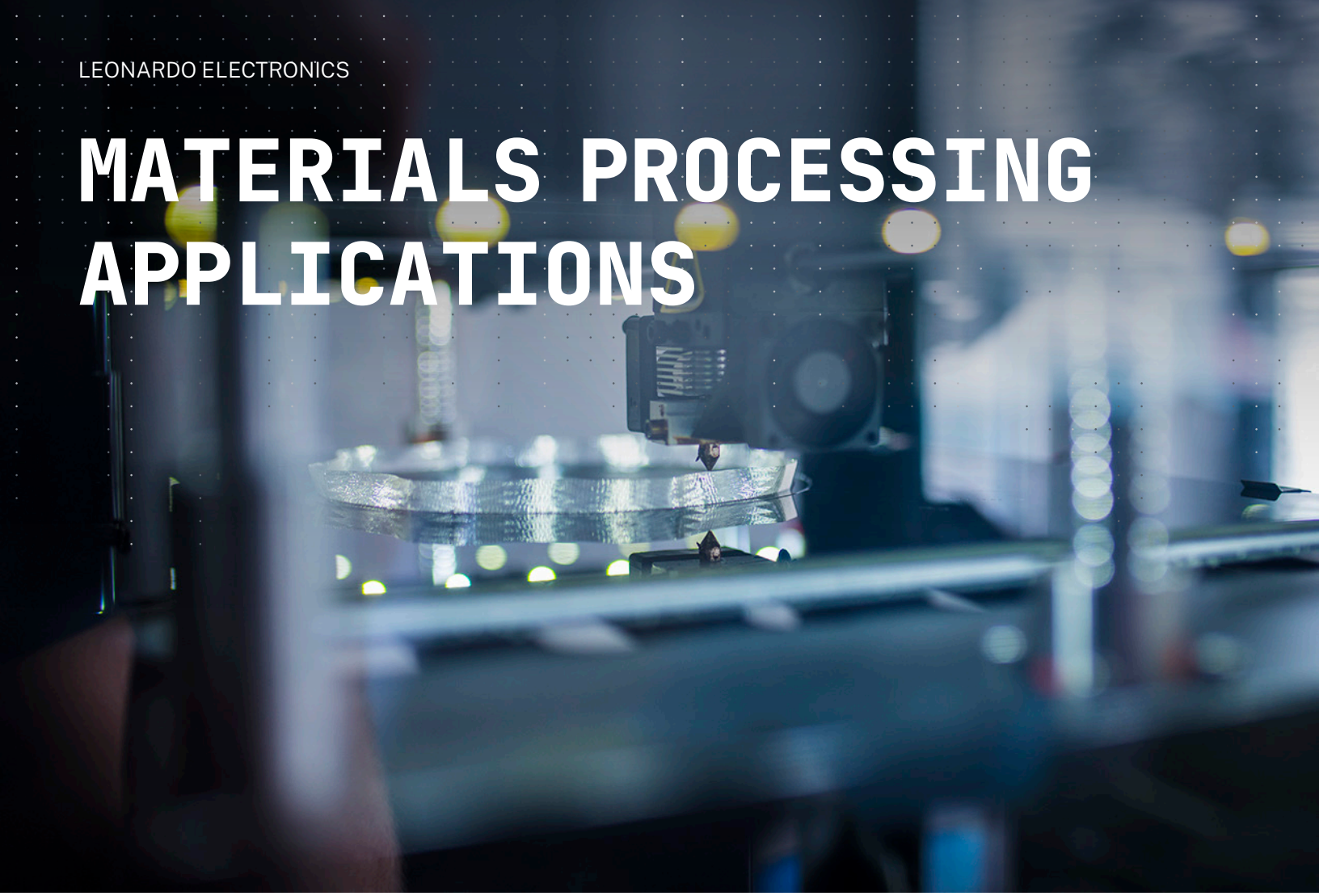
LEONARDO ELECTRONICS

MATERIALS PROCESSING APPLICATIONS



Many processes require an exactly defined amount of energy to be delivered to a specific target. Laser diodes are an ideal candidate in the implementation of such processes. Their power can be varied in a continuous fashion at very fast speeds (sub-milliseconds) and the illuminated target area can be shaped to fit almost any need.

KEY FEATURES

- Small form factor for flexibility
- High power (up to 50 kW) with high efficiencies (>60%)
- Custom beam geometries
- Homogenization options available
- Multi-wavelength options
- Modular design
- Rugged design for use in harsh environments
- System-level integration possible

APPLICATIONS

- Automated Fiber Placement (AFP) for composite materials
- Heating sources
- Food packaging
- Metal additive manufacturing
- Thermal annealing
- Solar cell manufacturing
- Pump source for high peak power laser systems
- Plastic welding

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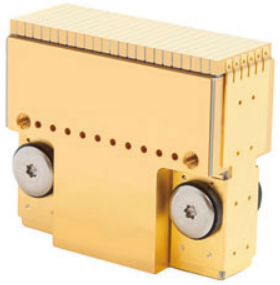
TYPICAL MATERIALS PROCESSING SPECIFICATIONS

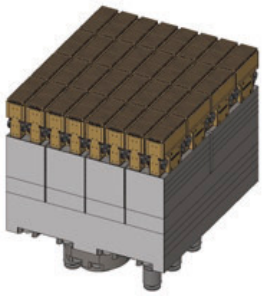
SINGLE ARRAY T6

		760 nm - 1100 nm				1400 nm - 1700 nm
Parameters	**Units**	**Typical Value at 25°C**				
Power	W	1,920	2,400	2,880	50,000	600
Bar Length	mm	10				
Operating Mode	-	CW			Pulsed	CW
Current	A	90	105	125	1,100	35
# of Bars	-	≤24			≤50	≤24
Voltage/Bar	V	1.9 (760 nm - 830 nm)			2	1.5
		1.7 (850 nm - 1100 nm)			1.8	
Size FA	mm	28.4				
Size SA	mm	11.5				
Mass	g	40				



MULTIPLE ARRAYS

		760 nm - 1100 nm	1400 nm - 1700 nm
Array Pitch FA	mm	29 (min.)	
Array Pitch SA	mm	13 (typ.)	



Additional options like homogenization, special beam size, working distance, enclosures, higher integration level, and spectral properties are available upon request.

ABOUT US

Leonardo Electronics US enables next-gen technologies in defense, security, medical, automotive and industrial segments. For over 20 years, the Tucson, AZ based facility has driven robust laser design and innovation resulting in enabling technology to support market leaders worldwide.

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Patent Numbers:
US 7,660,335 | US 7,864,825 | US 6,352,873 | US 6,295,307

Certifications:
AS 9100D Including ISO 9001:2015
IATF 16949:2016 Automotive
ISO 14001:2016 Environmental Management System

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