

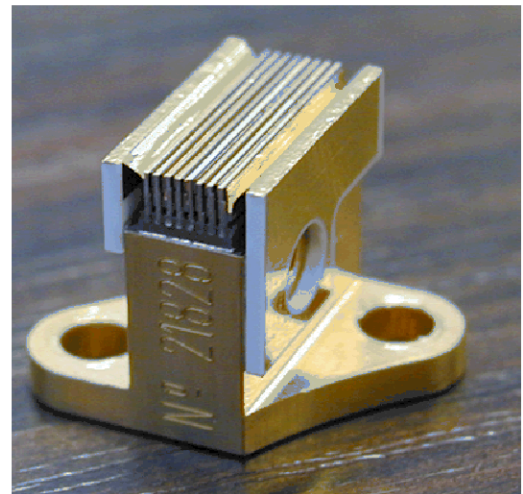
HIGH TEMPERATURE 120W to 600W QCW STACKED ARRAYS

DESCRIPTION

TH-Q11xx-K (2 to 10 bars) is a conductively cooled laser diode stack designed to operate at very high temperature. The laser diode bar arrays benefits from a fully mastered MOCVD quantum well technology. An appropriate design of epitaxial layers has been developed for improved efficiency and reliable operation at very high junction temperature.

Packaging and heat exchanger have been optimized to reduce the overall thermal resistance. TH-Q11xx-K stack is ideal for different applications under severe environmental conditions: pumping rods or slabs solid state lasers, illuminators...

Assembly in a compact and rugged package allows easy connection.



MAIN FEATURES

- QCW operation (D.C. up to 2%)
- 60°C case temperature
- Low thermal resistance assembly
- Highly reproducible MOCVD process
- Mechanically robust, shock and vibration resistant

SPECIFICATIONS

Case temperature: +60°C

Quasi-continuous mode : pulse width = 200µs
repetition rate = up to 100Hz

PARAMETERS	TH-Q11xx-K	UNITS	
Number of diode bars	xx = 2 to 10		
QCW output power	120 to 600	Watt	
Energy per pulse	24 to 120	mJ	
Emitting area	10 x 3.6 (10 bars)	mm x mm	
Threshold current	typical max	17 22	Amp.
Operating current	typical	67 76	Amp.
Operating voltage	< 2 / bar	Volt	
Total efficiency	typical min	46 42	%
Beam divergence (FWHM)	10 x 40	degree	

Note :

- Variation of wavelength is approximately 0.26 to 0.3 nm/°C
- Standard wavelength is 808nm
- Spectral width is ≤ 4nm FWHM
- Tolerance on wavelength is +/- 4nm
- Other wavelength selections are available
- Specifications are for nominal lifetime 5. 10⁸ pulses (for 200µs pulse width)

ABSOLUTE MAXIMUM RATINGS

PARAMETERS	TH-Q11xx-K	UNITS
QCW output power	65 W per bar	Watt
Pulse width	250	µs
Maximum duty cycle	3	%
Reverse voltage	3	Volt
Storage temperature	-40 to +85	°C

Note: Operation at temperature below dew point requests to use dry N2 environment

For further information please contact:

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