

**Preliminary Data Sheet****AC3460 Series****Uncooled 4.25 Gbps 1310 nm Fabry Perot laser in TOSA package****Description**

The AC3460 series laser is an uncooled semiconductor InAlGaAs Fabry Perot laser working at 1310 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 4.25 Gb/s in short haul links or local networks.

**Features**

- 1310 nm typical emission wavelength
- Wide operation temperature range (from  $-40$  to  $85^{\circ}\text{C}$ )
- High Reliability
- Multi-quantum Well (MQW) active layer

**Applications**

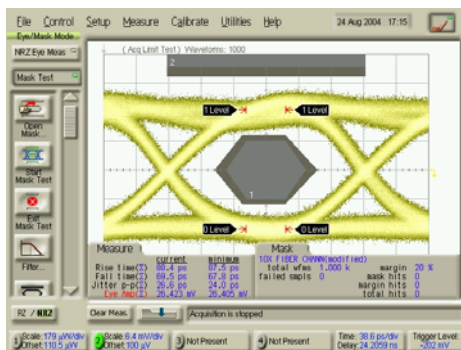
- Telecommunication
- Data Communication
- Storage area networks

**Absolute Maximum Rating**

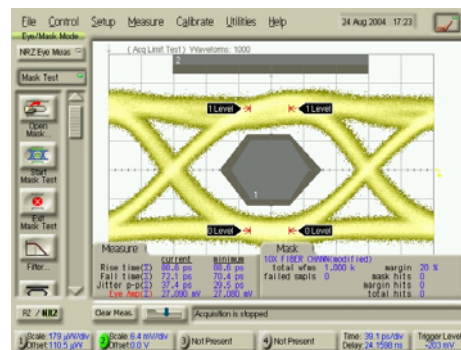
| Parameter                     | Symbol    | Ratings         | Unit               |
|-------------------------------|-----------|-----------------|--------------------|
| Forward Current (Laser Diode) | $I_{OL}$  | 100             | mA                 |
| Reverse Voltage (Laser Diode) | $V_{RL}$  | 2               | V                  |
| Reverse Voltage (Photodiode)  | $V_{RD}$  | 20              | V                  |
| Forward Current (Photodiode)  | $I_{FD}$  | 2               | mA                 |
| Case Temperature              | $T_C$     | $-40 \sim +85$  | $^{\circ}\text{C}$ |
| 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 $85^\circ\text{C}$  |      | 25   | 35   |               |
| Output Power         | $P_o$           | CW, $I_o = I_{th} + 20\text{mA}$  | 0.5  |      |      | mW            |
| Operating Voltage    | $V_{op}$        | CW, $T_c = -40^\circ\text{C} \sim +85^\circ\text{C}$  |      | 1.2  | 1.5  | V             |
| Center Wavelength    | $\lambda_c$     | CW  | 1280 | 1310 | 1340 | nm            |
| Spectral Width (RMS) | $\Delta\lambda$ | CW, $T_c = -40^\circ\text{C} \sim +85^\circ\text{C}$  |      | 1.5  | 3    | nm            |
| Bandwidth (-3 dB)    | BW              | $I_{th} + 30\text{mA}$  |      | 9    |      | GHz           |
| Tracking Error       | $\Delta P_o$    | $P_o$ ( $I_o = I_{th} + 20\text{mA}$ , $25^\circ\text{C}$ )<br>$T_c = -40^\circ\text{C} \sim +85^\circ\text{C}$ |      | -1.0 |      | dB            |
| Rise and fall Time   | $T_r, T_f$      | $I_f = I_{th}, I_b = I_{th}$ , 10~90%   |      | 100  | 120  | 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            |



25C, 0Km, 9 dB ER, 4.25G FC mask with 20% margin, 1000 WFRMs



25C, 10Km, 9 dB ER, 4.25G FC mask with 20% margin, 1000 WFRMs

**Ordering Information:**

AC3460-A-L2

Where:

A = pin-out "Type A" configuration (See outline drawing for pin-out configurations)

L2 = Metal LC receptacle.

