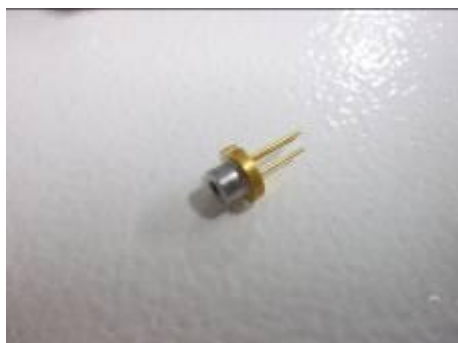


10mW 650nm TO18 Laser Diode

Model: AL0650F10T18-01FW



Features:

- Output Power: 10mw
- Lower Threshold Current
- Center Wavelength: $650 \pm 10\text{nm}$
- Standard TO18 Package ($\phi 5.6\text{mm}$)

Product Specifications:

Absolute Maximum Ratings:

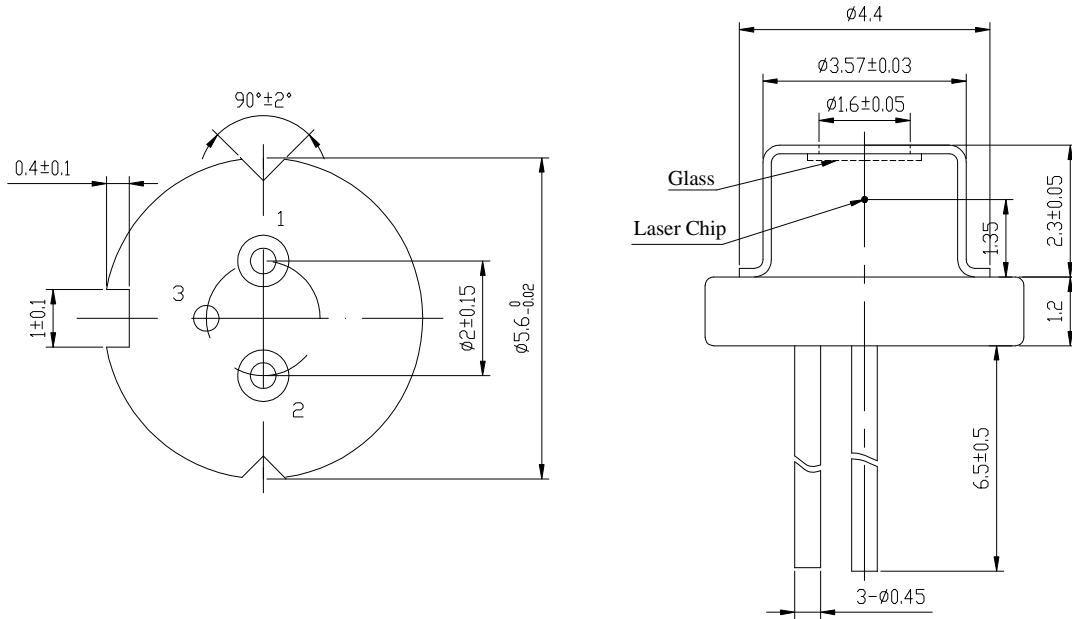
Parameter	Symbol	Ratings	Unit
Storage temperature	T_{stg}	-15~+85	$^{\circ}\text{C}$
Operating temperature	T_{opr}	-10~+40	$^{\circ}\text{C}$
Reverse voltage	Laser	2	V
	PD	30	
Lead Soldering Temp	S_{temp}	260	$^{\circ}\text{C}$
Lead Soldering Time	S_{time}	10	sec

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

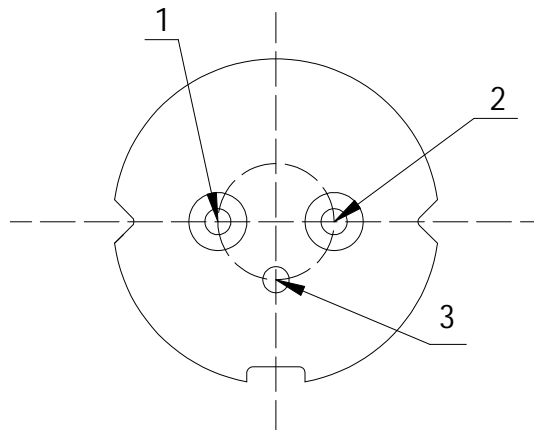
item	Symbol	Test Condition	Min	Typ	Max	Unit	
Optical Output Power	P_o	$I_{\text{OP}}=30\text{mA}$	-	10	12	mW	
Center Wavelength	λ_p	$P_o=10\text{mw}$	640	650	660	nm	
Threshold Current	I_{th}	CW	-	16	26	mA	
Operating Current	I_{op}	$P_o=10\text{mw}$	-	30	40	mA	
Monitoring Output Current	I_m	$P_o=10\text{mw}$	0.1	0.3	1	mA	
Operating Voltage	V_{op}	$P_o=10\text{mw}$	-	2.2	2.6	V	
Beam Divergence (FWHM)	Perpendicular	θ_{\perp}	$P_o=10\text{mw}$	28	33	38	$^{\circ}$
	Parallel	$\theta_{//}$	$P_o=10\text{mw}$	5	8	12	$^{\circ}$
Slope Efficiency	η	-	0.3	0.7	-	mW/mA	

θ_{\perp} and $\theta_{//}$ are defined as the angle within which the intensity is 50% of the peak value.

Outline Drawings (in mm):



PIN Assignment (Bottom View) :

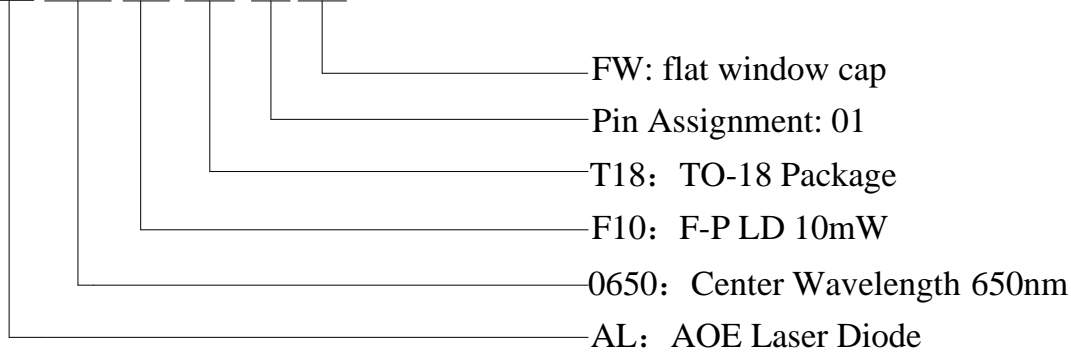


Pin Assignment				
Type \ Pin	1	2	3	
01	PD Anode	LD Cathode	LD Anode /PD Cathode /Case	



Ordering Information:

AL 0650 F10 T18 -01FW



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.