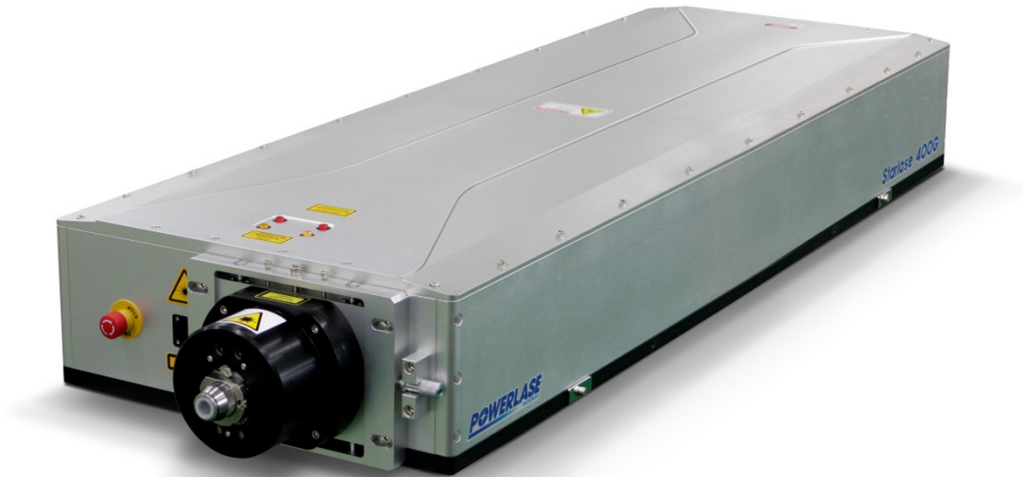


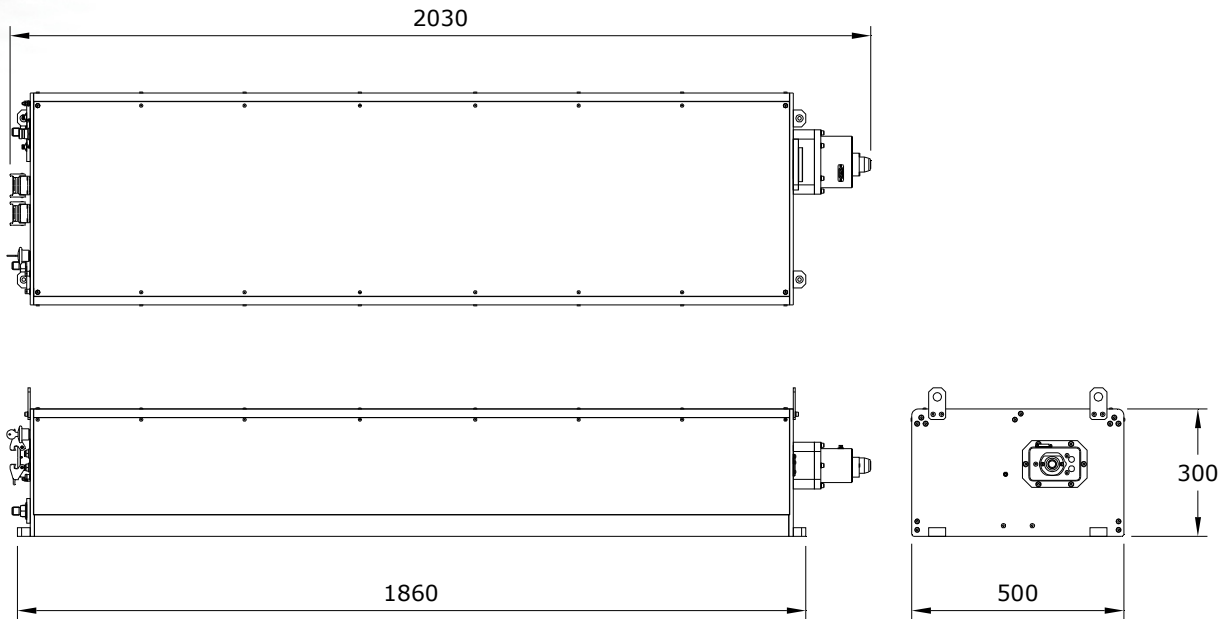
Starlase 400G



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 532 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 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 can be provided across the performance range. The laser head incorporates an optical attenuator and optional fibre coupling unit to provide flexible beam delivery and output power control.

Applications

- Thin film removal
- Photovoltaic processing
- Low temperature poly-silicon annealing (GLA)
- Hard materials processing (e.g. PCD)
- Ti:sapphire pumping



Typical laser performance

Pulse Repetition Freq. (kHz)	10	15	20
Average Power (W)	380	400	360
Pulse Energy (mJ)	38.0	26.7	18.0
Pulse Duration (ns)	75 to 150	90 to 180	110 to 220
Divergence (mrad, 1/e ² FA)	7		
M ²	30		
Typical Power Stability	±2% pk-pk		

Facility requirements

Supply Voltage	400 VAC (±10%)
Supply Frequency	50/60 Hz
Nominal Power Consumption	23 kVA
Cooling Water	40 litres/min at 11-17°C
Gas Purge	N ₂ or Air (Grade N5.0, <1 ppm THC)
Laser Dimensions	2030 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**