830 nm Broad Area Laser Diode, 1 W

LD830-MA1W

Description

The LD830-MA1W 830 nm Broad Area (multi-lateral mode) Laser Diode is based on quantum well epitaxial layer growth and a highly reliable waveguide structure. This diode features high optical output power and slope efficiency. The LD830-MA1W (Ø9 mm), a TO-can package discrete laser diode with integrated power monitor photodiode, is a compact light source suited to many applications. TO-can packaged lasers are fully compatible with Thorlabs' entire line of Laser Diode and TEC Controllers as well as our Thorlabs' Laser Diode Mounts and Collimation Solutions.

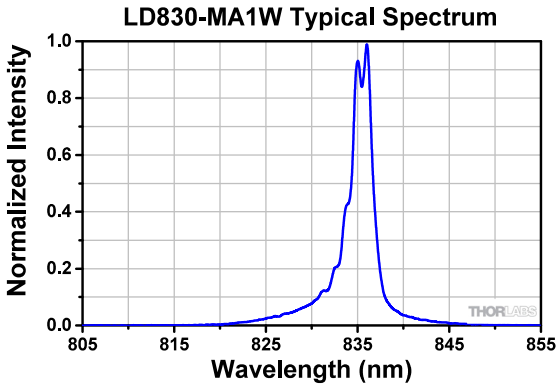
Specifications

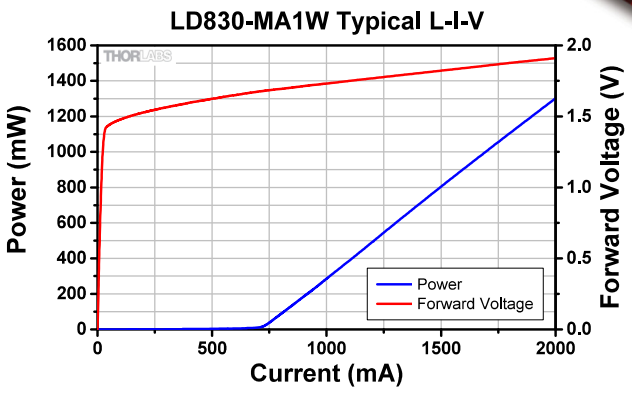
LD830-MA1W	
LD Reverse Voltage (Max)	2 V
PD Reverse Voltage (Max)	30 V
Absolute Max Current	2000 mA
Absolute Max Power	1100 mW
Operating Temperature	-20 to 50 °C
Storage Temperature	-20 to 80 °C
Pin Code	A

T_{CHIP} = 25 °C

LD830-MA1W				
	Symbol	**Min**	**Typical**	**Max**
Center Wavelength	λ_C	820 nm	830 nm	840 nm
Spectral Bandwidth (RMS)	$\Delta\lambda$	-	-	10 nm
Output Power CW @ I_{CW}	P_{CW}	700 mW	1000mW	-
Operating Current CW	I_{CW}	-	-	2000 mA
Threshold Current	I_{TH}	-	-	1000 mA
Forward Voltage	V_F	-	2.1 V	2.5 V
Slope Efficiency	$\Delta P/\Delta I$	-	0.9 W/A	-
Photodiode Current @ P_{OP}	-	-	0.8 mA	-
Transverse Beam Divergence Angle (FWHM)	θ_T	-	24°	30°
Lateral Beam Divergence Angle (FWHM)	θ_L	-	7°	15°

Typical Performance Plots





Drawings