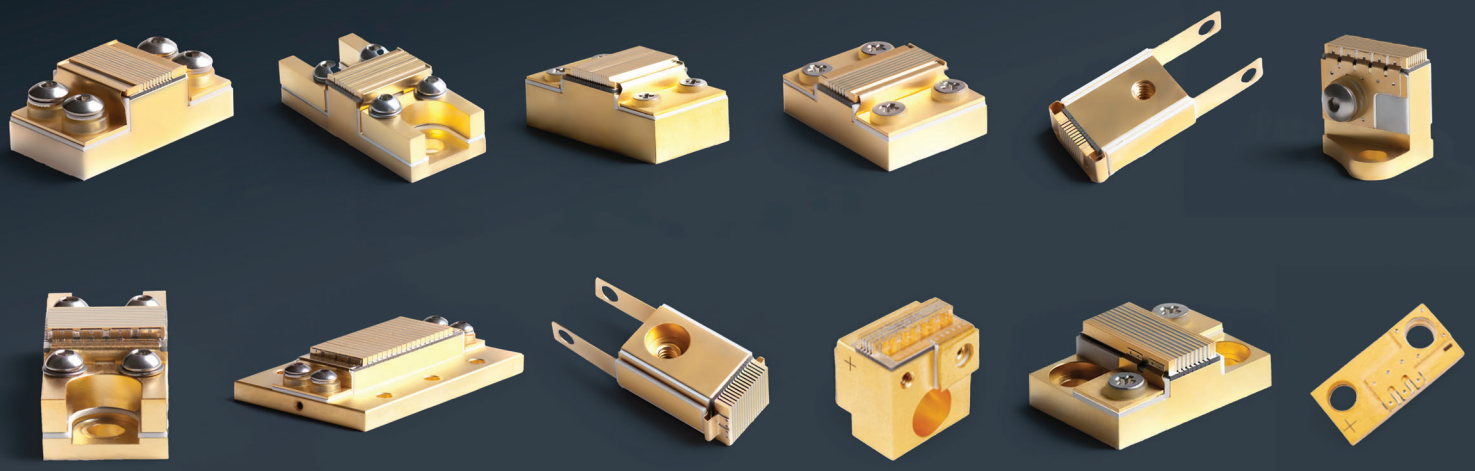
LEONARDO ELECTRONICS

QCW CONDUCTIVELY COOLED LASER DIODE ARRAYS



Leonardo Electronics US is the global leader in conductively cooled laser diode arrays, offering an unparalleled selection of package types, bar geometries, and wavelengths, all precisely designed to meet your unique application requirements. Our advanced laser diode solutions deliver industry-leading performance, with up to 1.5 kilowatts peak output power per bar, multiple wavelength options from 760 nm to 1700 nm, and customizable bar spacing from 150 µm to over 2 millimeters.

KEY FEATURES

- 760 nm to 1700 nm
- Up to 1.5 kW peak power per bar
- Flexible package platform
- 100% hard solder, CTE-matched assemblies
- Advanced beam conditioning
- Spectrally broadened and multi-wavelength options available
- Fast and slow axis collimation
- Wavelength stabilized options
- Fluxless, epoxy-free assembly process
- MIL-aero qualified

KEY BENEFITS

- High brightness
- Superior electrical-to-optical efficiency
- MIL-aero qualified
- Space-qualified (under vacuum, irradiations, low-outgassing)
- Scalable power
- Long operating lifetime

