



## 824nm 200mW 60°C Laser Diode in TO-18 $\phi$ 5.6mm Package

Part No. LD820A200C16

### FEATURES

- 824nm 200mW CW AlGaAs Laser Diode
- Package: TO-18 (dia. 5.6mm)
- Built-in photodiode for monitoring laser diode

### APPLICATIONS

- Industrial optical module
- Sensor

### 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	$\lambda_p$	819	824	829	nm	$P_O = 200\text{mW}$
Threshold current	$I_{th}$	-	50	80	mA	-
Operating current	$I_{op}$	-	210	240	mA	$P_O = 200\text{mW}$
Differential Efficiency	$\eta$	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	$\Delta \Theta_{//}$	-2.5	0	+2.5	deg	$P_O = 200\text{mW}$
Perpendicular FFP deviation angle	$\Delta \Theta_{\perp}$	-2.5	0	+2.5	deg	$P_O = 200\text{mW}$
Emission point accuracy	$\Delta x \Delta y \Delta z$	-80	0	+80	um	

