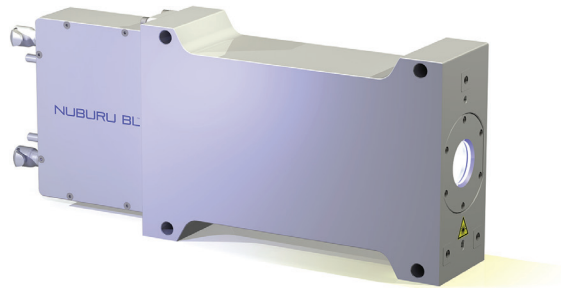


# FREE SPACE DELIVERY BL SERIES

DATA SHEET

## HIGH BRIGHTNESS, FREE SPACE OUTPUT BLUE LASERS FOR METALS PROCESSING



The **NUBURU BL™** series are high brightness, blue lasers that process metals better and more efficiently than IR or green lasers and integrate with standard scanning systems. This enables them to service a wide range of welding, additive manufacturing, and other materials processing applications in batteries, e-mobility and consumer electronics.

The high brightness of the **NUBURU BL-F** series, combined with scan head delivery, offers an ideal laser for metal processing due to the high absorption of blue light by metals: including 13x for copper and 3x for aluminum. Reducing the excess heat input compared to infrared lasers enables spatter-free and defect free welds with the highest possible mechanical and electrical performance.

With available output powers from 125W to 250W, these blue lasers can power mass production solutions for <500micron copper and aluminum welds which require a large process window and demand extremely high yields.

### Key Benefits

- Compact footprint to simplify integration
- Capable of direct interface to standard scanners
- All semiconductor laser reliability and lifetime
- Lower cost of ownership than fiber and solid-state lasers
- Spatter and defect free conduction mode welds
- Higher weld joint densification

### Applications

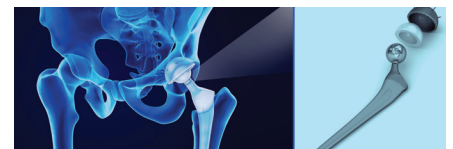
- Batteries for consumer electronics
- Consumer electronics
- Interconnects
- Electronics packaging
- Powder bed fusion 3D metal printing



Consumer Electronics



eMobility/Energy Storage



Healthcare



3D Printing

# FREE SPACE DELIVERY BL SERIES

Optical	Units	BL-125	BL-250
Wavelength	nm	~444	
Bandwidth	nm	+/-15	
Output Power	W	125	250
Power Adjustment	%	20-100	
Power Stability (8 hours)	%	<3 at full power	
Collimator Aperture Diameter	mm	20 or 30	
Beam Parameter Product (10-90% enclosed power)	mm.mrad	<5	
Electrical			
Operating Current	A	<18	
Operating Voltage	V	180/264 (47-63Hz) 1 ph-3 wires	
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		Driver/Head with Telescope	
Height, Width, Depth	mm	H: 178/170 - W: 443/100 - D: 635/410	
Weight	Kg	21/11.4	
Power Supply		19" Rack	
IP Rating		IP20/NEMA 1	
Operating Conditions			
Temperature	Deg C	15-25	
Relative Humidity (non-condensing)	%	0-90	
Storage and Transport			
Temperature	Deg C	0-40	
Cooling			
Heat Load	kW/Rton	3/0.85	
Min Flow Rate	Lpm/gpm	6/1.5	
Supply Temperature	Deg C	15-25	
Max Pressure	bar/psi	5.5/80	



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**NUBURU**  
The Blue Laser Company™

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