

# AlGaAs Infrared Laser Diode

**DL-7891SX**

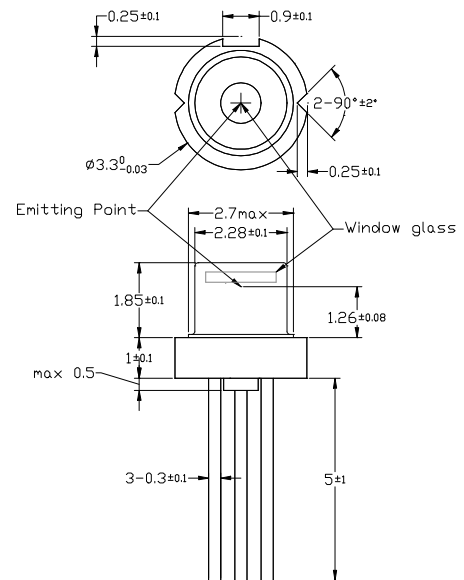
DATE : 2006/01/01 Ver 1.0

**★  $\varnothing 3.3\text{mm}$  Mini Package!****200mW High Power Reliable Operation****• Features**

1. Smallest package
2. Small aspect ratio
3. High COD level

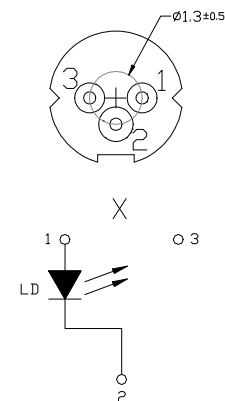
**• Applications**

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	$\lambda$	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	$\eta$	0.8	1.1	1.3	mW/mA	$P_o=88\text{-}90\text{mW}$
Parallel divergence angle	$\theta_{  }$	8	9	10	deg	$P_o=90\text{mW}$
Perpendicular divergence angle	$\theta_{\perp}$	15	17	19	deg	
Parallel FFP deviation angle	$\Delta\theta_{  }$	-2	0	+2	deg	
Perpendicular FFP deviation angle	$\Delta\theta_{\perp}$	-3	0	+3	deg	
Emission point accuracy	$\Delta x \Delta y \Delta z$	-80	0	+80	um	

**• Precautions**

- \* 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 the 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 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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