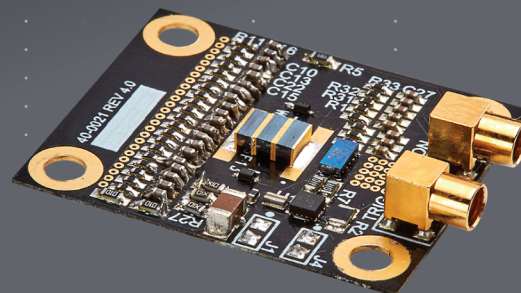
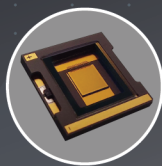


LASER DIODE ARRAYS



VCSELS



EDGE EMITTERS

Leonardo's vertical cavity surface emitting laser (VCSEL) arrays and edge emitter laser arrays have a small footprint, optimized beam profile, high efficiency and are low cost and easily integrated. Applications include illumination, drones/UAS, defense, robotics, and heating. These arrays are particularly well-suited for high-volume ADAS and lidar applications.

KEY BENEFITS

- Customizable
 - Power and size
 - Wavelength
 - Emitter and array geometries
- Lifetime testing of each design under customer specific operating conditions
- High reliability – long lifetime

KEY FEATURES

- Operation modes from ns pulses to CW
- Fast modulation
- High reliability – long lifetime
- Individually addressable
- Advanced beam conditioning

TYPICAL VCSEL SPECIFICATIONS

Parameter	Units	Typical Value
Wavelength	nm	800 to 980
Operating Voltage	V	2.8
FWHM Beam Divergence	°	<30 (circular)
Spectral Width	nm	<3
Power Conversion Efficiency	%	35

Pulse Width	Typical Intensity (W/mm ²)
Short Pulse (1 ns -100 ns)	100
QCW (10 μs -100 μs)	10
CW	1 — 2

PACKAGING

Leonardo offers custom packaging options that can be AEC Q102 qualified.

ACCESSORIES

Leonardo’s VCSEL and edge emitting arrays can be fully integrated with drive electronics, power boards and housings.

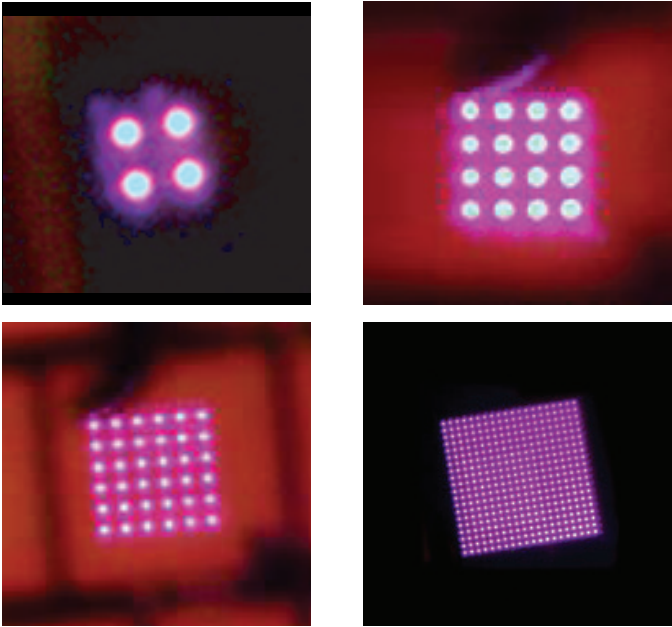
AUTOMOTIVE QUALITY SOLUTIONS

AEC-Q102

Leonardo offers stress-tested products for automotive applications.

IATF 16949 Certified

Leonardo uses automotive-approved, process oriented, quality systems.



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



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