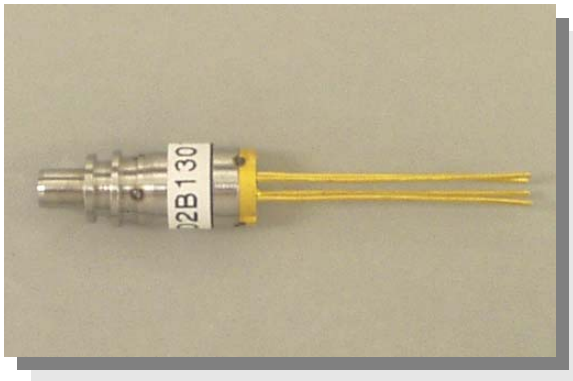




AC5410 Series

Uncooled 1.25 Gbps 1550 nm Fabry Perot Laser in TOSA Package



Description

The AC5410 series lasers are uncooled semiconductor InAlGaAs Fabry Perot laser working at 1550 nm wavelength. The device is delivered in hermetic TOSA 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
- Wide operation temperature range (from -40 to 70°C)
- High Reliability
- Multi-quantum Well (MQW) active layer

Applications

- Telecommunication
- Data Communication
- Storage area networks

Absolute Maximum Rating

Parameter	Symbol	Ratings	Unit
Forward Current (Laser Diode)	I_{OL}	100	mA
Reverse Voltage (Laser Diode)	V_{RL}	2	V
Reverse Voltage (Photodiode)	V_{RD}	20	V
Forward Current (Photodiode)	I_{FD}	2	mA
Case Temperature	T_C	$-40 \sim +70$	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	$-40 \sim +100$	$^{\circ}\text{C}$

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Threshold Current	I_{th}	CW		10	15	mA
		CW at 70°C		24	32	
Output Power	P_o	CW, $I_o = I_{th} + 20\text{mA}$	L	0.3		mW
			M	0.5		
Operating Voltage	V_{op}	CW, $T_c = -40^\circ\text{C} \sim +70^\circ\text{C}$		1.1	1.5	V
Center Wavelength	λ_c	CW	1520	1550	1580	nm
Spectral Width (RMS)	$\Delta\lambda$	CW, $T_c = -40^\circ\text{C} \sim +70^\circ\text{C}$		2	4	nm
Tracking Error	ΔP_o	P_o ($I_o = I_{th} + 20\text{mA}$, 25°C) $T_c = -40^\circ\text{C} \sim +70^\circ\text{C}$		-1.0		dB
Rise and fall Time	T_r, T_f	$I_f = I_{th}, I_b = I_{th}$, 10~90%		200	240	ps
Monitor Current	I_m	CW, $V_{RD} = 1\text{V}$	0.1			mA
Monitor Dark Current	I_d	$V_{RD} = 10\text{V}$			0.1	μA
Capacitance	C_t	$V_{RD} = 10\text{V}$, $f = 1\text{MHz}$		10	20	pF

Ordering Information:

AC5410-X-Y

X=A, or B for the pin-out configurations (See next page)

Y=L, M for the output power

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Outline Drawings

(Customer package designs are available)

