

HIGH-POWER, VERY HIGH BRIGHTNESS BLUE LASERS with scanning capability



NUBURU first-generation **AO**® products introduced defect-free, spatter-free copper welding to metal processing applications. The second-generation **AI**™ product line incorporates NUBURU world-leading proprietary blue laser technology in a high-power, very high brightness compact package with scanning capability. The AI product line brings the qualitative advantages of the blue laser to a wider range of industrial applications, while also enabling processing speeds anywhere from two times to more than twenty times faster than current infrared lasers.

Features/Benefits

- Blue dramatically improves IR process windows — even enabling otherwise impossible processing geometries
- Blue wavelength is superior to all other wavelengths even at equal power
- Enables SPATTER FREE™ welding process
- Conduction mode weld in reflective metals
- Fully compatible with the BlueWeld™ welding lens product line
- 1200 and 1500 Watts with a BPP of 11mm*mrad
- Fully compatible with scanners

Applications

- Welding Cu–Au–Al–Ni–SS and other metals for: Lithium-ion Battery, E-mobility, Electronics Packaging, Consumer Electronics, Photovoltaics, Automotive components and Interconnects
- Cladding, Brazing, LMD
- Additive Manufacturing



eMobility/Energy Storage



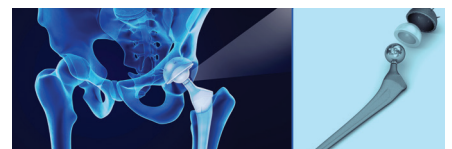
Consumer Electronics



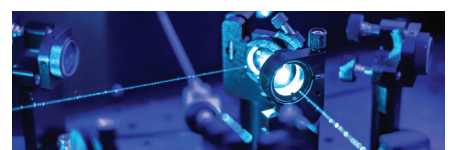
Automotive



Aerospace



Healthcare



Research

AI Product Line

Optical		Units	AI-1200 Typical	AI-1500 Typical
Wavelength		nm	~450	
Bandwidth		nm	~10	
Output Power ¹		W	1200	1500
Power Adjustment		%	10 - 100; Automatic Power Control Mode	
Power Stability (8 hours)		%	<3% at full power	
Fiber Diameter (Core)		μm	100	
Fiber Numerical Aperture		NA	0.22	
Beam Product Parameter		mm-mrad	<11	
Standard Fiber Length - Connector Type		m	5 - QBH	
Electrical		Units	AI-1200 Typical	AI-1500 Typical
Operating Current ²		A	<25 per phase	
Operating Voltage ²		V	396 - 484 (50/60Hz; 3Φ 4 wires)	
Auxiliary Voltage		V	90 - 264 (Universal 110/230)	
External Control Inputs				
Laser Enable (High on)		V	+5 / +24	
CW Analog Control		V	0 - 10	
Modulation		kHz	5	
Communications			Ethernet	
Safety Interlocks				
Interlock Voltage (Laser Enable)		V	24	
Open Circuit (Laser Shut-down)		V	0	
Mechanical		Units	AI-1200 Typical	AI-1500 Typical
Height		mm (inches)	641 (25.2)	
Width		mm (inches)	671 (26.4)	
Depth		mm (inches)	1183 (46.6)	
Weight		Kg (Lbs.)	136 (300)	
IP Rating			IP 52 / NEMA 12	
Operating Conditions		Units	AI-1200 Typical	AI-1500 Typical
Temperature		Degrees C°	20-30	
Relative Humidity		%	0-90	
Storage and Transport ³		Units	AI-1200 Typical	AI-1500 Typical
Vibration, MIL_STD-810 G			Method 514.6, category 7, general exposure	
Temperature		Degrees C°	-10 to +60	
Cooling ⁴		Units	AI-1200 Typical	AI-1500 Typical
Heat Load		kW / RTon	8 / 2.3	
Min Flow Rate		Lpm/gpm	33 / 8.6	
Supply Temperature Range		Degrees C°	22 - 25	
Max Pressure Range		Bar / psi	5.5 / 80	

1. Power based on 5m fiber

2. The following options are available: 440 - 480V 25A per Φ,
380 - 415V 29A per Φ or 208 - 240V 52A per Φ.

3. Unit must be drained and purged with clean dry air prior to storage

4. Non condensing

* The user assumes all risks and liability whatsoever in
connection with use of this product or its application

** Contact NUBURU for all requirements



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NUBURU
The Blue Laser Company™

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