



nLIGHT's picosecond pulsed Fiber Laser provides the industry's first cost-effective solution for high-precision micro-materials processing applications. Designed to meet the highest quality and reliability standards for maintenance-free 24/7 industrial operation, the air cooled system outputs a near diffraction limited high peak power, short pulsed beam at 1064nm. The small footprint of the laser head coupled with an intuitive user interface allows for ease of integration into any laser machine tool.

The pulsed Fiber Laser platform integrates nLIGHT's industry-leading technologies to deliver a high-performance pulsed fiber laser solution:

- Builds upon high brightness fiber-coupled diodes coupling nLIGHT's high-brightness nXLT™ single emitters for efficient fiber coupling.
- Incorporates nLIGHT LIEKKI™ active fiber with proprietary Direct Nano-particle Deposition (DND) technology that provides high efficiency and minimizes photodarkening
- Proprietary seed technology allowing ultra-stable pulses with highly flexible parameters

The pulsed Fiber Laser platform is designed and manufactured to meet the high-performance and high-reliability requirements for Thin Film Patterning and Scribing.

## Features

- Burst mode (up to 30 pulses, adjustable pulse to pulse spacing <10ns to 100ns)
- High peak power (300kW)
- Configurable pulse widths from <50ps to 400ps
- User selectable repetition rate from 50kHz to 10MHz
- Air-cooled
- Flexible modular design enables high user uptime
- Near diffraction-limited beam

## Applications

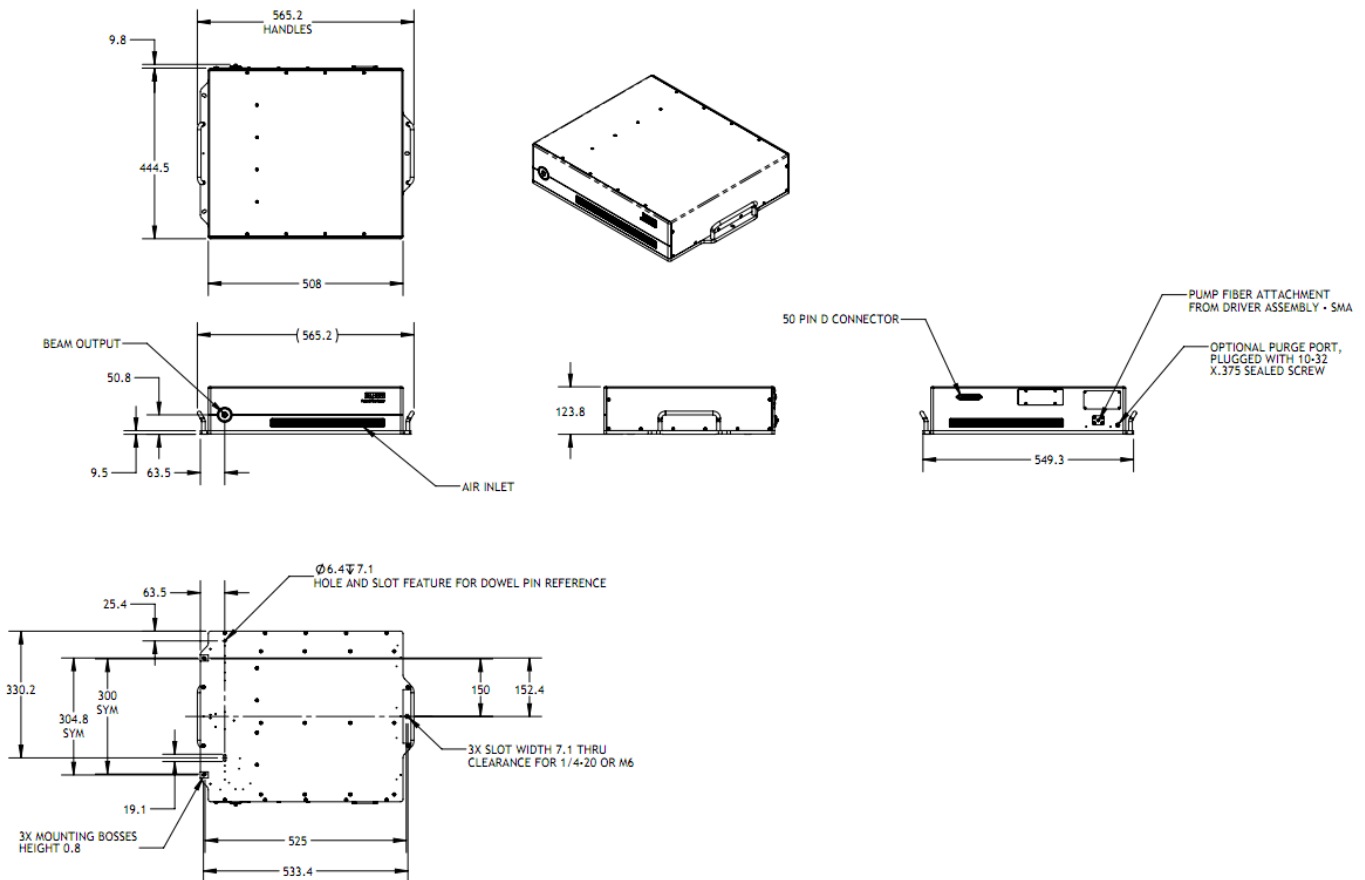
- FPD processing
- Semiconductor processing
- Marking and engraving
- Micro-machining
- Glass processing
- Sapphire scribe
- Stealth dicing
- UV laser replacement

## Proven Performance

**Typical Device Specifications**

Parameter		Specification				
Target Applications		Thin Film Patterning Sapphire / Glass Scribing				
Pulse Energy	uJ	15				
Output Peak Power	kW	300				
Output Average Power	W	1.5	3.75	7.5	11.25	15
Repetition Rate	kHz	100	250	500	750	1000
Pulse Width	ps	50				
Center Wavelength	nm	1064 ± 2 nm				
Power Variation	%	≤ 3%				
Beam Diameter	mm	2				
Beam Divergence	mrad	5				
Beam Quality	M <sup>2</sup>	<1.3				

**Package Dimensions**



**Proven Performance**