

# AlGaAs Infrared Laser Diode

## ADL-78901TL

DATE : 2007/04/11 ver 2.0

★780nm, 90mW Power Reliable Operation

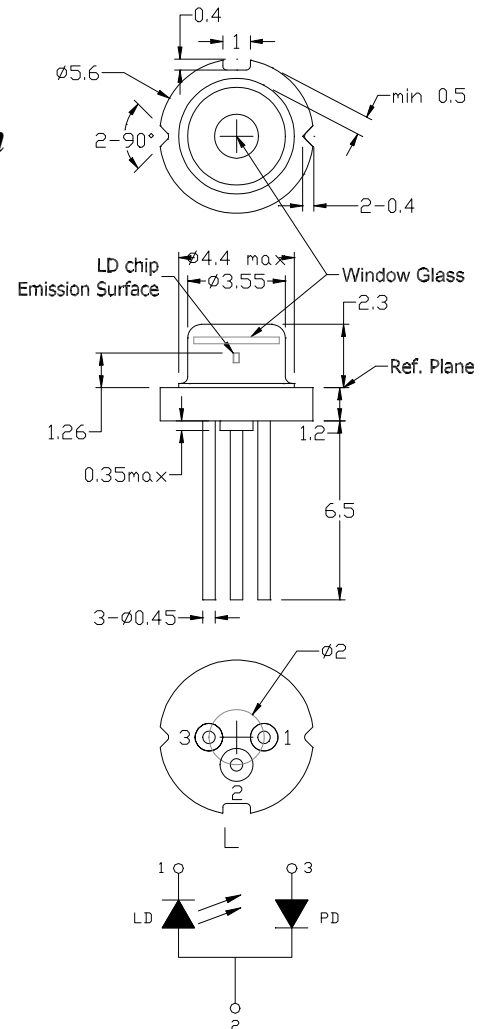
200mW High Power Pulse Reliable Operation

### Features

1. Small aspect ratio
2. High COD level

### •Applications

1. Virtual keyboard
2. CD R/RW



### •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 ( $T_c=25^\circ\text{C}$ )

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions (CW)
Peak wavelength	$\lambda$	775	785	795	nm	$P_o=90\text{mW}$
Threshold current	$I_{th}$	25	35	55	mA	$P_o:1-10\text{mW}$
Operating current	$I_{op}$	90	115	160	mA	$P_o=90\text{mW}$
Operating voltage	$V_{op}$	1.5	2	2.2	V	$P_o=90\text{mW}$
Monitor Current	$I_m$	0.1	0.5	0.7	mA	$P_o=90\text{mW}$ , $V_r=5\text{V}$
Differential efficiency	$\eta$	0.8	1.1	1.3	mW/mA	$P_o=88-90\text{mW}$
Parallel divergence angle	$\theta_{  }$	7.5	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	$\Delta\theta_{\perp}$	-2	0	+2	deg	
Emission point accuracy	$\Delta x \Delta y \Delta z$	-80	0	+80	um	

