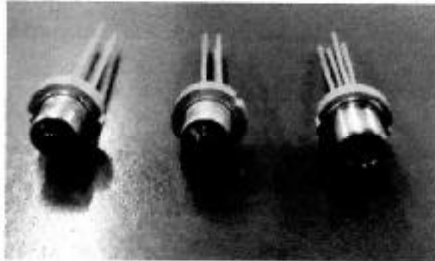


## 2.5Gbps 1310nm FP LD TO-CAN

Model: AL1310FXXTXX-XX



### Features:

- Wide temperature range operation from -40°C to+85°C
- High slope efficiency
- Speed up to 2.5Gbps
- TO-56 package
- Built-in InGaAs monitor or not

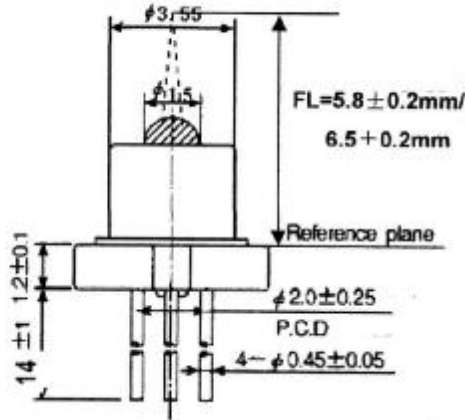
### Product Specifications:

Absolute Maximum Ratings(T=25°C)

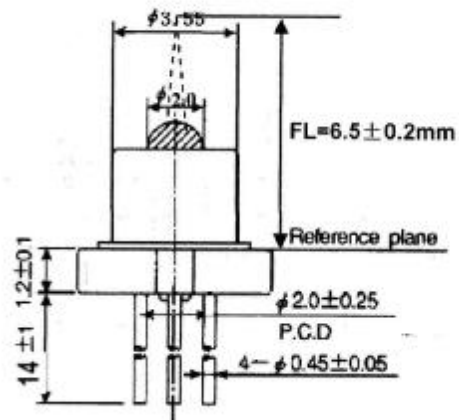
Parameter	Symbol	Unit	Min	Max	Note
Storage Temperature	$T_{stg}$	°C	-40	+100	
Operating Temperature	$T_{op}$	°C	-40	+85	
Forward current(LD)	$I_f$	mA		150	
Reverse voltage(LD)	$V_r$	V		2	
Maximum Power	$P_o$	mW		10	
Solder Reflow Temperature		°C		260	10 seconds max

Electro-Optical Characteristics(T=25°C, unless noted otherwise)

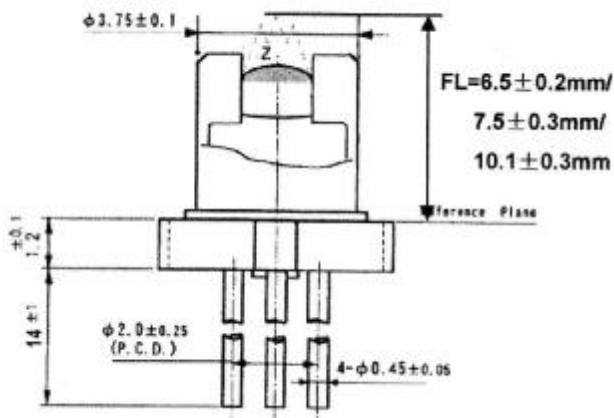
Parameter	Symbol	Unit	Min	Typ	Max	Test Condition
Threshold current	$I_{th}$	mA		8	12	CW, $T_c=25^\circ\text{C}$
				20	25	CW, $T_c=85^\circ\text{C}$
Optical output power	$P_o$	mW	6	8		CW, $I_{op}=I_{th}+20\text{mA}$
			8	10		CW, $I_{op}=I_{th}+20\text{mA}$ Only for BBL&AL
Slope efficiency	$S_e$	mW/mA	0.30	0.40		CW, $I_{op}=I_{th}+20\text{mA}$
			0.40	0.50		CW, $I_{op}=I_{th}+20\text{mA}$ Only for BBL&AL
Peak wavelength	$\lambda_c$	nm	1290	1310	1330	$I_{op}=25\text{mA}$
Spectral Width	$\Delta\lambda$	nm		2.0	3.0	RMS
Rise and Fall time	$T_r, T_f$	ps			300	CW, $I_{op}=I_{th}+20\text{mA}$ , 10~90%
Monitor current	$I_m$	$\mu\text{A}$	120		800	CW, $I_{op}=I_{th}+20\text{mA}$
Monitor Dark current	$I_d$	nA			100	$V_r=5\text{V}$
Beam Divergence Angle	$\theta_{//}$	degree		22		$P_o=5\text{mw}$ , FWHM
	$\theta_{\perp}$			35		

