

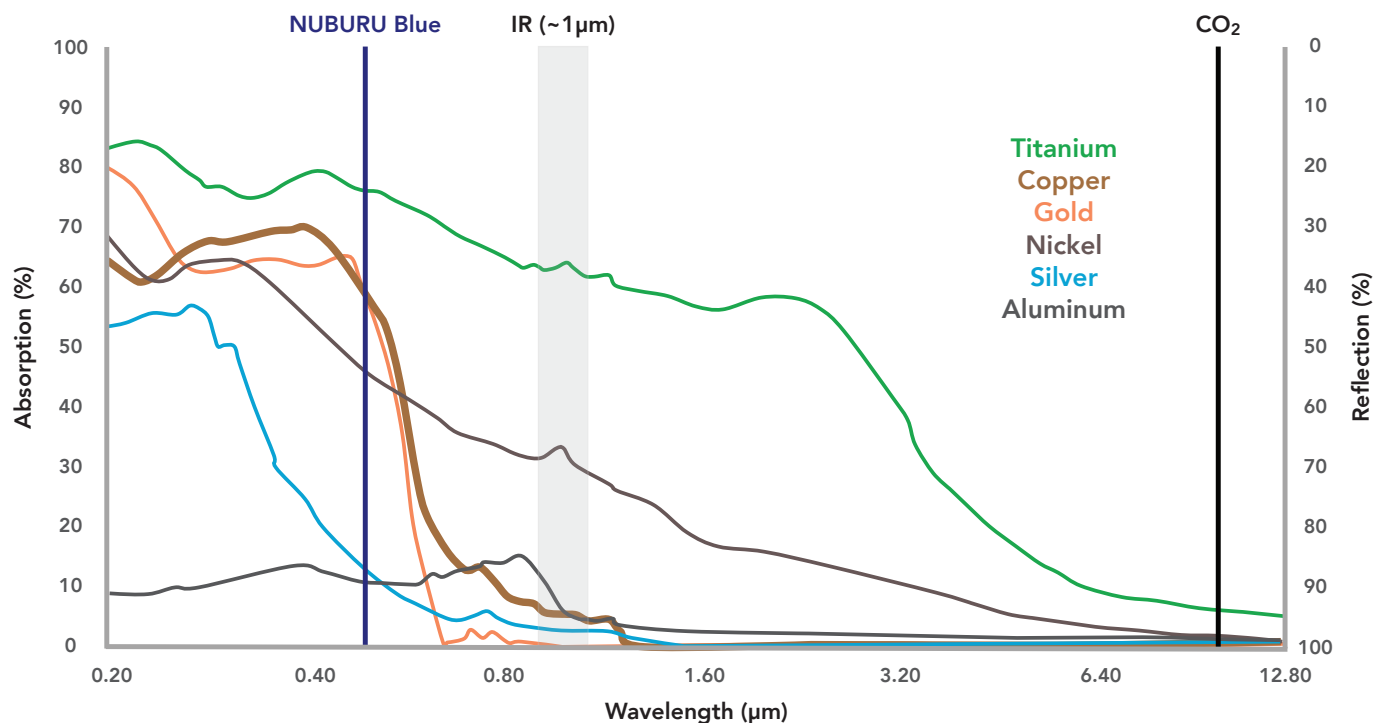
# WHY BLUE BEATS INFRARED LASERS

## 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	1.3×	>10×
Copper	13×	>50×
Gold	66×	>15×
Nickel	1.7×	>15×
Silver	5×	>10×
Aluminum	3×	>10×

### 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\*mrad, 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 6µm up to 1mm.

Blue lasers bring substantially improved metal quality with increased process speed from 2 to 10× 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



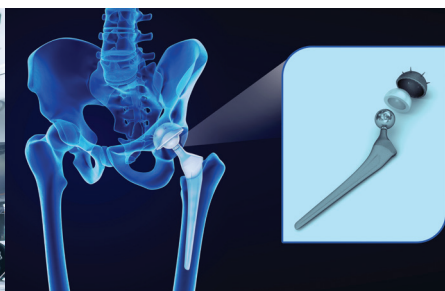
Automotive



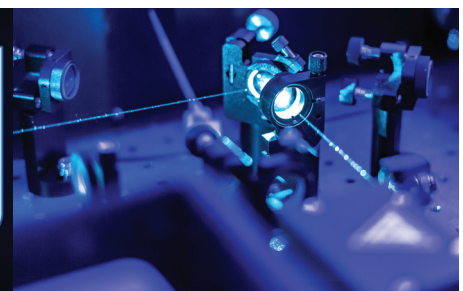
Aerospace



Healthcare



Research



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