

Model No. LD820B200C16
824nm 200mW 60°C Laser Diode in TO-18 Ø5.6mm Package

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	λ_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	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	$\Delta \Theta_{//}$	-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	

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



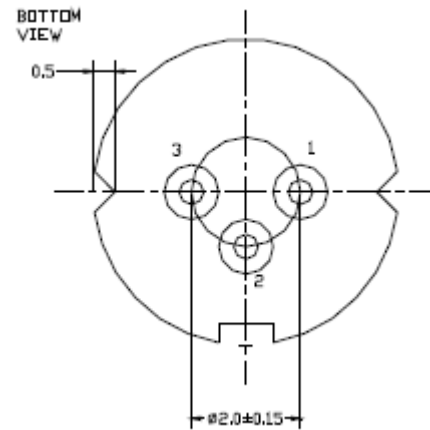
Technical drawing of a glass component, showing top and side views with dimensions.

TOP VIEW:

- Overall width: 1.0 ± 0.1
- Inner width: 0.4 ± 0.1
- Angle: $90^\circ \pm 2^\circ$

Side View:

- Overall width: $\phi 5.6 \pm 0.1$
- Inner width: $\phi 4.2 \pm 0.1$
- Inner width: $\phi 3.55 \pm 0.05$
- Inner width: $\phi 1.6 \pm 0.1$
- Overall height: 6.5 ± 0.5
- Height from base to top of inner structure: 2.3 ± 0.1
- Height from base to top of outer structure: 1.4 ± 0.08
- Height from base to top of inner structure: 1.2 ± 0.1
- Height from base to top of inner structure: 0.5 MAX
- Inner diameter: $\phi 1.2 \text{ MAX}$
- Bottom diameter: $3 - \phi 0.45 \pm 0.05$
- Bottom width: 2.0 ± 0.15
- Material: Glass
- Label: Lb. chip
- Note: Submount



- Do not operate the device above maximum ratings. Doing so may cause unexpected and permanent damage to the device.
- Take precautions to avoid electrostatic discharge and/or momentary power spikes. A change in the characteristics of the laser or premature failure may result.
- Proper heat sinking of the device assures stability and lifetime. Always ensure that maximum operating temperatures are not exceeded.
- Observing visible or invisible laser beams with human eye directly, or indirectly, can cause permanent damage. Use a camera to observe the laser.
- No laser device should be used in any application or situation where life or property is at risk in the event of device failure.
- Specifications are subject to change without notice. Ensure that you have the latest specification by contacting us prior to purchase or use of the product.



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