



# Photoacoustic Imaging Sources



diode pumped



mobile



table-top

Utilizing many years of experience in the development and production of tunable wavelength, high energy lasers, EKSPLA introduced PhotoSonus series laser sources, which were designed to be used in advanced photoacoustic imaging systems. These laser sources have a wide wavelength range of 660 – 2300 nm, up to 250 mJ of pulse energy and the capability of fiber coupling of the output beam. This makes them a perfect choice for any photoacoustic imaging system for irradiating different tissues and a range of other materials.

Flash-lamp pumped PhotoSonus M laser systems combine a pump laser, OPO and power supply unit into a single mobile cart unit. Having the highest pulse energy of up to 250 mJ this is a perfect laser source for pre-clinical photoacoustic research equipment.

Diode-pumped PhotoSonus X is a low maintenance, high repetition rate (up to 100 Hz) and low noise laser system. Combining an optional internal energy meter and electromechanical shutter with laser self-test capability, this laser is certification-ready for both pre-clinical and clinical use.

A unique, fast-wavelength switching option enables each laser pulse to have a different wavelength in almost any sequence. This could be very useful while tracking changes in molecular properties within a short time period.

Flash-lamp pumped high-energy table-top PhotoSonus T series tunable wavelength laser systems can be used in research labs as a standalone OPO system as well as an irradiation source for photoacoustic imaging systems.

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## SPECIFICATIONS AT A GLANCE

Not all output specifications may be available simultaneously. Please refer to the catalog page for exact specifications and available options.

Model	Available output wavelengths	Pulse duration <sup>1)</sup>	Max repetition rate	Max pulse energy	Page
<b>Diode pumped laser source</b>					
<b>PhotoSonus X</b>	650 – 1300 nm (signal) 1065 – 2600 nm (idler)	2 – 5 ns	100 Hz	90 mJ	4
<b>Mobile flashlamp pumped laser source</b>					
<b>PhotoSonus M</b>	660 – 1320 nm (signal) 330 – 659 nm (SH) 1065 – 2300 nm (idler)	3 – 5 ns	20 Hz	180 mJ	8
<b>PhotoSonus M+</b>	660 – 1064 nm (signal) <sup>2)</sup> 330 – 530 nm (SH) <sup>3)</sup> 1065 – 2300 nm (idler)	3 – 5 ns	10 Hz	250 mJ	8
<b>Table-top flashlamp pumped laser source</b>					
<b>PhotoSonus T</b>	660 – 1320 nm (signal) 330 – 659 nm (SH) 1065 – 2300 nm (idler)	3 – 5 ns	20 Hz	150 mJ	12
<b>PhotoSonus T+</b>	660 – 1064 nm (signal) <sup>2)</sup> 330 – 530 nm (SH) <sup>3)</sup> 1065 – 2300 nm (idler)	3 – 5 ns	10 Hz	230 mJ	12

<sup>1)</sup> FWHM measured with photodiode featuring 1 ns rise time and 300 MHz bandwidth oscilloscope.  
<sup>2)</sup> Optional signal extended range: 660 – 1320 nm.  
<sup>3)</sup> When extended signal range is selected, wavelength range is 330 – 659 nm.

Due to the constant product improvements, EKSPILA reserves its right to change specifications without advance notice.

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