



AC4620 Series*

Uncooled 2.5 Gbps 1550 nm Fabry Perot Laser in TO Package



Description

The AC4620 series laser is an uncooled semiconductor InAlGaAs Fabry Perot laser working at 1550 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 suitable for applications up to 2.5 Gbps in short haul links or local networks, including OC-3, OC-12, OC-24 and OC-48 applications.

Features

- 1550 nm typical emission wavelength
- High power over wide temperature range.
- High reliability
- Multi-quantum Well (MQW) active layer

Applications

- Telecommunication
- Data Communication
- 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

(*Previous model number AC5220)


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		12	15	mA
P_o	Output Power	CW, $I_{FL}=I_{th}+20\text{mA}$	4	5		mW
V_{op}	Operating voltage	CW, $I_{FL}=I_{th}+20\text{mA}$		1.15	1.5	V
λ_c	Center Wavelength	CW, $I_{FL}=I_{th}+20\text{mA}$	1520	1550	1580	nm
$\Delta\lambda$	Spectral width (RMS)	CW, $I_{FL}=I_{th}+20\text{mA}$		2	4	nm
$\theta_{//}$	Beam divergence angle (parallel)	CW, $I_{FL}=I_{th}+20\text{mA}$		24 (8)		Deg.
θ_{\perp}	Beam divergence angle (perpendicular)	CW, $I_{FL}=I_{th}+20\text{mA}$		48 (16)		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)	$V_{RD}=10\text{V}$		0.01	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:

AC4620-**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

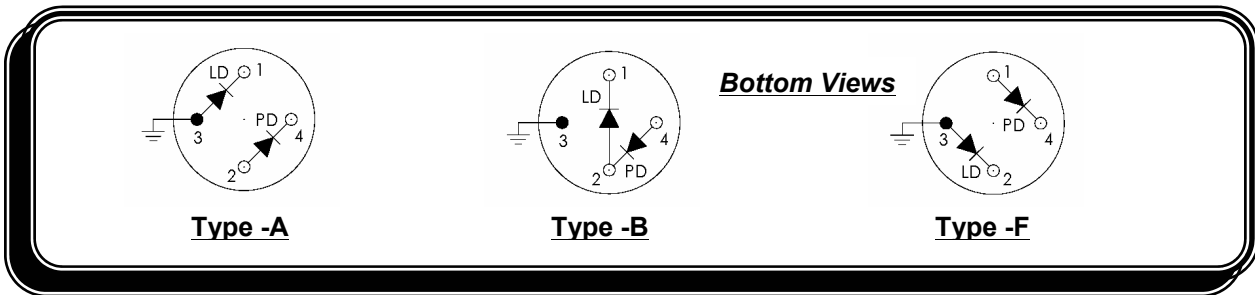
(See options next pages)

Example: AC4620-A-S is an Archcom 2.5 Gbps 1550 nm Fabry Perot laser, with Type-A pin-out, Standard ball lens cap.



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Pin-out Options



Outline Drawings (in mm)

