

AC5210 Series

Uncooled 1.25 Gbps 1550 nm Fabry Perot Laser in TO Package



Description

The AC5210 series lasers are uncooled semiconductor InAlGaAs Fabry Perot laser working at 1550 nm wavelength. The device is delivered in hermetic TO package with photodiode for optical power monitoring. This high performance,

and high reliability laser is suitable for applications up to 1.25 Gb/s in short haul links or local networks, including OC-3 and OC-12 applications.

Features

- 1550 nm typical emission wavelength
- High power over wide temperature range (5 mW over -40 to 70°C)
- High Reliability
- Multi-quantum Well (MQW) active layer

Applications

- Telecommunication
- Data Communication
- Storage area networks

Absolute Maximum Rating

Symbol	Parameter	Ratings	Unit
P_o	Light output power	10	mW
V_{RL}	Reverse Voltage (Laser diode)	2	V
V_{RD}	Reverse Voltage (Photodiode)	20	V
I_{FD}	Forward current (Photodiode)	2	mA
T_C	Case temperature	$-40 \sim +70$	$^{\circ}\text{C}$
T_{stg}	Storage temperature	$-40 \sim +125$	$^{\circ}\text{C}$

Electrical/Optical Characteristics (T_c=25°C)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I _{th}	Threshold current	CW		10	15	mA
I _{op}	Operating current	CW, P _o = 5mW		27	32	mA
V _{op}	Operating voltage	CW, P _o = 5mW		1.15	1.5	V
η	Slope efficiency	CW, P _o = 5mW	0.25(0.18)	0.30(0.22)		mW/mA
λ _c	Center Wavelength	CW, P _o = 5mW	1520	1550	1580	nm
Δλ	Spectral width (RMS)	CW, P _o = 5mW		2	4	nm
θ _{//}	Beam divergence angle (parallel)	CW, P _o = 5mW		15(5)		Deg.
θ _⊥	Beam Divergence angle (perpendicular)	CW, P _o = 5mW		40(15)		Deg.
T _r , T _f	Rise and fall time	I _f =I _{th} , P _o = 5mW, 10~90%		200	240	ps
I _m	Monitor current (Photodiode)	CW, P _o =5mW, V _{RD} =1V	0.1	0.5		mA
I _D	Dark current (Photodiode)	V _{RD} =10V		0.01	0.1	μA
C _t	Capacitance (Photodiode)	V _{RD} =10V, f=1MHz		10	20	pF

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

Ordering Information:

AC5210-X: X=A, B, ..., F is the package types (refers to next page)

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