

AlGaAs Infrared Laser Diode

ADL-78901SX

3.3mm Mini Package!

200mW High Power Reliable Operation

• Features

1. Smallest package
2. Low operating current
3. Small aspect ratio
4. High COD level

• Applications

1. Virtual keyboard
2. Super slim 40X CD-R/RW OPU

• Absolute maximum ratings

Parameter	Symbol	Condition	Rating	Unit
Light output power	P_o	CW	100	mW
	P_{op}	Pulsed*	220	
Reverse voltage(LD)	V_{RL}	-	2	V
Case temperature	T_c	-	-10~+70	°C
Storage temperature	T_s	-	-40~+85	°C

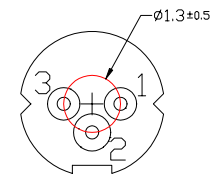
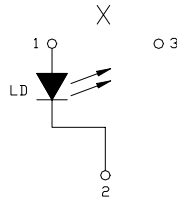
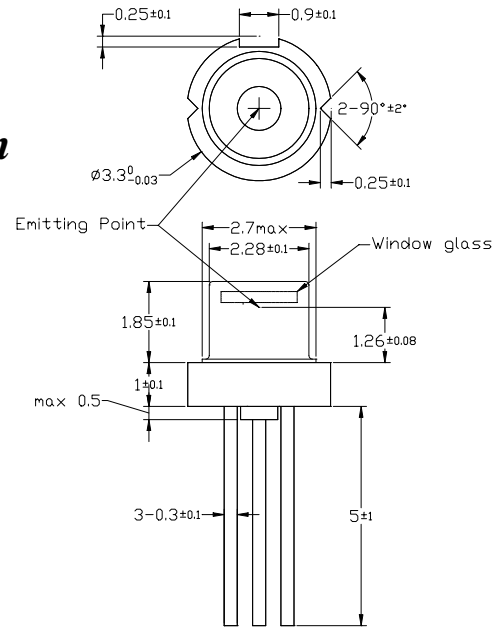
* Pulse width 0.5us, duty cycle 50%

• Electrical and optical characteristics ($T_c=25\text{ }^\circ\text{C}$)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions (CW)
Peak wavelength		775	785	795	nm	
Threshold current	I_{th}	25	35	55	mA	$P_o=90\text{mW}$
Operating current	I_{op}	90	115	160	mA	
Operating voltage	V_{op}	1.5	2	2.2	V	
Differential efficiency		0.8	1.1	1.3	mW/mA	$P_o=88\text{-}90\text{mW}$
Parallel divergence angle	//	8	9	10	deg	$P_o=90\text{mW}$
Perpendicular divergence angle		15	17	19	deg	
Parallel FFP deviation angle	//	-	-	± 2	deg	
Perpendicular FFP deviation angle		-	-	± 3	deg	
Emission point accuracy	x y z	-	-	± 80	um	

• Precautions

1. Do not operate the device above the maximum rating condition, even momentarily. It may cause unexpected permanent damage to the device.
2. Semiconductor laser device is very sensitive to electrostatic discharge. High voltage spike current may change the characteristics of the device, or malfunction at any time during its service period. Therefore, proper measures for preventing electrostatic discharge are strongly recommended.
3. Effective heat sink can help the device operates under a more relax condition; as a result, a more stable characteristics and better reliability can be achieved. So it is recommended that always apply proper heat sink before the device is operating.
4. Do not look into the laser beam directly by bare eyes. The laser beam may cause severe damage to human eyes.



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