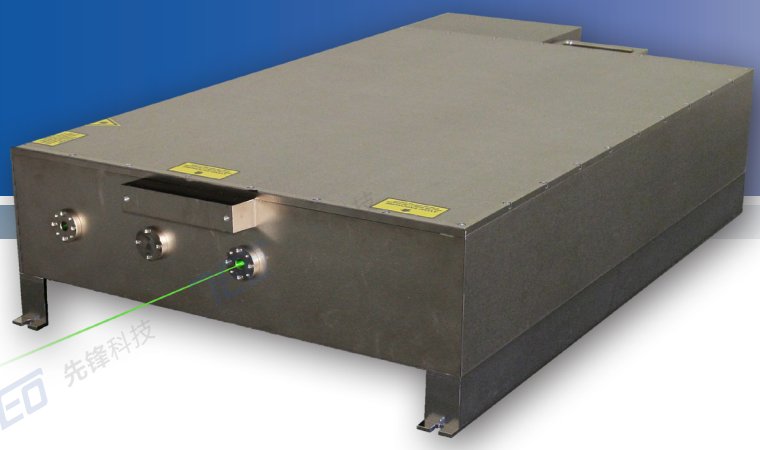
Advanced Optowave impact through innovation.

PRODUCT DATA SHEET
FEMTO-IR-1030/GR-515

ALTA SERIES
Femtosecond Industrial Lasers

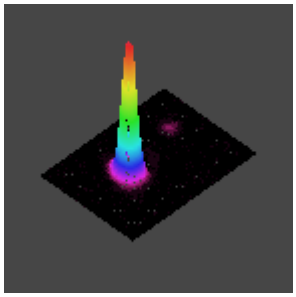


applications.

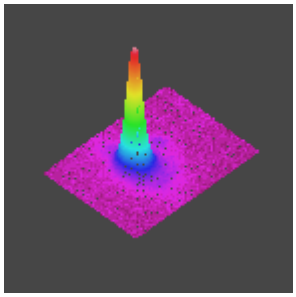
Polymer Processing/Machining
High-Speed Precision Micromachining
Semiconductor/PV Processing/Wafer Scribing
Sapphire Scribing, Drilling & Dicing
Microfluidics
Pulsed Laser Deposition
Injector Nozzle Drilling
Thin-Film, Solar Cell Structuring
Glass Welding, Sub-Surface Marking & Micromachining
Metal Processing
Ceramic Micro-Processing
Micro-Via Drilling
Medical Device Manufacturing

features & benefits.

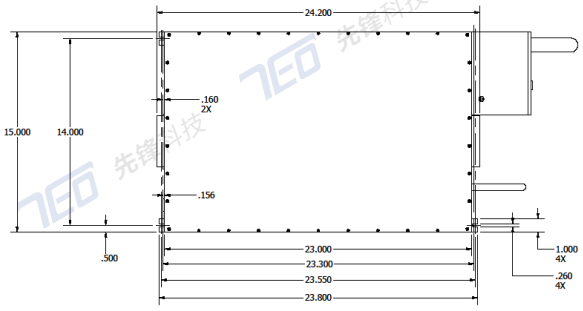
Available in IR & GR Wavelengths
*Up to 10W Average Power**
*Excellent Beam Quality of M2 <1.3**
Highly Reliable Design
Simple, Intuitive Control Features
Pulse Durations of ~ 950 fs
Flexible Output Options
Burst Mode Option
Lowest Cost of Ownership in the Industry

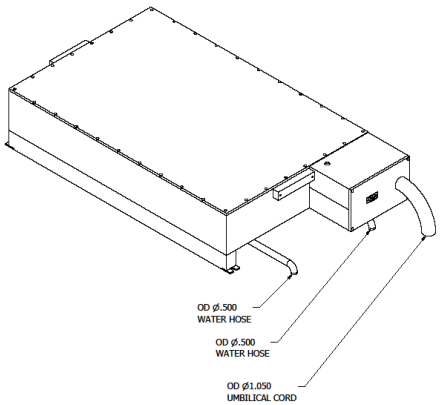


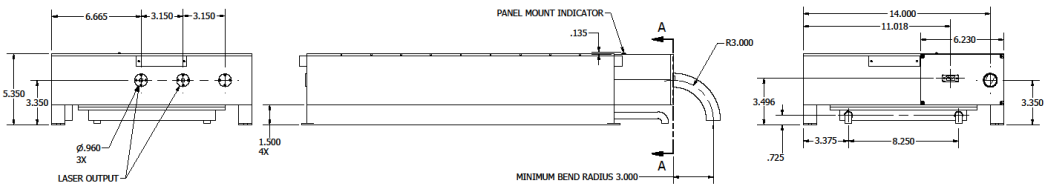
*515 BEAM PROFILE**



*1030 BEAM PROFILE**







www.a-optowave.com

**Advanced Optowave Corporation follows a policy of continuous product improvement. Specifications are subject to change without notice.*

Advanced Optowave impact through innovation.
105 Comac Street | Ronkonkoma, NY 11779 | USA
www.a-optowave.com | phone 631-750-6035 | fax 631-803-4445

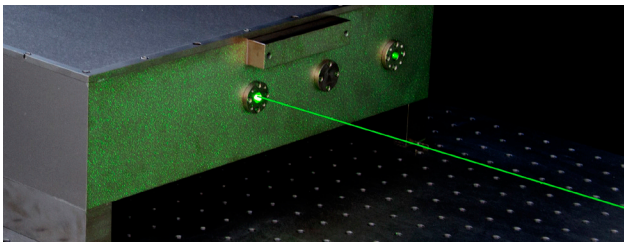
PRODUCT DATA SHEET
FEMTO-IR-1030/GR-515

ALTA SERIES
Femtosecond Industrial Lasers

SPECIFICATIONS*	ALTA-FS-1030-10W	ALTA-FS-515-5W
Wavelength[1]	1030 nm	515 nm
Average Power[2]	10W	5W
Pulse Repetition Rate[3]	100-1000 kHz	
Beam Quality (M^2)	<1.3	
Spatial Mode	TEM00	
Beam Roundness	>80%	>85%
Pulse Width (fs)	~950 fs	
Pulse Energy (µJ @ 100kHz)	>50	>30
Pulse-to-Pulse Stability[4]	<2% RMS	<2% RMS
Average Power Stability[4]	<.5% over 12 hours	<2% over 12 hours
Point Stability	<20 µrad/°C	
Polarization Ratio	>100:1 LINEAR, HORIZONTAL	>100:1 LINEAR, VERTICAL
Communication Protocol[5]	RS-232	
Operating Voltage (VAC)	90-260	
Line Frequency (Hz)	50-60	
Cooling	CLOSED-LOOP WATER	
Operation Temperature	15° - 30° C	
Operation Humidity	20% - 80%	
Storage Temperature	-20° - 50° C	

Dimensions & Weight

	DIMENSIONS (IN.)	WEIGHT (LBS.)
Laser Head	23 x 15 x 7	70
Laser Controller	14.5 x 19 x 7	20
Umbilical	100 inches / 2.5 meters (all lasers)	



Note:
1. Contact AOC for additional wavelengths.
2. Contact AOC for higher power lasers.
3. Contact AOC for high frequency.
4. Defined as standard deviation/average.
5. Contact AOC for USB II & Ethernet.

COMPLIANCE: CDRH, ROHS, CE

**Advanced Optowave Corporation follows a policy of continuous product improvement. Specifications are subject to change without notice. Advanced Optowave Corporation offers a limited warranty for all Femtosecond IR/GR laser systems. For full details on warranty coverage, or for further product information, please contact us.*