



LASERMATE GROUP, INC.

The Friend of Lasers

Model No. LD820B200A16
820nm 200mW 60°C Laser Diode in TO-33 Ø3.3mm Package

FEATURES

- 820nm 200mW CW AlGaAs Laser Diode
- Package: TO-33 (dia. 3.3mm)
- Built-in photodiode for monitoring laser diode
- Attractive light source

APPLICATIONS

- Motion recognition sensor
- Industrial optical module

ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	CONDITION	RATING	UNIT
OPTICAL OUTPUT POWER	P_O	CW	210	mW
REVERSE VOLTAGE (LD)	V_{RL}	-	2	V
REVERSE VOLTAGE (PD)	V_{RD}	-	30	V
OPERATING TEMPERATURE	T_{opr}	-	-10 to +60	°C
STORAGE TEMPERATURE	T_{stg}	-	-40 to +85	°C

ELECTRICAL AND OPTICAL CHARACTERISTICS ($T_c = 25^\circ\text{C}$)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS
LASING WAVELENGTH	λ_p	819	824	829	nm	$P_O = 200\text{mW}$
THRESHOLD CURRENT	I_{th}	-	75	90	mA	
OPERATING CURRENT	I_{op}	-	210	250	mA	$P_O = 200\text{mW}$
DIFFERENTIAL EFFICIENCY	η	0.8	1.2	1.6	mW/mA	$P_O = 200\text{mW}$
OPERATING VOLTAGE	V_{op}	1.8	2.3	2.6	V	$P_O = 200\text{mW}$
MONITOR CURRENT	I_m	0.01	0.3	1.2	mA	$P_O = 200\text{mW}$
PARALLEL DIVERGENCE ANGLE	$\Theta_{//}$	5	8	11	deg	$P_O = 200\text{mW}$
PERPENDICULAR DIVERGENCE ANGLE	$\Theta_{\perp}$	13	16	19	deg	$P_O = 200\text{mW}$
PARALLEL FFP DEVIATION ANGLE	$\Delta \Theta_{//}$	-3	0	+3	deg	$P_O = 200\text{mW}$
PERPENDICULAR FFP DEVIATION ANGLE	$\Delta \Theta_{\perp}$	-3	0	+3	deg	$P_O = 200\text{mW}$
EMISSION POINT ACCURACY	$\Delta x \Delta y \Delta z$	-60	0	+60	um	

Note: The above specifications are subject to change without notice.



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