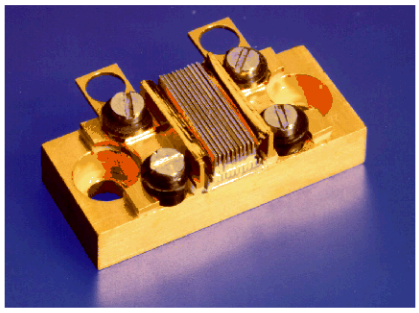
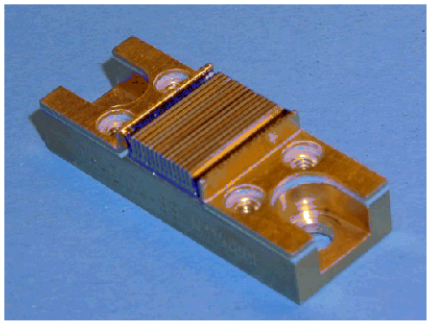
TH-Q11xx-B / TH-Q11yy-BS

HIGH TEMPERATURE 120W to 1 200W QCW STACKED ARRAYS

DESCRIPTION

TH-Q11xx-B (up to 12 bars) and TH-Q11yy-BS (up to 20 bars) are conductively cooled laser diode stacked arrays designed to operate at very high temperature.
The laser diode bar arrays benefit from a fully mastered MOCVD quantum well technology. Appropriate design of epitaxial layers has been developed for improved efficiency and reliable operation at very high junction temperature operation.
Packaging and heat exchanger have been opimized to reduce the overall thermal resistance. TH-Q11xx-B and TH-Q11yy-BS stacks are 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-B	TH-Q11yy-BS	UNITS
Number of diode bars		xx = 2 to 12	yy = 10 to 20	
QCW output power		120 to 720	600 to 1200	Watt
Energy per pulse		24 to 144	120 to 240	mJ
Emitting area		10 x 4.4 (12 bars)	10 x 7.6 (20 bars)	mm x mm
Threshold current	typical max.	17 22		Amp.
Operating current	typical max.	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 ≤ 4 nm FWHM
- Tolerance on wavelength is +/- 4nm
- Other wavelength selections are available
- Specifications are for nominal lifetime 510^8 pulses (for 200µs pulse width)

ABSOLUTE MAXIMUM RATINGS

PARAMETERS	TH-Q11xx-B / TH-Q11yy-BS	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

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