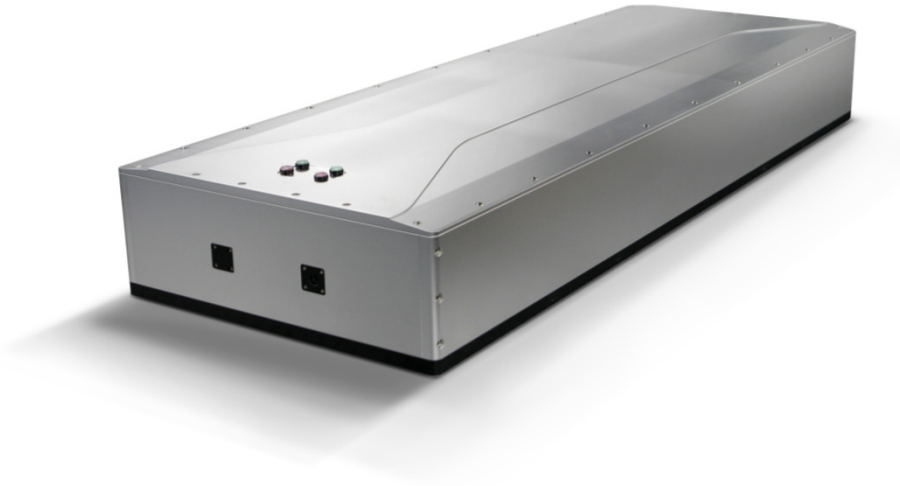


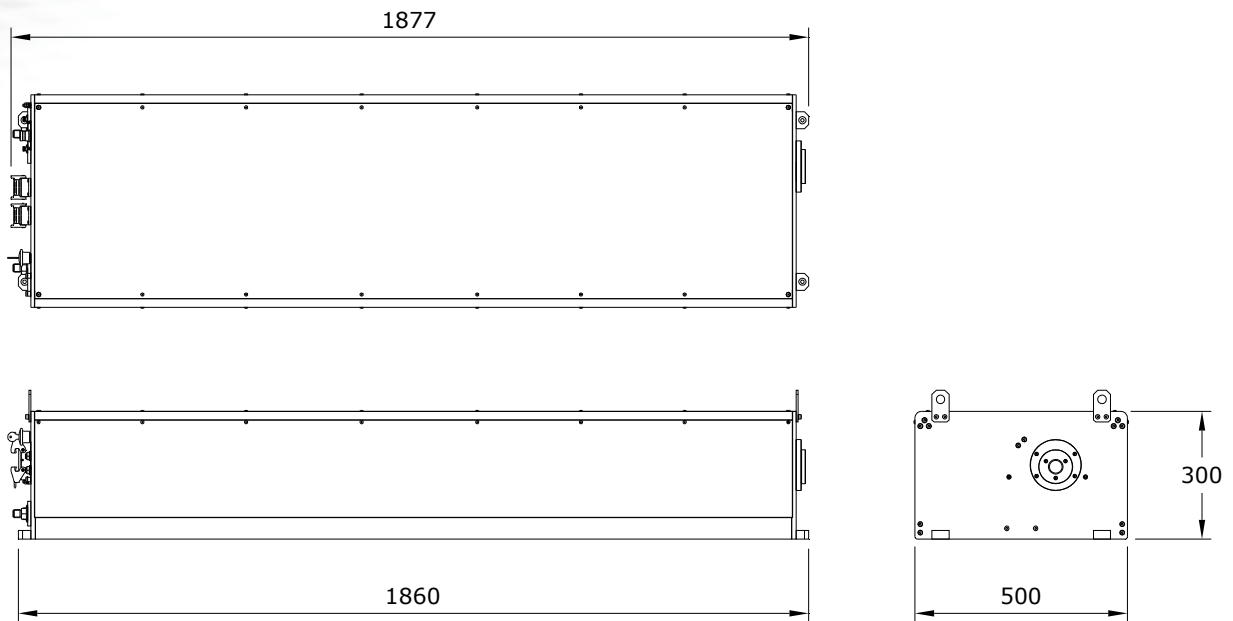
Starlase AO10 SP



A higher power version of the Starlase AO10 SP laser system – optimized for short pulse duration at high repetition rate to deliver increased throughput for applications requiring high peak intensity in a 24/7 production environment. Rugged head design and a flexible control system provide a platform that is ideally suited to industrial applications. A microprocessor architecture allows for serial interfaces, touch screen control and simple integration with OEM equipment and process lines. Real time condition-monitoring provides details of laser performance using power monitors and internal diagnostics. The laser head contains two synchronous oscillators which can be triggered with a software configurable delay to give variable pulse duration and shape, double pulses or interleaved pulses depending on the application requirements. First pulse control and CW leakage suppression can be provided across the performance range. The laser head incorporates an optical attenuator and can accept optional fibre coupling unit to provide flexible beam delivery and output power control.

Applications

- Photovoltaic processing
- Thin film removal
- Rapid laser patterning (RLP)
- Extreme ultraviolet (EUV) generation



Typical laser performance

	Low frequency with pulse shaping				High frequency with fixed duration			
Pulse Repetition Freq. (kHz)	6	8	10	12	12	16	20	24
Average Power (W) *	760	930	1010	1050	780	940	1020	1060
Pulse Energy (mJ) *	127	116	101	88	65	59	51	44
Pulse Duration (ns)	>22	>25	>29	>33	22	25	29	33
Divergence (mrad, 1/e² FA) *	<160							
Fibre Core Diameter (µm)	600 - 1200 (depending on configuration)							
Typical Power Stability	±1% pk-pk							

*at the fibre output

Facility requirements

Supply Voltage	400 VAC (±10%)
Supply Frequency	50/60 Hz
Nominal Power Consumption	31 kVA
Cooling Water	60 litres/min at 11-17°C
Gas Purge	N ₂ or Air (Grade N5.0, <1 ppm THC)
Laser Dimensions	1877 x 500 x 350 mm
Control Rack Dimensions	1885 x 600 x 800 mm (h x w x d)
Heat Exchanger Dimensions	1035 x 532 x 1020 mm (h x w x d)
Environmental Conditions	Temp. 15-32°C and RH <60% (90% max, non condensing)

LASER RADIATION
AVOID EYE OR SKIN EXPOSURE TO
DIRECT OR SCATTERED RADIATION
CLASS 4 LASER PRODUCT

Specifications subject to change without notice