

HIGH TEMPERATURE 1360W QCW STACKED ARRAY

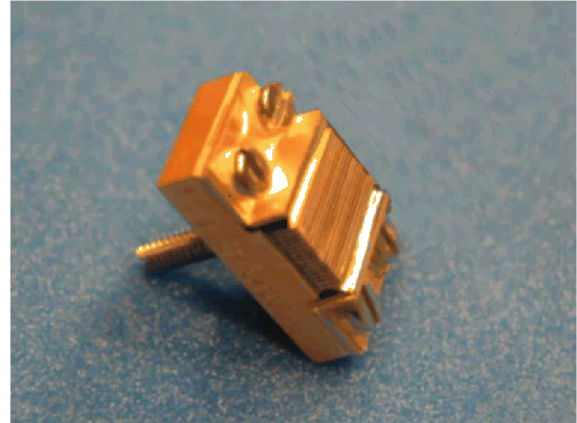
DESCRIPTION

TH-Q11xx-G is a conductively cooled laser diode stack designed to operate at very high temperature and high QCW optical power.

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 operation.

Packaging and heat exchanger have been optimized to reduce the overall thermal resistance. TH-Q11xx-G 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

- up to 1 360W peak optical power
- 60°C case temperature
- 340 mJ energy per pulse
- Low thermal resistance assembly
- 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-G (xx = 5 to 16)		UNITS
	TH-Q1110-G	TH-Q1116-G	
QCW output power	850	1360	Watt
Energy per pulse	212	340	mJ
Emitting area	10 x 3.6	10 x 6	mm x mm
Threshold current,	typical	17	Amp.
	max.	22	
Operating current,	typical	94	Amp.
	max	104	
Operating voltage	≤ 20	≤ 32	Volt
Total efficiency,	typical	48	%
	min.	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 (FWHM) is ≤ 4 nm FWHM
- Tolerance on wavelength is +/- 3nm
- Specifications are for typical lifetime 10⁸ pulses

ABSOLUTE MAXIMUM RATINGS

PARAMETERS	TH-Q1110-G	TH-Q1116-G	UNITS
QCW output power	900	1440	Watt
Pulse width	300		µs
Maximum duty cycle	2		%
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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