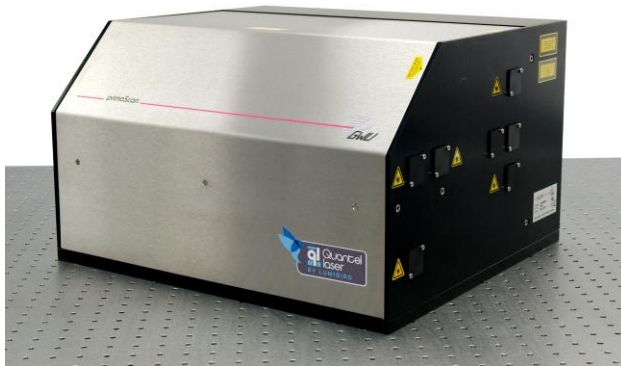


primoScan 532

High End Optical Parametric Oscillator



The primoScan 532 is GWU's modular high-end OPO, pumped at 532 nm. It is delivering market-leading, **tunable near-infrared (NIR)** output energy with exceptional ultra-low divergence (ULD) beam quality. The fast-switching capability allows for **changing the wavelength from shot-to-shot** across the entire range with <100 ms shifting time. The modular design of the primoScan ensures the **optimum versatility** for almost any application.

The OPO's tuning range is covering **655 nm to 2700 nm**. Paired with optional second harmonic generation (**SHG**), it can be extended to the **UV and visible**, providing tunable **330 nm to 520 nm** output.

Additional features, e. g. a common port for all wavelengths, are available. All options, including SHG, are **integrated in one single box**.

Following GWU's design philosophy, the OPOs of the primoScan series are using a **soft pumping scheme** with low fluence, ensuring **maximum reliability**. Moreover, the BBO crystals are coated with an advanced "p-coating" – a layer that protects the crystal surface from degradation due to environmental effects for **maximum lifetime**. Our advanced optical and mechanical design grants for optimum performance and is virtually maintenance-free.

Features and Benefits

Mid band OPO with ultra-low divergence

Highest output energy

Wide NIR tuning range 655-2700 nm

Optional SHG integrated for 330-520 nm output

Single output port for entire tuning range

Fully automated control standard

Fast shot-to-shot wavelength switching

Soft pumping scheme for high reliability and long lifetime

Applications

Material Analysis

Laser ind. fluorescence

Combustion studies

Remote sensing

Photoacoustic Imaging

Medical & Biotechnology

Notes

All specifications depend in the pump laser specifications and performance. Please contact the factory or our sales representatives for details. All specifications are subject to change without notice.

primoScan 532 Specification

primoScan 532	/ULD/230		/ULD/440	/ULD/850	
Repetition Rate	10 Hz	20 Hz	10 Hz	10 Hz	
Pump Energy at 532 nm	220 mJ	200 mJ	430 mJ	750 mJ	850 mJ
Output Energy ¹ at 680 nm	63 mJ	54 mJ	123 mJ	214 mJ	242 mJ
Output Energy ^{2,3} at 345 nm	8 mJ	7 mJ	16 mJ	29 mJ	32 mJ
Beam Diameter at Exit Aperture	< 7 mm	< 7 mm	< 9.5 mm	< 13 mm	
Tuning Range OPO			655 – 2700 nm		
Tuning Range UV			330 – 520 nm		
Linewidth			8 – 20 cm ⁻¹		
OPO Pulse Width			0 – 3 ns < Pump		
Beam Divergence (FWHM)			< 2 mrad		
Wavelength Shift Time			< 100 ms		

Footnotes:

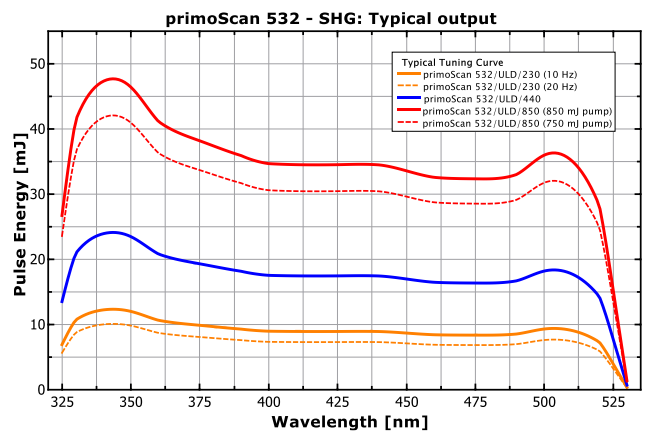
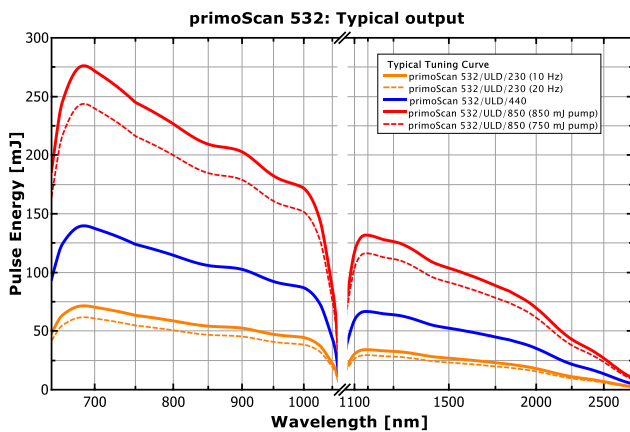
¹: Output Peak ± 10 nm

