

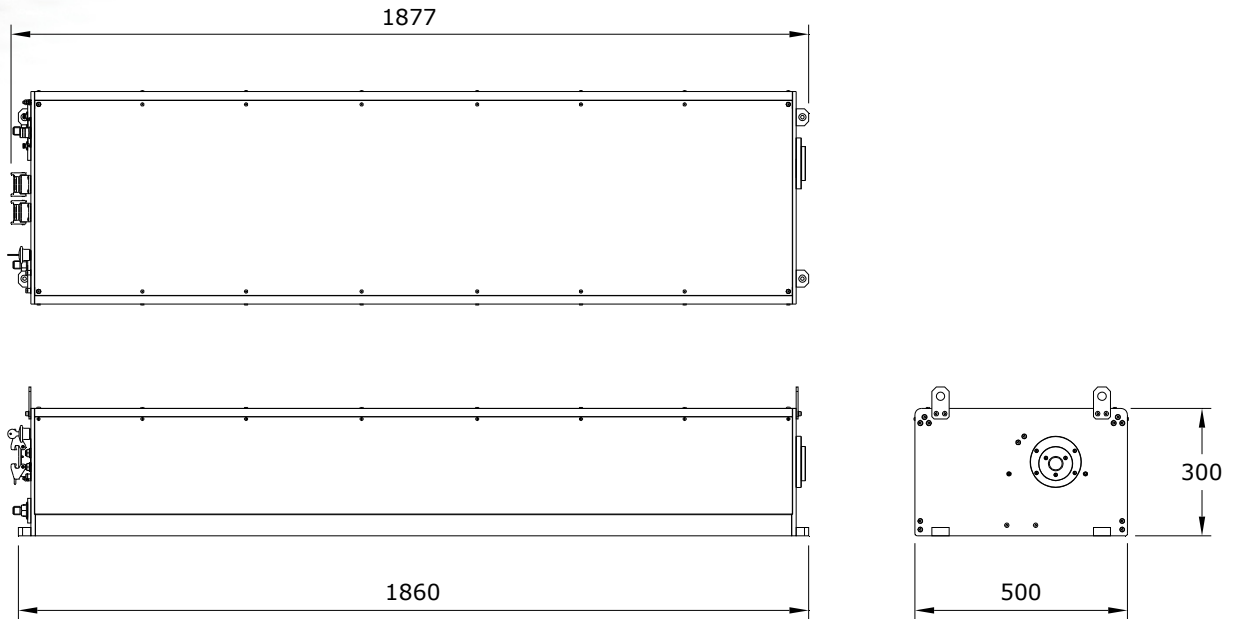
Starlase AO16



An acousto-optically Q-switched, diode-pumped Nd:YAG laser system designed for high-volume 24/7 manufacturing environments. Delivers high average powers at a wavelength of 1064 nm, unpolarised. 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 cavity design is optimized for stable operation across a wide range of pulse repetition frequencies and first pulse control and CW leakage suppression can be provided across the performance range. Integrated optical attenuator and fibre delivery options are available 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

Pulse Repetition Freq. (kHz)	5	6	10	15	20
Average Power (W)	1250	1350	1500	1550	1600
Pulse Energy (mJ)	250	225	150	103	80
Pulse Duration (ns)	40	45	60	85	110
Divergence (mrad, 1/e ² FA)	14	14	14	14	14
M ²	24 to 30				
Typical Power Stability	±1% pk-pk				

Facility requirements

Supply Voltage	400 VAC (±10%)
Supply Frequency	50/60 Hz
Nominal Power Consumption	39 kVA
Cooling Water	80 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)

Specifications subject to change without notice

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