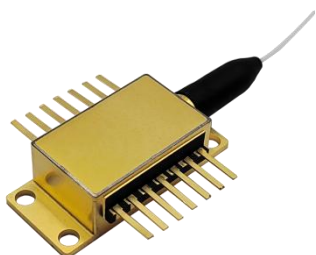


## 1310nm 20mW DFB Butterfly Modules with PM Optical Fiber

310-PM520A



### Key Features

- DFB Laser Chip, Butterfly Package
- High Stabilization
- Telecordia GR-468-CORE Compliant
- RoHS Compliant
- PM Optical Fiber

### Applications

- Light Source
- Test instrument

### Absolute Maximum Ratings

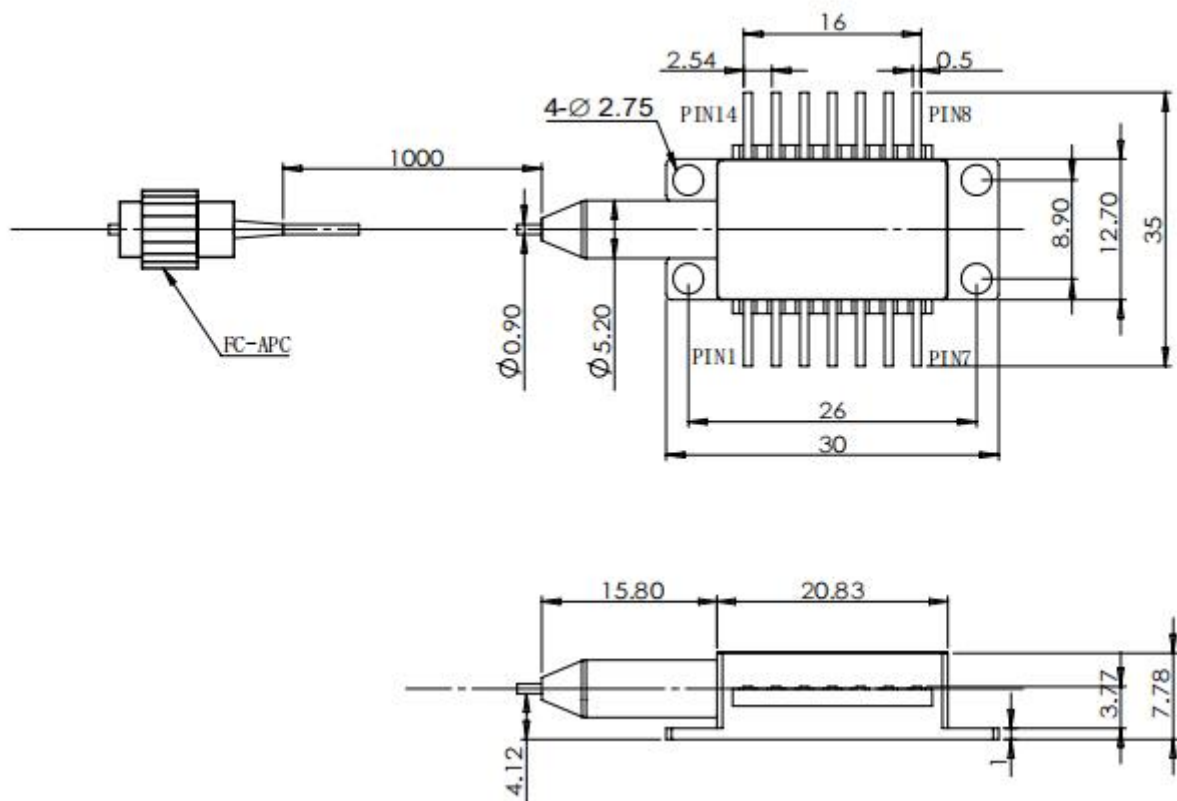
| Parameter                           | Symbol       | Min | Max    | Unit  |
|-------------------------------------|--------------|-----|--------|-------|
| Storage Temperature                 | $T_{stg}$    | -40 | 85     | °C    |
| Ambient Operating Temperature       | $T_c$        | -20 | 70     | °C    |
| Relative Humidity                   | RH           | 0   | 85     | %     |
| LD Forward Current with TEC         | ILF          | -   | 200    | mA    |
| LD Reverse Voltage                  | VLR          | -   | 2      | V     |
| PD Reverse Voltage                  | $V_R$        | -   | 3.9    | V     |
| TEC Current                         | $I_{tec}$    | -   | 1.8    | A     |
| TEC Voltage                         | $V_{tec}$    | -   | 4      | V     |
| Lead Soldering Temperature and Time | $T_{sold/t}$ | -   | 260/10 | °C /s |
| Fiber bend radius                   | r            | 30  | -      | mm    |