²: Output Peak ± 5 nm

³: Losses are to be expected with additional add-ons, e. g. up to 10% losses on UV wavelengths (330 – 515 nm) when common port UV is added. Please contact sales for detailed specification.

primoScan 532 Performance

Typical performance with Lumibird Q-Smart Lasers, not a guaranteed or warranted specification



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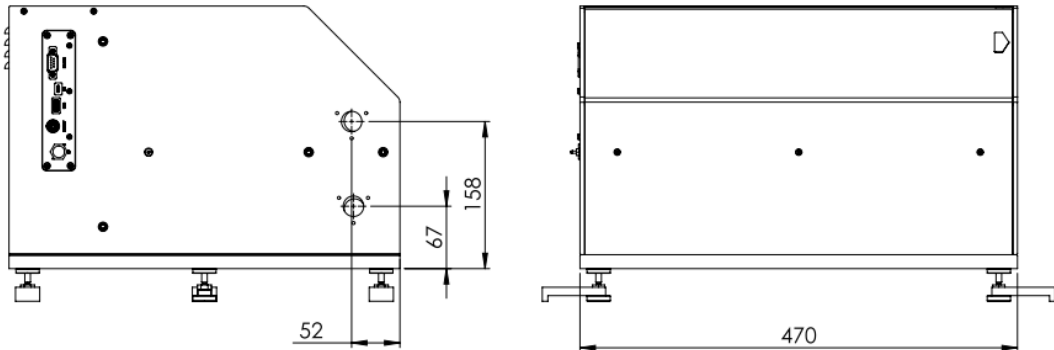
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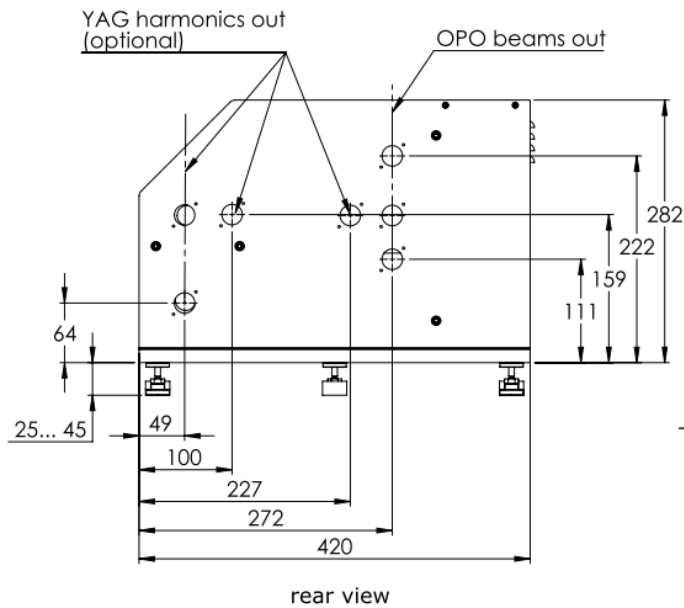


primoScan Dimensions and Properties



front view

side view



rear view

Pumplaser Requirements

Wavelength	532 nm
Energy	80 – 850 mJ
Pulse Width	3.5 – 10 ns
Repetition Rate	1 – 30 Hz
Spatial Beam Profile	homogeneous
Divergence	< 0.5 mrad

Mechanical + Utilities

Size OPO body
(L x W x H):
470 x 420 x 317 mm³

Weight OPO body:
24 – 29 kg (depending on configuration)

Power requirements
Electronics & Motorizers:
100 – 240 V, 50 – 60 Hz

For dimensions with feet
please refer to the
dimensional drawing