### • Precautions

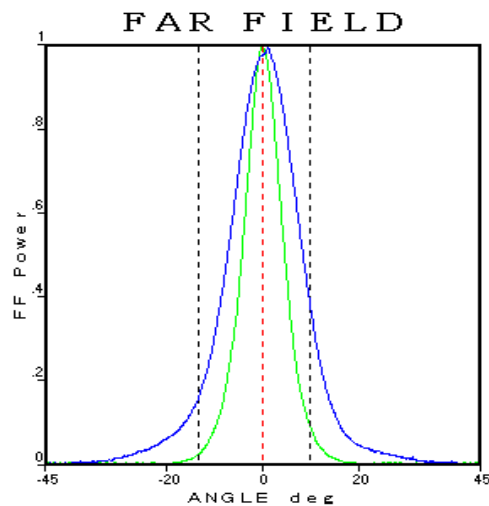
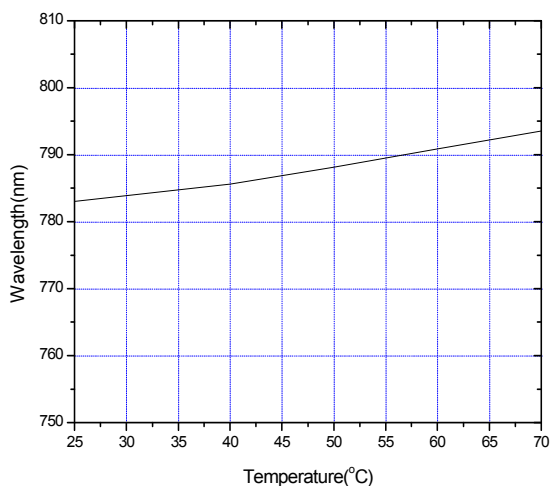
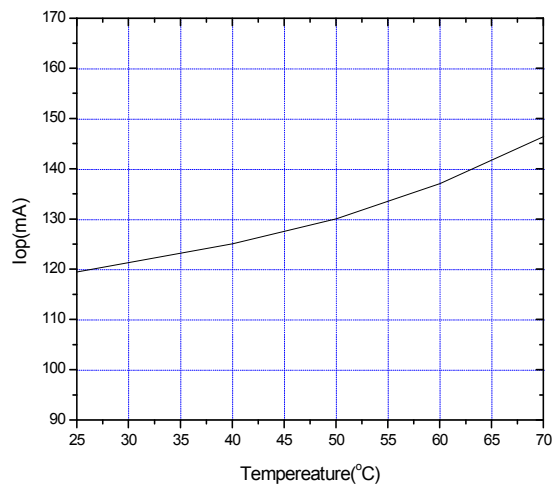
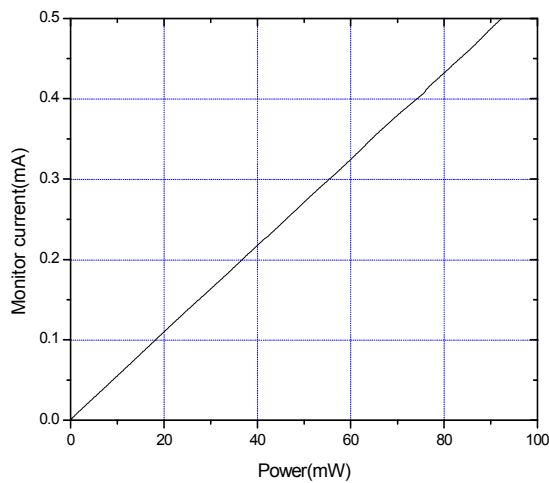
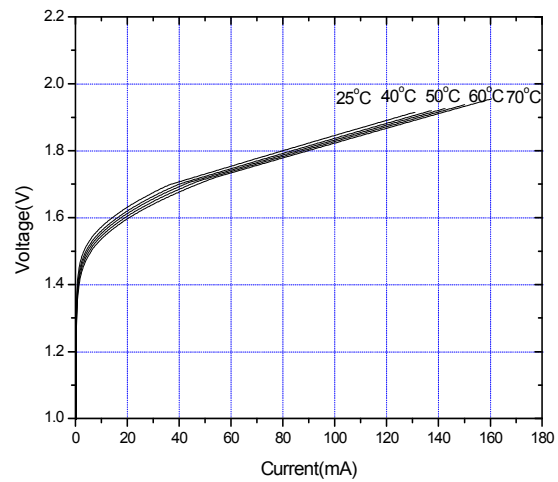
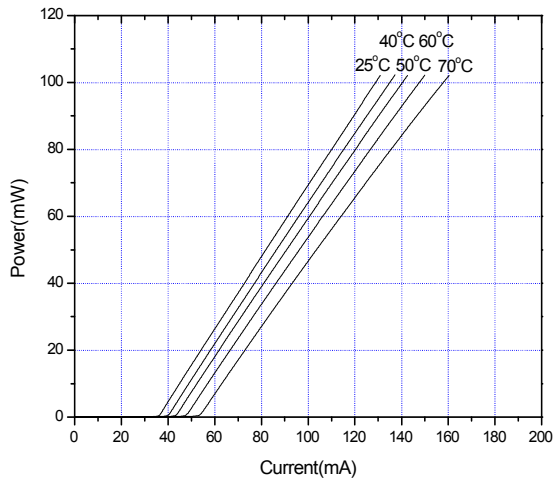
- \* Do not operate the device above maximum ratings. Doing so may cause unexpected and permanent damage to the device.
- \* Take precautions to avoid electrostatic discharge and/or momentary power spikes. A change in the characteristics of the laser or premature failure may result.
- \* Proper heat 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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[www.lasercomponents.com](http://www.lasercomponents.com)

01/08 / V2 / HW / divers-vis/ari785nm/adl-78901tl.pdf

**Arima**  
LASERS

Germany and other countries: LASER COMPONENTS GmbH, Phone: +49 8142 2864 0, Fax: +49 8142 2864 11, [info@lasercomponents.com](mailto:info@lasercomponents.com)

USA: LASER COMPONENTS IG, Inc., Phone: +1 603 821 7040, Fax: +1 603 821 7041, [info@laser-components.com](mailto:info@laser-components.com)

Great Britain: LASER COMPONENTS (UK) Ltd., Phone: +44 1245 491 499, Fax: +44 1245 491 801, [info@lasercomponents.co.uk](mailto:info@lasercomponents.co.uk)

France: LASER COMPONENTS S.A.S., Phone: +33 1 3959 5225, Fax: +33 1 3959 5350, [info@lasercomponents.fr](mailto:info@lasercomponents.fr)