



## 808nm High Power TO-3 Laser Diode

**Model: AL0808FXXXXT3-08PS-FW**



### Features:

- Output power: 1000/2000/3000/5000mW
- Efficient quantum well structure
- Center Wavelength: 808nm
- Package: TO-3

### Absolute Maximum Ratings( $T=25^{\circ}\text{C}$ )

Parameter	Symbol	Unit	Min	Max	Note
Reverse Voltage	$V_r$	V	-	2	-
Operating Temperature	$T_o$	$^{\circ}\text{C}$	10	30	
Storage Temperature	$T_{\text{stg}}$	$^{\circ}\text{C}$	10	85	
Solder Temperature	$S_{\text{temp}}$	$^{\circ}\text{C}$	-	260	10 seconds max

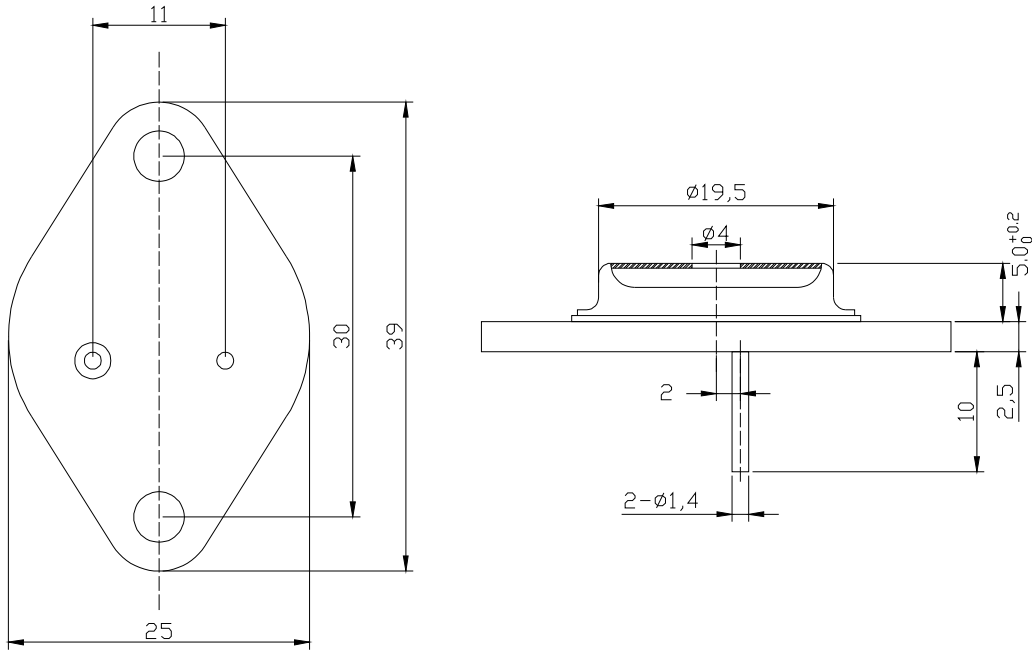
### Electro-Optical Characteristics( $T=25^{\circ}\text{C}$ )

Symbol	Parameter	Unit	AL0808F1000	AL0808F2000	AL0808F3000	AL0808F5000
$P_o$	Optical output power	mW	1000	2000	3000	5000
$\lambda_c$	Center wavelength	nm	808 $\pm$ 5	808 $\pm$ 5	808 $\pm$ 5	808 $\pm$ 5
$\Delta\lambda$	Spectral width	nm	$\leq$ 3.5	$\leq$ 5	$\leq$ 5	$\leq$ 5
$I_{\text{th}}$	Threshold current	mA	$\leq$ 300	$\leq$ 500	$\leq$ 600	$\leq$ 1000
$I_o$	Operating current	mA	$\leq$ 1300	$\leq$ 2500	$\leq$ 3700	$\leq$ 6000
$V_f$	Operating voltage	V	1.7~2.0	1.8~2.2	1.8~2.2	1.8~2.4
$\eta$	Slope Efficiency	W/A	$\geq$ 1	$\geq$ 1	$\geq$ 1	$\geq$ 1
$\theta_{//}\times\theta_{\perp}$	Beam divergence	o/o	12/40	12/40	12/40	12/40
$\theta_{//}\times\theta_{\perp}$	Beam divergence (fast axis collimated)	o/o	12/10	12/10	12/10	12/10
$d\lambda/dT$	Wavelength temperature coefficient	nm/ $^{\circ}\text{C}$	$\leq$ 0.3	$\leq$ 0.3	$\leq$ 0.3	$\leq$ 0.3