**Outline Drawings (in mm):**


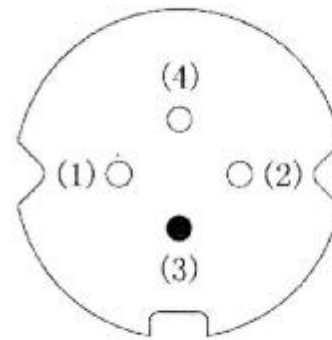
TYPE BL: 1.5mm ball lens cap



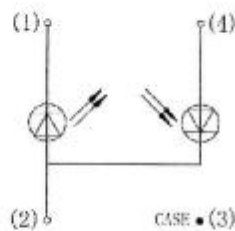
TYPE BBL: 2.0mm ball lens cap



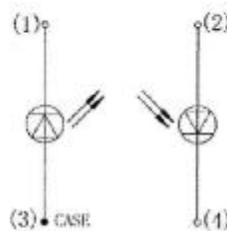
TYPE AL: aspherical lens cap



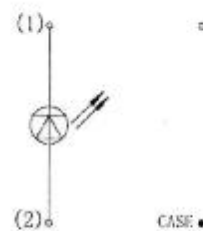
Bottom view



Type "01"



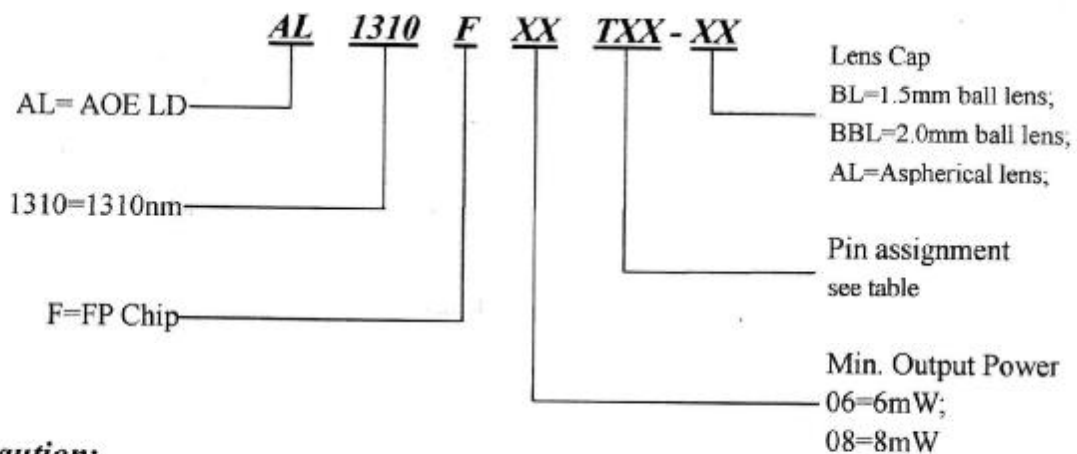
Type "02"



Type "03"

PIN-OUT and Focal Length

Number	Pin Assignment			Type	Focal length
	"01"	"02"	"03"		Length(mm)
PIN 1	LD-	LD-	LD-	BL	$5.8 \pm 0.2 / 6.5 \pm 0.2$
PIN 2	LD+(PD-)	PD+	LD+	BBL	$6.5 \pm 0.2$
PIN 3	Case	LD+	Case	AL	$6.5 \pm 0.2 / 7.5 \pm 0.3 / 10.1 \pm 0.3$
PIN 4	PD+	PD-	/		

**Ordering information:**

**Precaution:**

- (1) The modules 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. To assemble the modules on PCB, 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.