

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



NUBURU first-generation **AI**® 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 1500-Watt AI-1500 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
- 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



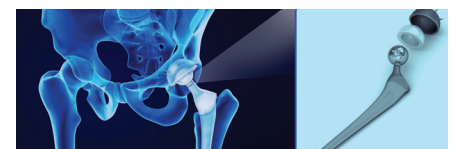
Consumer Electronics



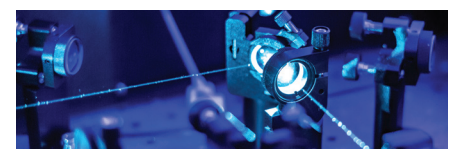
Automotive



Aerospace



Healthcare



Research

AI Product Line

Optical	Units	AI-1500 Typical
Wavelength	nm	~450
Bandwidth	nm	~10
Output Power ¹	W	1500
Power Adjustment	%	0 - 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-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-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-1500 Typical
Temperature	Degrees C°	20-30
Relative Humidity	%	0-90
Storage and Transport ³	Units	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-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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