

HYLASE

Industrial Picosecond Laser



Key Features

- Maximum Average Power of 25W at 1064nm
- Maximum Pulse Energy of 125 μ J at 1064nm
- Integrated pulse modulation enables:
 - Single-shot to 40MHz
 - Flexible burst mode
- Integrated Second Harmonic Generation module
- M-squared <1.3

Advantages

- Ultra-compact form factor
- Excellent processing
 - Minimal Heat Affected Zone
 - High throughput processing
- High repetition rates and burst-mode capability
- Excellent beam quality at all repetition rates
- 1064/532nm switchable output

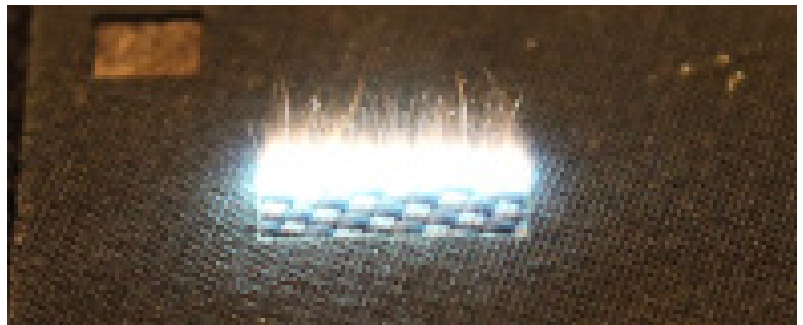
High-Energy & High-Power

Compact and Powerful

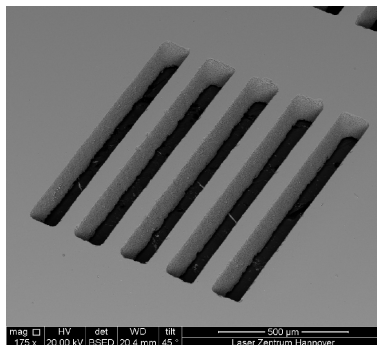
The HYLASE™ picosecond laser from Fianium combines the reliability and low maintenance of an all fiber oscillator with a state-of-the-art amplifier. The ultra-compact laser head has the smallest footprint available enabling easy integration. High stability and long lifetime are provided by design for 24/7 industrial use.

Precision Laser Processing

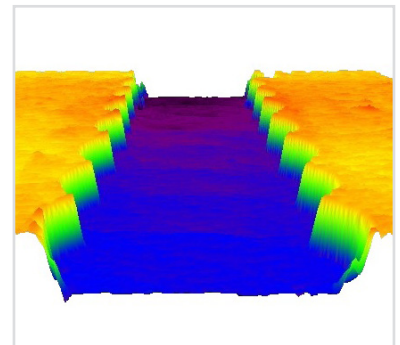
The multi-Megawatt level peak-power and ultrafast pulses delivered by the HYLASE system are suitable for processing the most demanding materials including transparent glasses & plastics. Typical applications include photovoltaic & electronics production, display glass processing and security & decorative marking.



Carbon Fiber Reinforced Polymer processing at Fianium Applications Facility, Oregon, US



Cutting of display glass, courtesy of Laser Zentrum Hannover

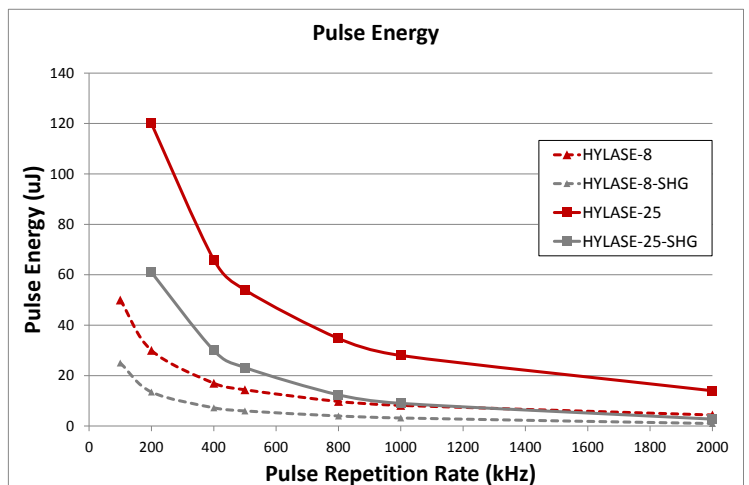
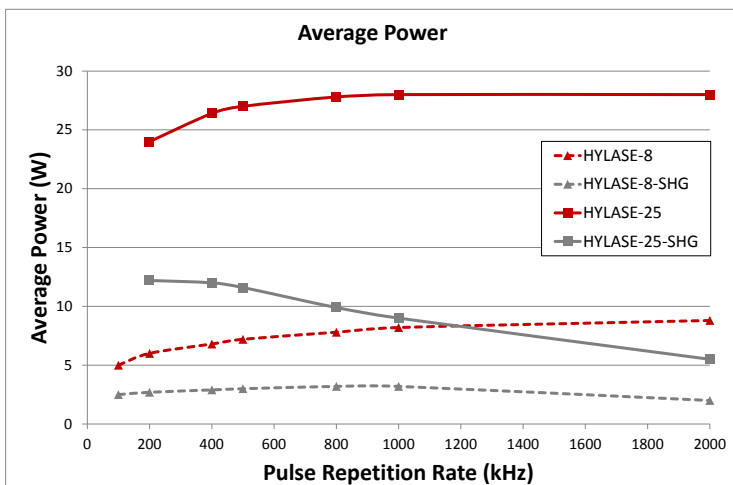


Scribing of thin-film Molybdenum at Fianium Applications Facility, Oregon, US

STANDARD SPECIFICATIONS

HYLASE Industrial Picosecond Laser				
Model	HYLASE-8	HYLASE-8-SHG	HYLASE-25	HYLASE-25-SHG
Wavelength	1064nm	532/1064nm switchable	1064nm	532/1064nm switchable
Max pulse energy	40µJ @ 1064nm	40µJ @ 1064nm 20µJ @ 532nm	125µJ @ 1064nm	125µJ @ 1064nm 60µJ @ 532nm
Max power	>8W @ 1064nm	>8W @ 1064nm >2W @ 532nm	>25W @ 1064nm	>25W @ 1064nm >10W @ 532nm
Pulse Duration	<15ps			
Pulse Repetition Rate	Single shot to 40MHz including burst mode			
Spatial Mode	TEM ₀₀ (M ² < 1.3)			
Beam circularity	> 85 %			
Pulse energy stability	< 1% RMS @ 1064nm and 1MHz			
Average power stability	< 1% RMS @ 1064nm and 1MHz			
Polarisation extinction ratio	>>100:1			
Trigger input	TTL			
Synchronisation output	TTL			
Warm-up time	< 30 minutes			
Laser head weight	< 20Kg			
Dimensions Laser Head/Controller	330 x 220 x 90mm 19" rackmount, 6U height		550 x 220 x 98mm 19" rackmount, 6U height	
Cooling	Water Cooled			

TYPICAL PERFORMANCE DATA



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