



808nm 500mW TO-5 Laser Diode

Model: AL0808F500T5-03FW



Features:

- Output power: 500mW
- Center wavelength: 808nm
- Package: TO-5 (∅9mm) with long wires

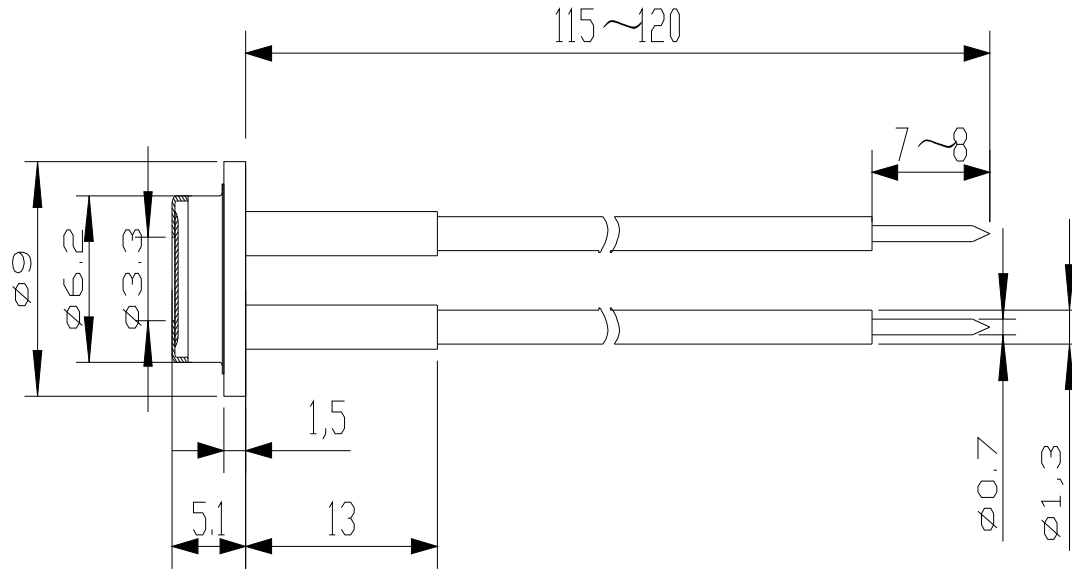
Absolute Maximum Ratings($T=25^{\circ}\text{C}$)

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

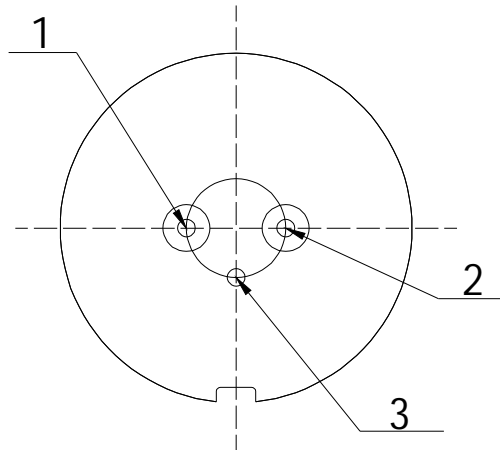
Electro-Optical Characteristics($T=25^{\circ}\text{C}$)

Parameter	Symbol	Unit	Min	Typ	Max	Test Condition
Optical output power	P_o	mW	500	-	-	$I_{\text{op}}=650\text{mA}$
Center wavelength	λ_c	nm	803	808	813	$P_o=500\text{mW}$
Spectral width	$\Delta\lambda$	nm	-	-	5	FWHM, $P_o=500\text{mW}$
Threshold current	I_{th}	mA	-	120	150	-
Operating current	I_o	mA	-	570	650	-
Operating voltage	V_f	V	-	1.8	2	$P_o=500\text{mW}$
Slope Efficiency	η	W/A	-	1.1	-	-
Beam divergence	$\theta_{\perp} \times \theta_{\parallel}$	$^{\circ}$	-	40×12	-	FWHM
Wavelength temperature coefficient	d_{λ}/d_T	nm/ $^{\circ}\text{C}$	-	0.3	-	-
Emitting area	-	μm	50×1			-
Polarization Ratio	-	-	TE			-

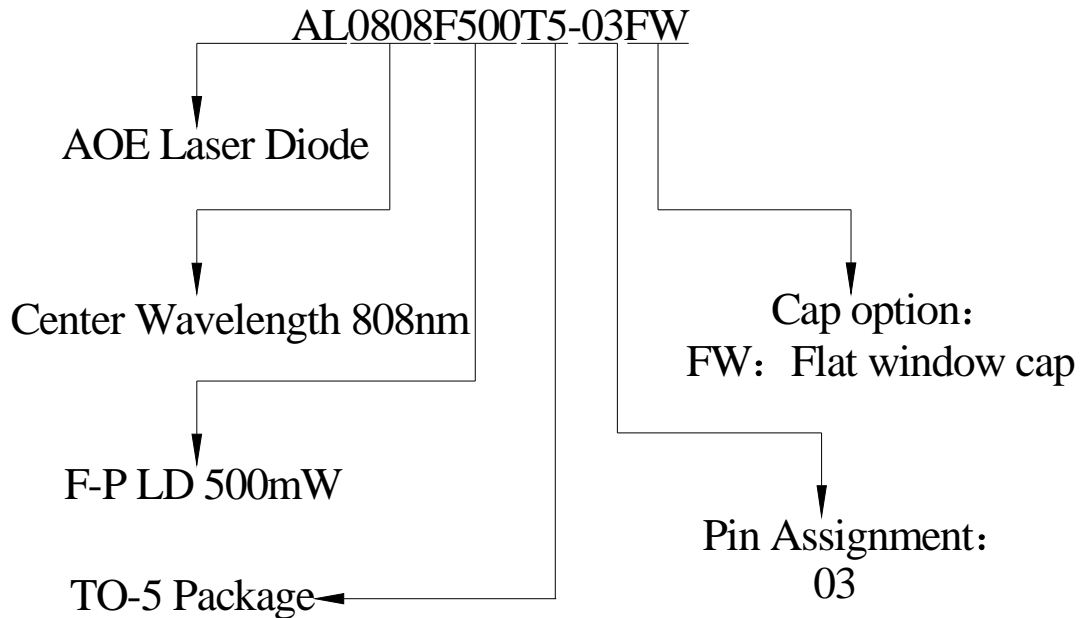
Outline Drawings(FW) (in: mm)



Pin Assignment(Bottom View):



Pin Assignment				
Type	Pin	1	2 (black)	3 (red)
03		-	LD Cathode	LD Anode

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 electrical 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.

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.