## Optical/Electrical Characteristics

| Parameter                          | Symbol                   | Test Conditions         | Min. | Typ    | Max. | Unit          |
|------------------------------------|--------------------------|-------------------------|------|--------|------|---------------|
| Threshold Current                  | $I_{th}$                 | @25°C, CW               | -    | -      | 30   | mA            |
| Operation Current with TEC         | $I_{op}$                 | @25°C                   | -    | 80     | 200  | mA            |
| Optical Output Power               | P                        | @25°C, $I_F=I_{op}$     | 20   | -      | -    | mW            |
| LD Forward Voltage                 | $V_f$                    | $I_F \leq 300\text{mA}$ | -    | -      | 1.8  | V             |
| Center Wavelength                  | $\lambda_c$              | @25°C, $I_F=I_{op}$     | 1309 | 1310   | 1311 | nm            |
| Side Mode Suppression Ratio        | SMSR                     | @25°C, $I_F=I_{op}$     | 35   | -      | -    | dB            |
| Isolation                          | ISO                      | @25°C, CW               | 30   | -      | -    | dB            |
| Monitor Operation Current          | $I_{MON}$                | @25°C, CW               | 50   | -      | 4000 | $\mu\text{A}$ |
| TEC Current                        | $I_{TEC}$                | -                       | -    | -      | 1.8  | A             |
| Wavelength temperature coefficient | $\Delta\lambda/\Delta T$ | -                       | -    | 0.1    | 0.12 | nm/°C         |
| Thermistor Resistance              | RT                       | @25°C                   | 9.5  | 10     | 10.5 | k $\Omega$    |
| Thermistor B-Value                 | $\beta$                  | 25°C/85°C               | -    | 3950   | -    | K             |
| Fiber Length                       | -                        | -                       | -    | 1      | -    | m             |
| Fiber (Align to slow axis)         | -                        | -                       | -    | PM1310 | -    | -             |
| Polarization Extinction Ratio      | PER                      | @25°C                   | 20   | -      | -    | dB            |

## Package Outline:

Dimensions are in millimeters



## PIN Description

## Type A

| Pin | Description | Pin | Description |
|-----|-------------|-----|-------------|
| 1   | Thermistor  | 8   | Case Ground |
| 2   | Thermistor  | 9   | Case Ground |
| 3   | Laser (-)   | 10  | Null        |
| 4   | MPD (+)     | 11  | Laser (+)   |
| 5   | MPD (-)     | 12  | Laser (-)   |
| 6   | TEC (+)     | 13  | Laser (+)   |
| 7   | TEC (-)     | 14  | Null        |

Ordering Information

Example: LTBF1310-PM620A

| Family Name | Wavelength | - | Fiber | Connector                           | Optical power | PIN Description |
|-------------|------------|---|-------|-------------------------------------|---------------|-----------------|
| LTBF        | 1310       | - | PM    | 2: SC/APC<br>5: FC/APC<br>6: FC/UPC | 20:20mW       | A: Type A       |
| LTBF        | 1310       | - | PM    | 5                                   | 20            | A               |