TH-Q1206-A / TH-Q1306-A / TH-Q1406-A

360W / 480W / 600W QUASI-CW STACKED ARRAYS

DESCRIPTION

TH-Q1X06-A are high optical power laser diode sources. These products are based upon 6 highly efficient 1cm linear bar arrays which are piled up to form a stack operating in Quasi-CW mode. 'X' value in TH-Q1X06-A stands for the type of diode bars which are assembled. For X = 2, 3, 4 respectively, peak optical power are 360W, 480W, 600W with power density from 1.8 to 3kW/cm².
The quality of the process of these GaAlAs laser diodes leads to longer lifetime and improved reliability. So the TH-Q1X06-A stacked arrays are ideal for different applications : pumping solid state lasers, illuminators,...
Assembly in a compact and rugged package allows easy connection to a heat exchanger to get good temperature control.

MAIN FEATURES

- 360W / 480W / 600W peak optical power
- Standard QCW operation (200µs/100Hz)
- 72mJ / 96mJ / 120 mJ energy per pulse
- 795 to 860nm wavelength range
- High conversion efficiency
- Highly reproducible MOCVD process
- GaAlAs quantum well design

SPECIFICATIONS

Case temperature : 25° C

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

PARAMETERS	TH-Q1206-A	TH-Q1306-A	TH-Q1406-A	UNITS
QCW output power	360	480	600	Watt
Energy per pulse	72	96	120	mJ
Emitting area	10 x 2	10 x 2	10 x 2	mm x mm
Threshold current	17	20	22	Amp.
Operating current	76	100	120	Amp.
Operating voltage	11.5	12	12.5	Volt
Total efficiency	40 to 46	40 to 46	40 to 46	%
Beam divergence (FWHM)	10 x 40	10 x 40	10 x 40	degree

Note :
- Variation of wavelength is approximately 0.26 to 0.3 nm/°C
- Standard wavelength is 808nm
- Spectral width is $\leq$ 3nm FWHM ($\leq$ 4nm for TH-Q1406-A model)

- Tolerance on wavelength is +/- 4nm (+/- 3nm on request)
- Other wavelength selections are available in the range of 795nm to 860nm
- Specifications are for nominal lifetime 10^9 pulses (for 200µs pulse width)

ABSOLUTE MAXIMUM RATINGS

PARAMETERS	TH-Q1206-A	TH-Q1306-A	TH-Q1406-A	UNITS
QCW output power	380	500	630	Watt
Reverse voltage	3	3	3	Volt
Operating temperature	+5 to +50	+5 to +50	+5 to +50	°C
Storage temperature	-40 to +85	-40 to +85	-40 to +85	°C

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

PACKAGE SPECIFICATION

- dimensions are in mm
- standard tolerances are ± 0.2 mm

For further information please contact:

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