



AC2220-X-Y Series*

Uncooled 2.5 Gbps 1310 nm DFB Laser in TO Package



Description

The AC2220-X-Y series laser is an uncooled semiconductor InAlGaAs MQW-DFB laser working at 1310 nm wavelength. The device is delivered in a hermetic TO-56 package with integrated InGaAs photodiode for optical power monitoring. This high performance and high reliability laser is suitable for applications up to 2.5 Gbps in fiber optics links.

Features

- 1310 nm typical emission wavelength
- High power over wide temperature range
- High side-mode-suppression ratio (typical $\geq 40\text{dB}$)
- High Reliability
- Multi-quantum Well (MQW) active layer

Applications

- Telecommunication
- Data Communication
- Analog fiber optic links
- Storage area networks
- Access networks

Absolute Maximum Rating

Symbol	Parameter	Ratings	Unit
V_{RL}	Reverse Voltage (Laser diode)	2	V
I_{FL}	Forward Current (Laser diode)	100	mA
V_{RD}	Reverse Voltage (Photodiode)	20	V
I_{FD}	Forward current (Photodiode)	2	mA
T_C	Case temperature	-40 ~ +85**	°C
T_{stg}	Storage temperature	-40 ~ +100	°C

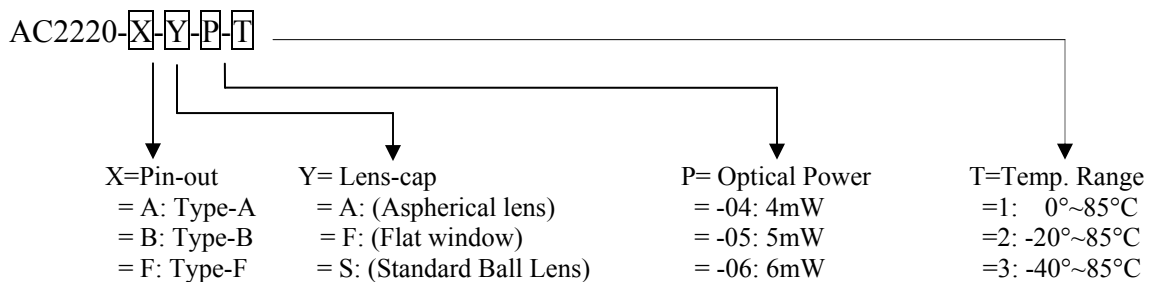
** Case temperature rating is same as option -T. (See ordering information on page 2.)

(*Previous model number AC3620-X-Y)


Electrical/Optical Characteristics ($T_c=25^\circ\text{C}$, unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{th}	Threshold current	CW		10	15	mA
P_o	Optical Power Option	-04	CW, $I_{FL}=I_{th}+20\text{mA}$	4		mW
		-05	CW, $I_{FL}=I_{th}+20\text{mA}$	5		
		-06	CW, $I_{FL}=I_{th}+20\text{mA}$	6		
V_{op}	Operating voltage	CW, $I_{FL}=I_{th}+20\text{mA}$		1.2	1.6	V
λ_c	Center Wavelength	CW, $I_{FL}=I_{th}+20\text{mA}$	1290	1310	1330	nm
SMSR	Side-mode suppression ratio	CW, $I_{FL}=I_{th}+20\text{mA}$	30	40		dB
$\theta_{//}$	Beam divergence angle (parallel)	CW, $I_{FL}=I_{th}+20\text{mA}$		25 (8)		Deg.
θ_{\perp}	Beam divergence angle (perpendicular)	CW, $I_{FL}=I_{th}+20\text{mA}$		38 (13)		Deg.
T_r, T_f	Rise and fall time	$I_{FL}=I_{th}+20\text{mA}$, 10~90%		100	150	ps
I_{mon}	Monitor current (Photodiode)	CW, $V_{RD}=1\text{V}$	0.1	0.5		mA
I_D	Dark current (Photodiode)	$V_{RD}=10\text{V}$			0.1	μA
C_t	Capacitance (Photodiode)	$V_{RD}=10\text{V}$, $f=1\text{MHz}$		10	20	pF
F	Focus length	Aspherical lens cap "A"	7.2	7.5	7.8	mm

Note: () applied to the lens-cap types (-A, and -S)

Ordering Information:


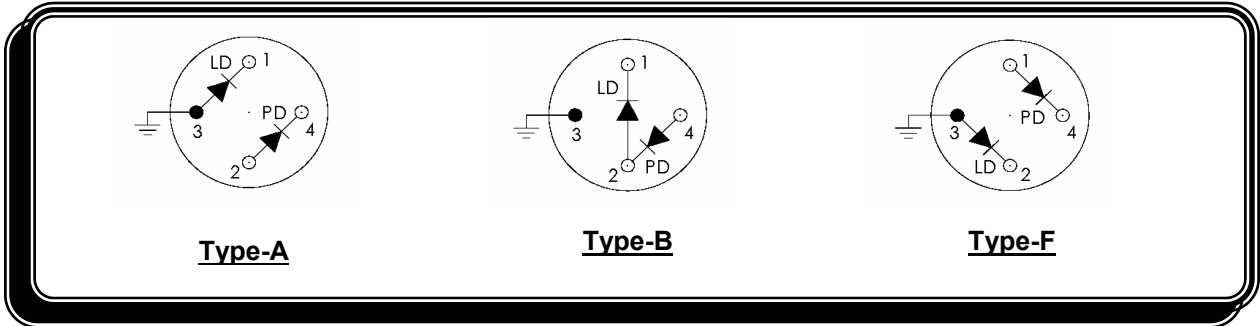
(See options next page)

Example: AC2220-B-A-04-1 is an Archcom 2.5 Gbps 1310 nm DFB laser, with Type-B pin-out, Aspherical lens cap, output power of 4 mW, with temp. range of $0^\circ\sim 85^\circ\text{C}$



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Pin-out Options (Bottom View)



Package dimension (in mm):

