hz	
Power	< 0.6 kW	

Specifications are subject to changes without advance



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