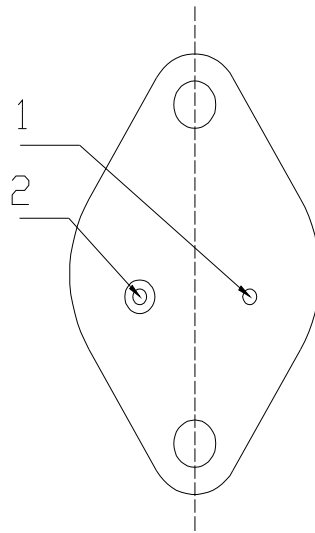


Emitting area	μm	80×1	100×1	100×1	200×1
Polarization Ratio		TE	TM	TE	TE

**Outline Drawings (in: mm)**



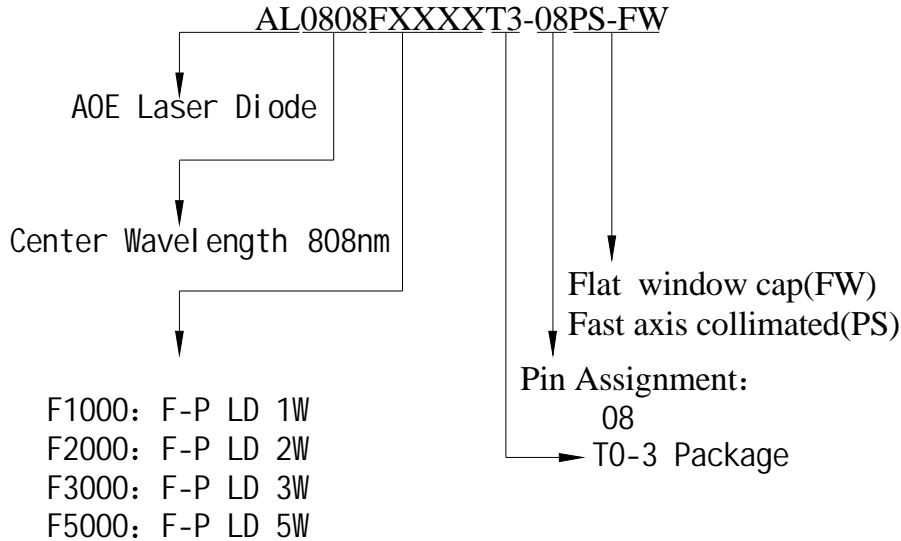
**Pin Assignment:**



Type \ Pin	1	2
08	LD Anode	LD Cathode



**Ordering information:**



**Precaution:**

- (1) The laser diodes should be handled in the same manner as ordinary semiconductor device to prevent the electro-static damages. For safety keeping and carrying, the modules should be packaged with ESD proof material. For assembling, the workbench, the soldering iron and the human body should be grounded.
- (2) Please pay special attention to the atmosphere condition because the dew on the module may cause some damages.
- (3) Under such a strong vibration environment as in automobile, the performance and reliability are not guaranteed.
- (4) A voltage stabilizer should be taken into consideration for the power supply, and shock voltage should be avoided during the process of switching on and off of the supply in order to prevent the device from damaging.
- (5) Pay attention to the dust polluting. The device may be damaged when operating in atmosphere because the dust may be absorbed onto the region of lighting under the action of electric field.

**Warning:** Direct exposure of one's eyes to the laser beam or long time exposure of one's skin to the beam must be avoided.