



AC3204 Series

Uncooled 622 Mbps 1310 nm Fabry Perot Laser in TO Package



Description

The AC3204 series laser is an uncooled semiconductor InAlGaAs Fabry Perot laser working at 1310 nm wavelength. The device is delivered in a hermetic TO package with photodiode for optical power monitoring. This high performance, and high reliability laser is designed for 622 Mbps data rate for Fiber-to-the-home (FTTH) or local networks.

Features

- 1310 nm typical emission wavelength (near zero dispersion)
- Narrow optical spectrum (<1.8nm)
- High output power
- Multi-quantum Well (MQW) active layer

Applications

- Telecommunication
- Data Communication
- Storage area networks
- FTTH

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


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		15	16	mA
P_o	Output Power	CW, $I_{FL}=I_{th}+20\text{mA}$	4.0	5.0		mW
V_{op}	Operating voltage	CW, $I_{FL}=I_{th}+20\text{mA}$		1.15	1.5	V
η	Slope efficiency	CW, $I_{FL}=I_{th}+20\text{mA}$	0.25 (0.175)	0.35 (0.25)		mW/mA
λ_c	Center Wavelength	CW, $I_{FL}=I_{th}+20\text{mA}$	1296	1310	1325	nm
$\Delta\lambda$	Spectral width (RMS)	CW, $I_{FL}=I_{th}+20\text{mA}$		1.5	1.8	nm
$\theta_{//}$	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%		200	240	ps
I_{mon}	Monitor current (Photodiode)	CW, $V_{RD}=1\text{V}$	0.1	0.25		mA
I_D	Dark current (Photodiode)	$V_{RD}=10\text{V}$		0.01	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:

AC3204-X-Y

X=Pin-out
 = A: Type-A
 = B: Type-B
 = F: Type-F

Y= Package Lens-cap
 = A: Aspherical Lens (typical 7.5mm Focus Length)
 = F: Flat Window
 = S: Standard. Ball Lens

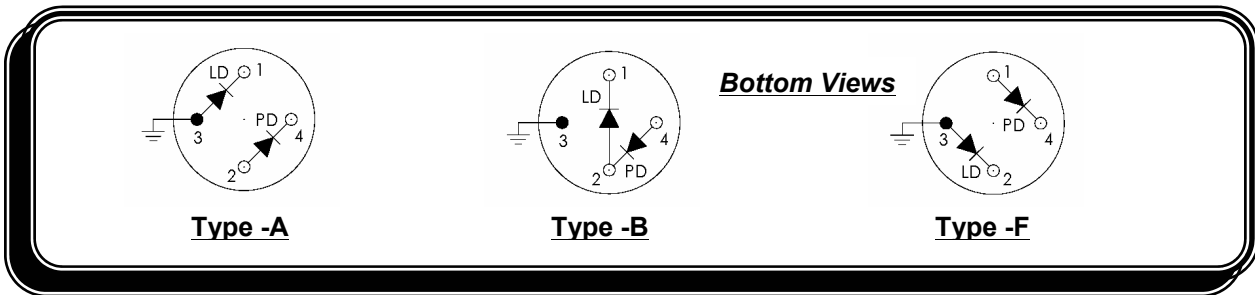
(See options next pages)

Example: AC3204-B-S is an Archcom 622 Mbps 1310 nm Fabry Perot laser, with Type-B pin-out, Standard ball lens cap.



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Pin-out Options



Outline Drawings (in mm)

