



nLIGHT alta™ is the first in a line of next generation high power fiber lasers. Designed to meet the performance and reliability requirements for industrial applications, nLIGHT alta™ incorporates several improvements over other commercially available fiber lasers:

- **Improved Cutting and Welding Performance:** nLIGHT alta™ is capable of delivering a modulation rate up to 100 kHz and rise and fall time of less than 5  $\mu$ s. Enabled by next generation electronics, these capabilities allow faster piercing, faster processing of fine features, and smaller heat affected zones.

- **Back Reflection Isolation:** nLIGHT's novel back reflection isolation technology allows uninterrupted full power processing of highly reflective materials.
- **Design-for-Service:** nLIGHT alta™ incorporates a unique, proprietary fiber laser architecture that enables tool integrators or end users to manage common field service events, which results in higher machine uptime, lower cost of ownership, and an improved customer experience.

The nLIGHT alta™ fiber laser platform is designed and manufactured in the U.S., leveraging nLIGHT's vertically integrated high brightness laser diode and fiber technology, and is supported through a global network of sales and service staff. nLIGHT alta™ - the next generation of fiber lasers.

## Features

- Advanced cutting and welding performance
- Failsafe processing of highly reflective materials
- Proprietary design for high uptime and easy service
- Durable in harsh environmental conditions
- Powers of 1600 W and 2 kW

## Applications

- Thick Metal Cutting
- Remote Welding
- Battery Welding
- Hardening / cladding
- Additive manufacturing

## Typical Device Specifications

Optical		Units
Mode of operation, Random Polarization		CW/QCW
Maximum average power (CW or Modulated)	W	2000
Power tunability	%	5 – 100
Power variation (8 hr)	%	≤ 1
Modulation frequency	kHz	≤ 100
Rise/fall times	μs	≤ 5
Beam quality (multimode options)	mm-mrad	≤ 2.3 with 50 μm fiber ≤ 4 with 100 μm fiber ≤ 8 with 200 μm fiber ≤ 12 with 300 μm fiber
Wavelength	nm	1080 ± 10
Electrical		
Operating voltage	Vac	3-phase 380/480
Operating voltage frequency	Hz	50/60
Control interface		External HW Control, Analog Power Control, ASCII Command Line (RS-232), GUI and API (Ethernet)
Optional control interface		EtherCat <b>or</b> Ethernet/IP <b>or</b> DeviceNet <b>or</b> PROFIBUS <b>or</b> PROFINET
Mechanical		
Dimensions (with casters, covers, interfaces)	mm	445 w x 625 h x 930 d
Mass	kg	131
Optical fiber		20 m, QBH connector standard
Cooling method		Water
General condition		
Operating temperature	°C	+10 to +40
Storage temperature	°C	-10 to +60
Relative humidity	%	10 to 80

#### Laser Safety

This laser product does NOT comply with IEC 60825-1 or 21CFR1040.10/21CFR1040.11 and is solely intended to be integrated into a laser product certified by the Purchaser. The Purchaser acknowledges that their product must comply with the applicable regulations before it can be sold to an end user.

#### Notice

nLIGHT continually improves its products to provide our customers with outstanding quality and reliability. nLIGHT may make changes to specifications and product descriptions at any time, without notice. In addition, nLIGHT offers a limited warranty to ensure customer satisfaction. For complete details, please contact your nLIGHT sales representative.

