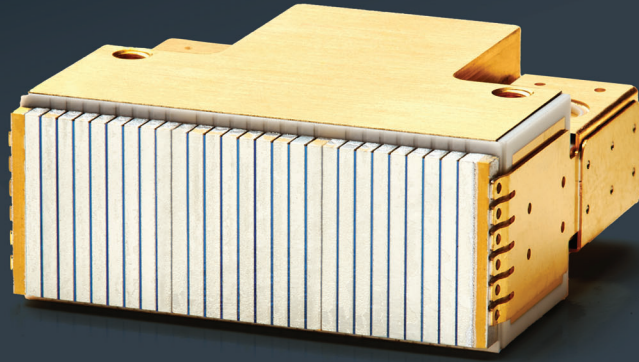


# FLUID COOLED LASER DIODE ARRAYS

## T6 STANDARD PRODUCTS - QCW



Leonardo's fluid-cooled T6 laser diode array offers exceptional reliability, high performance, ruggedness, and brightness in a compact package. With its patented monolithic design, this cutting-edge solution features efficient cooling with filtered water or alternative fluids and a scalable design for flexible integration. The T6 is an ideal solution for a wide range of industrial, medical, and scientific applications.

### KEY FEATURES

- Multiple wavelengths available from 760 nm to 1700 nm
- Monolithic, fully soldered construction
- Cooling path isolated from the electrical path
- Designed for close-packed 2D arrangement
- Lowest bar-bar pitch available on the market
- Stackable micro-optics plates for beam conditioning and wavelength stabilization

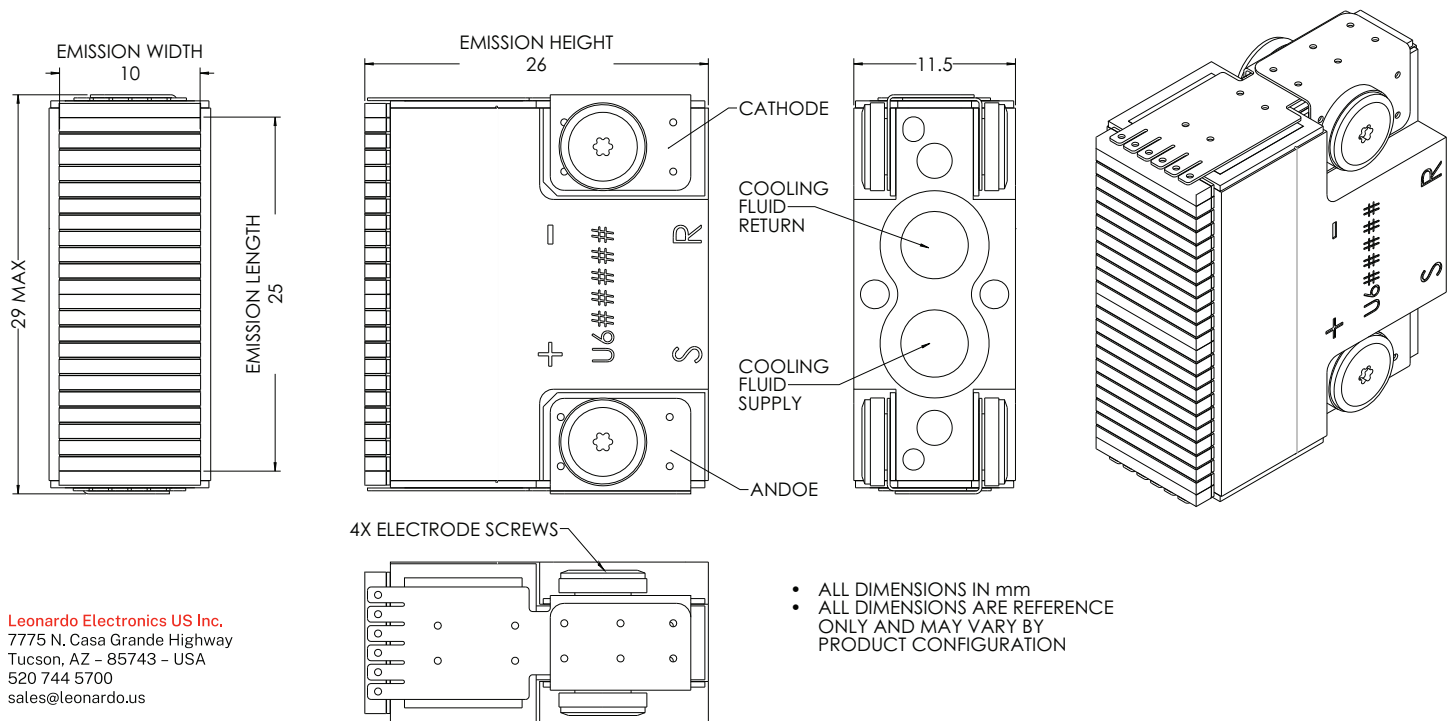
### KEY BENEFITS

- Pump source tailored for a large range of gain media
- Compatible with harsh operating and storage requirements
- Compatible with multiple cooling fluids and schemes
- High brightness scaling to MW-class modules

## TYPICAL FLUID COOLED LASER DIODE ARRAYS (T6 STANDARD PRODUCTS – QCW) SPECIFICATIONS

Typical Parameters	Units	QCW-808-17.5k	QCW-890-25k	QCW-940-25k	QCW-970-25k	QCW-KW-890-50k
<b>Optical</b>						
Output Power	kW	17.5	25	25	25	50
Number of Bars	-	50	50	50	50	50
Typical Center Wavelength	nm	808	890	940	970	890
Spectral Width (FWHM)	nm	4.5	5	5	5	5.5
Vertical Beam Divergence (FWHM)	°	32	32	32	32	32
Horizontal Beam Divergence (FWHM)	°	12	12	12	12	12
<b>Electrical</b>						
Conversion Efficiency	%	48	51	55	55	55
Threshold Current	A	52	42	45	45	62
Operating Current	A	400	520	550	550	1070
Operating Voltage	V	90	90	78	78	85
Maximum Pulse Width	µs	1000	1000	1000	1000	1000
Maximum Duty Cycle	%	1	1	1	1	1
<b>Thermal</b>						
Wavelength Temperature Coefficient	nm/°C	0.3	0.3	0.3	0.3	0.3
<b>Cooling Fluid</b>						
Operating Temperature (non-condensing)	°C	20	20	20	20	20
Filtered Particle Size	µm	10	10	10	10	10
Flow Rate	lpm	4	4	4	4	4
Pressure	psi	90	90	90	90	90

## MECHANICAL SPECIFICATIONS



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