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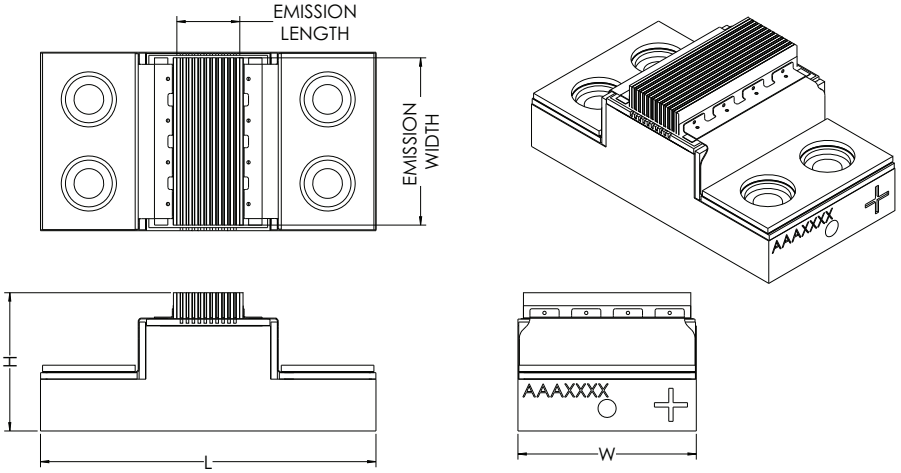
TYPICAL QCW CONDUCTIVELY COOLED LASER DIODE ARRAY SPECIFICATIONS

Typical Parameters	Units	S1	S1	S2	S4	S6	S7	S7	S9	S16	S25	R5	S32	S32	S37	S38
Optical																
Packaged Laser Diode Bars	#	10	10	8	8	9	13	11	9	9	4	1	9	9	6	18
Output Power	W	1050	1300	1850	1900	750	2200	1450	750	950	750	102	1400	1725	1650	8700
Center Wavelength	nm	808	808	808	808	808	808	808	808	808	808	940	808	808	808	860
Spectral Width (FWxxxx)	nm	3.25	4	8	11	3.5	14	17	2.5	8	19	4.5	9	2.5	13	4.5
Power Conversion Efficiency	%	60	57	57	61	52	53	53	60	51	54	62	49	58	58	56
Vertical Beam Divergence (FWHM)	° (deg)	36	36	36	36	36	36	36	36	36	36	36	36	36	36	32
Horizontal Beam Divergence (FWHM)	° (deg)	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Electrical																
Threshold Current	A	13	10	24	21	7	13.5	11	10	9	22	8	35	23	20	57
Operating Current	A	93	120	220	200	85	165	130	80	110	185	100	175	180	250	500
Operating Voltage	V	18.5	19	15	15.5	17	25	21	16	16.5	7.5	1.7	16.5	16.5	11.5	31
Pulse Width	µs	230	150	250	150	300	200	230	250	200	250	3000	170	100	200	500
Duty Cycle	%	0.46	0.3	0.75	0.3	0.15	0.4	0.46	0.63	0.2	0.13	0.3	0.34	0.2	0.4	0.05
Thermal																
Operating Temperature (non-condensing)	°C	45	25	40	25	25	25	25	56	25	25	25	80	65	25	25
Storage Temperature	°C	-60 to +85	-60 to +85	-60 to +85	-60 to +85	-60 to +85	-60 to +85	-60 to +85	-60 to +85	-60 to +85	-60 to +85	-60 to +85	-60 to +85	-60 to +85	-60 to +85	-60 to +85
Wavelength Coefficient	nm/°C	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
Mechanical																
Emission Area (l x w)	mm^2	10 x 3.6	10 x 3.2	10 x 2.8	10 x 2.8	3 x 2.8	5 x 4.2	10 x 8	10 x 2.8	3 x 2.8	10 x 1.2	5 x 0.1	10 x 2.8	10 x 2.8	10 x 2	10 x 6
Envelope Dimension (length)	mm	20	20	25.1	15.2	11.5	15.2	15.2	10.6	5.7	11.5	7.3	15.2	15.2	5.1	9.5
Envelope Dimension (width)	mm	10.7	10.7	10.7	10.7	8.4	10.7	10.7	14.5	10.9	10.6	16.0	10.7	10.7	10.6	10.6
Envelope Dimension (height)	mm	8.3	8.3	7.8	5.4	3.5	5.9	5.4	11.6	11.9	11.5	3.5	6.4	6.4	11.2	14.8

MECHANICAL SPECIFICATIONS



Leonardo Electronics US Inc.
7775 N. Casa Grande Highway
Tucson, AZ – 85743 – USA
520 744 5700
sales@leonardo.us

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leonardo.us

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