

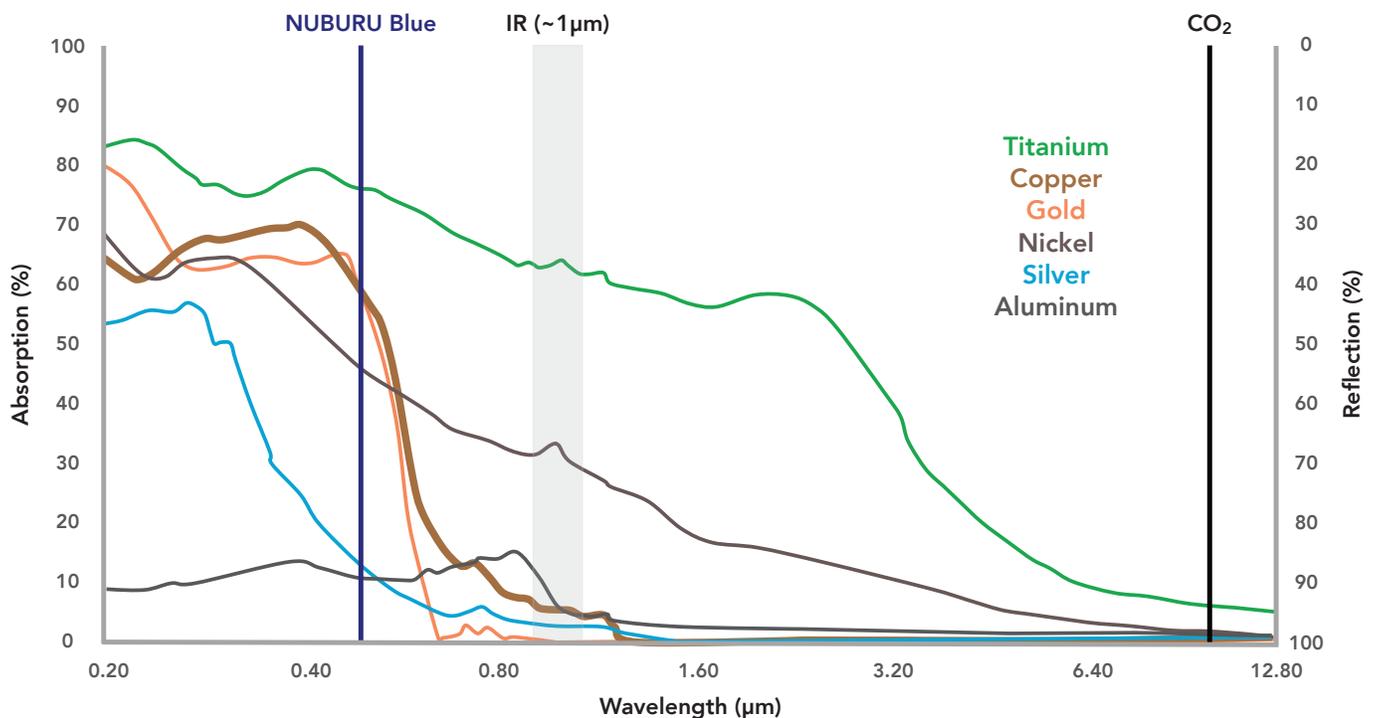
WHY BLUE BEATS INFRARED LASERS

ABSORPTION IS EVERYTHING

Superior Efficiency

- Physics dictates energy absorption efficiency: blue is 3–20× better than standard IR wavelength

Absorption Characteristics of Various Metals vs Wavelength



Source: NASA 2016

Key Metals	Blue to 1µm ratio	Blue to 10µm ratio
Titanium	1.3x	>10x
Copper	13x	>50x
Gold	66x	>15x
Nickel	1.7x	>15x
Silver	5x	>10x
Aluminum	3x	>10x

Net Benefits with Blue

- 2-10× metal processing speed of IR lasers (1µm and 10µm)
- Dramatically improves process performance and process windows
- Enables welding processes not possible, or with low yield, with IR
- Near to spatter-free welding for copper and high reflective material in IR

HIGH POWER – HIGH BRIGHTNESS

NUBURU’s high power, high brightness BL and BL-F Series broke new ground in material processing. With power ranging from 125W to 1kW and BPP’s from 5 to 15 mm* μ rad, they provide higher brightness to the superior capabilities of blue. They are ideal to weld copper, both electrical and structural aluminum, gold and stainless steel with thicknesses from 6 μ m up to 1mm.

Blue lasers bring substantially improved metal quality with increased process speed from 2 to 10 \times versus all infrared lasers in welding, cutting, soldering, and additive manufacturing. NUBURU continues to offer the highest performance blue lasers in the industry, bringing game-changing capabilities to energy storage, consumer electronics and general electronics packaging, e-mobility, additive manufacturing and aerospace manufacturing.

eMobility/Energy Storage



Consumer Electronics



Automotive



Aerospace



Healthcare



Research



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