

# 1310 nm FP 1.25G Laser Diode Module With Pigtail Connection and SC/PC

Data Sheet

OLD2334-A5-SC

## Features

- Uncooled
- Type A laser
- Low threshold current
- Output power: 0.5mW
- Data Rate: 1.25 Gbps
- 1310nm Fabry-Perot laser diode
- InGaAs monitor PIN photodiode
- Single mode fiber pigtailed with SC/PC connector
- Operating Temperature: -40~ +85° C

## Applications

- Digital Signal Transmission
- Telecommunications (Local loop, interoffice and intraoffice)
- Data Communications
- Gigabit Ethernet
- SONET OC-3, OC-12, OC-24/SDH STM-1, STM-4, STM-8

## Description

The OLD2334-A5-SC is a hermetically sealed InGaAsP/ InP Fabry-Perot laser diode module in a small coaxial type package, including a high speed InGaAs PIN monitor photodiode and single mode fiber pigtail connection.

The laser diode is designed for use in data communications systems and telecommunications systems over single mode fiber, and can operate in temperatures of -40° C to 85° C. The laser diode module transmits emission power to the monitor photodiode in the rear, which ensures highly stable emission at a wavelength of 1310 nm.

**Safety**

Radiation emitted by laser diode devices can be dangerous to the eyes. Avoid direct or scattered radiation exposure to the eyes or skin. Device contains gallium arsenide (GaAs) which can be hazardous to your health. Please embrace all customary precautions and discretion while handling this device. Observe governmental laws and regulations when discarding this device.

**Performance Specifications**

**Absolute Maximum Ratings**

Stresses in excess of the absolute maximum ratings can cause damage to the optical device. Operations of the optical device are suggested to remain within the recommended operating conditions. Exposure to the absolute maximum ratings for extended periods can adversely affect device reliability.

| Parameter                  | Symbol     | Value      | Unit |
|----------------------------|------------|------------|------|
| Storage Temperature        | $T_{stg}$  | -40 to +85 | °C   |
| Operating Case Temperature | $T_{op}$   | -40 to +85 | °C   |
| Peak Optical Output Power  | $P_o$      | 2          | mW   |
| Forward Current (LD)       | $I_{FLD}$  | 150        | mA   |
| Reverse Voltage (LD)       | $V_{RLD}$  | 2          | V    |
| Reverse Current (PD)       | $I_{RPD}$  | 2          | mA   |
| Reverse Voltage (PD)       | $V_{RPD}$  | 15         | V    |
| Soldering Temperature      | $S_{temp}$ | 260        | °C   |
| Soldering Time             | $S_{time}$ | 10         | sec  |

**Electrical and Optical Characteristics ( $T_c=25^\circ\text{C}$  unless otherwise noted)**

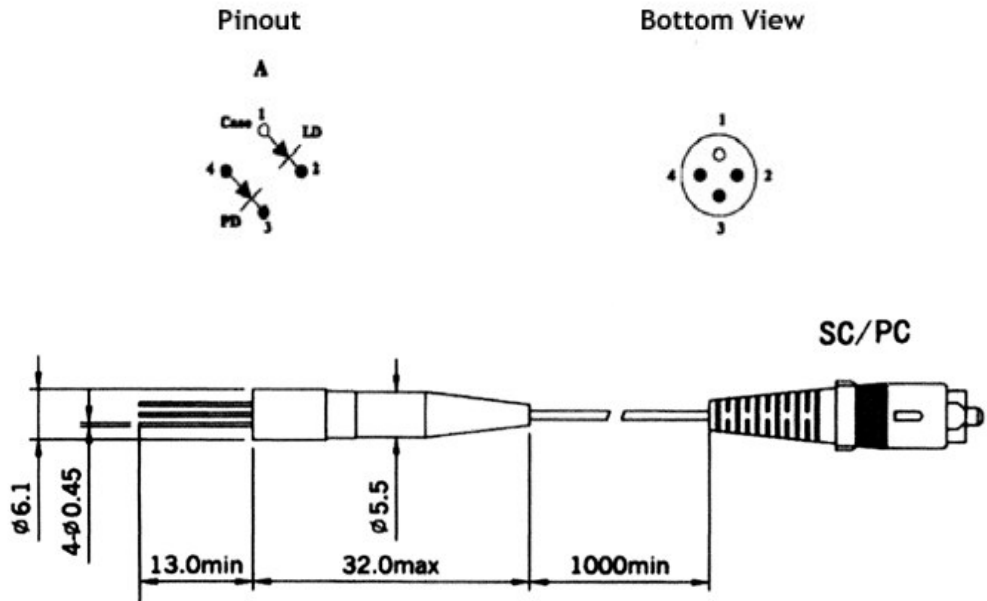
| Parameter           | Symbol          | Condition                    | Min  | Typ  | Max  | Unit |
|---------------------|-----------------|------------------------------|------|------|------|------|
| Threshold Current   | $I_{th}$        | CW                           | -    | 10   | 15   | mA   |
| Operating Voltage   | $V_{op}$        | Pf                           | -    | 1.2  | 1.5  | V    |
| Fiber Output Power  | Pf              | CW, $I_f=I_{th}+20\text{mA}$ | 0.5  | -    | -    | mW   |
| Central Wavelength  | $\lambda_c$     | CW, Pf                       | 1290 | 1310 | 1330 | nm   |
| Spectral Width, RMS | $\Delta\lambda$ | CW, Pf                       | -    | -    | 2.5  | nm   |
| Rise Time           | $T_r$           | $I_b=I_{th}$ , 20%-80%       | -    | -    | 0.3  | ns   |
| Fall Time           | $T_f$           | $I_b=I_{th}$ , 20%-80%       | -    | -    | 0.3  | ns   |
| Tracking Error      | $P_f/P_f$       | APC, -40 to +85 °C           | -    | -    | ±1.0 | dB   |

**Photodiode Parameters ( $T_c=25^\circ\text{C}$  unless otherwise noted)**

| Parameter            | Symbol | Condition                            | Min | Typ | Max  | Unit |
|----------------------|--------|--------------------------------------|-----|-----|------|------|
| Monitor Current      | $I_m$  | Pop, $V_{rp}=5\text{V}$              | 100 | -   | 1000 | μA   |
| Monitor Dark Current | $I_d$  | $V_{rp}=5\text{V}$                   | -   | -   | 100  | nA   |
| Monitor Capacitance  | C      | $V_{rp}=5\text{V}$ , $f=1\text{MHz}$ | -   | 6   | 15   | pF   |

### Package Outline Diagram

Dimensions for the device package are given in millimeters.



### Additional Information

#### Contact

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