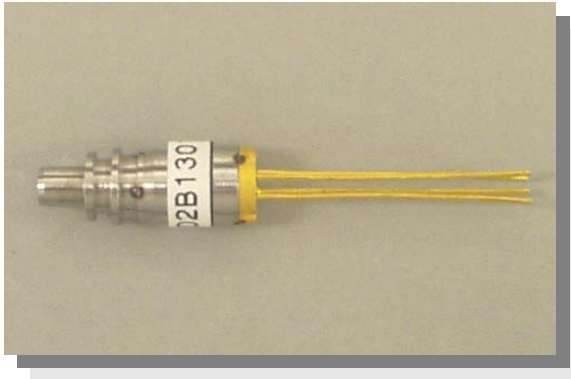




## AC4410 Series

### Uncooled 1.25 Gbps 1550 nm Fabry Perot Laser in TOSA Package



#### Description

The AC4410 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  $70^{\circ}\text{C}$ )
- 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 $70^\circ\text{C}$			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	$\lambda_c$	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	$\Delta P_o$	$P_o$ ( $I_o = I_{th} + 20\text{mA}$ , $25^\circ\text{C}$ ) $T_c = -40^\circ\text{C} \sim +70^\circ\text{C}$			-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	$\mu\text{A}$
Capacitance	$C_t$	$V_{RD} = 10\text{V}$ , $f = 1\text{MHz}$			10	20	pF

**Ordering Information:**

AC4410-W-P

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

P=L, M for the output power

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## Outline Drawings

(Customer package designs are available)

