

Laser Modules TO-830-1000TEC 831nm 1000mW

Description of the Product

Our TO-830-1000TEC 831nm Broad Area (multi-lateral mode) Laser Diode is based on quantum well epitaxial layer growth and a highly reliable waveguide structure.

This diode has a narrow range operating temperature. This should be respected, as the nonlinear effect of the laser crystal is very sensitive to temperature. Two 10W TEC will provide up to 20 Watts of heating or cooling power allowing the laser output power and wavelength to be stabilized with very big accuracy. We ensure a thermal stability lower than 0.01°C.

The laser driver and the TEC elements ensure excellent laser emission stability. The laser is a single mode beam (DPSS diode) with much smaller divergence angle than standard semiconductor laser diode.

The product is compact and easy to integrate in any other OEM application. Each part of our laser has EU Declaration of Conformity (RoHS2).

Specifications

	Target	Unit
Wavelength	830	nm
Spectral bandwidth	1	nm
Optical Output Power	1000	mW
Operating Current (Max)	1330	mA
Operating Voltage (Max)	2.1	V
Beam Divergence, Full Angle	15	mRad
Operating Temperature	20	°C

Laser Driver:

Control Range of Laser Current	0 to 1	A
Setting Accuracy / Repeatability	± 2 % typ. / ± 0.4 %	
Noise	< 10	µA
Drift	< 100	µA

TEC :

Control Range of TEC Current	-2 to +2	A
Control Range	- 20 to +80	°C
Setting Accuracy	± 2%	
Temperature Stability typ	< 0.01	°C
Max TEC Current	5	A
Max TEC Voltage	4	V
TEC Heating / Cooling Capacity	20	W

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Drawings

