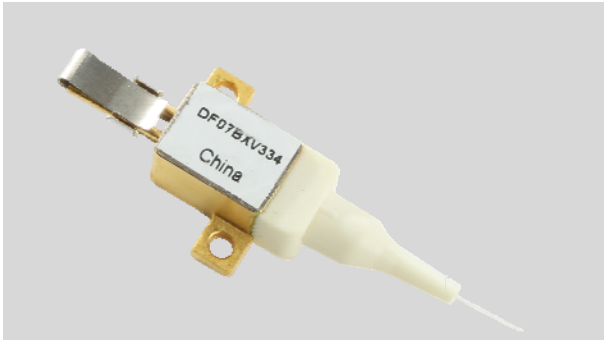


## 976nm 2W Uncooled Multimode Laser Diode Module

TY-976NM+/-10NM-2.0W-25C-2PIN-0.22NA-DF-ST-60



SkyEra delivers diode lasers employing professional coupling technology, that enjoy multiple advantages, e.g., compact design, stable output power, high power, high efficiency and convenient packaging.

These laser diode modules can provide solutions for fiber laser applications and direct suppliers.

The performance and aging tests have been performed upon the production line to guarantee reliable, stable and long lifetime of products. To provide customers with high-quality, high cost performance products is the company's goal.

### Key Parameters:

- Based on single fire spot laser module
- High output power 2W
- High stability
- 0.22NA 62.5μm core multimode fiber
- Parallel weld 2-Pin sealed package
- Standard central wavelength 976nm
- RoHS compliance

### Application:

- Medical
- Printing
- Lighting
- Material processing

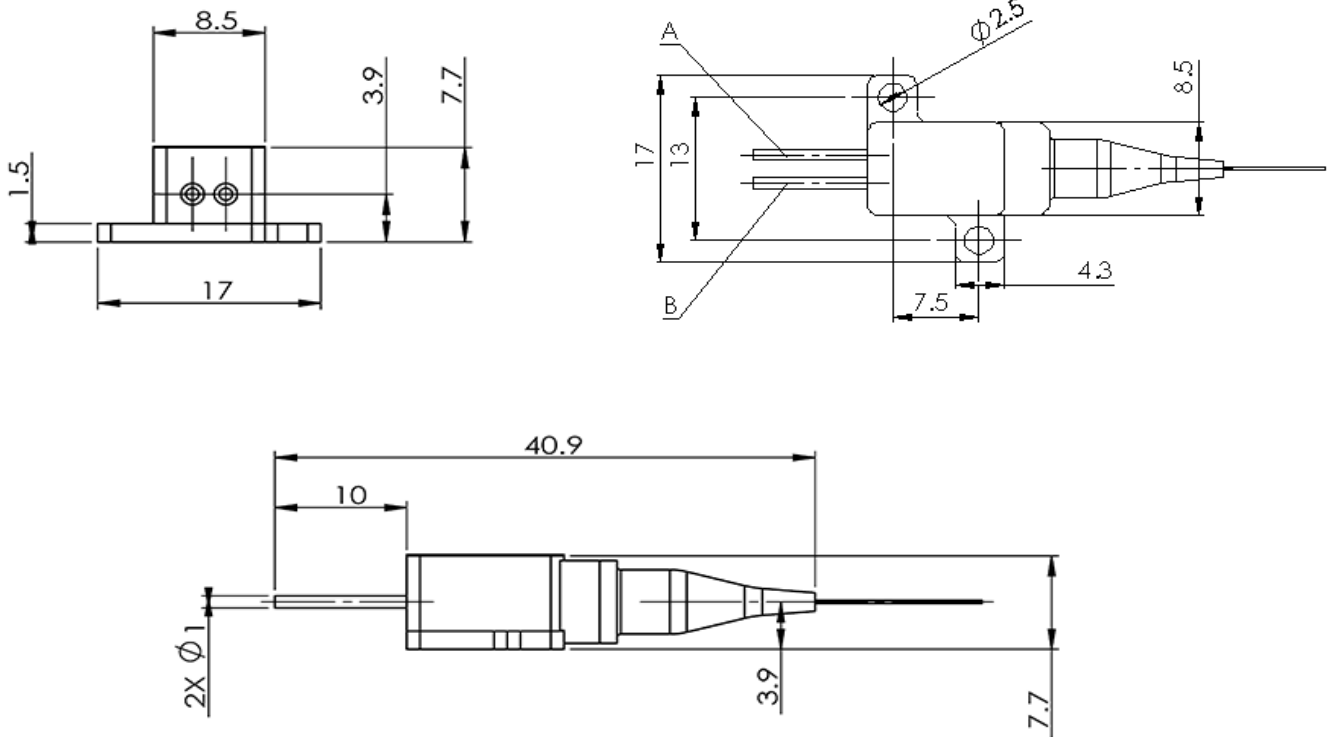
### Specification:

Functional parameters are tested on condition that the heat sink temperature is 25 degree, contact resistance of the component and the heat sink is smaller than 1CM<sup>2</sup> K/W.

| Parameter                         | Min  | Typ  |     | Max | Unit  | Conditions     |
|-----------------------------------|------|------|-----|-----|-------|----------------|
| CW Output Power                   |      | 1    | 2   |     | W     |                |
| Centre Wavelength                 |      |      |     |     |       |                |
| TY976±10                          | 966  | 976  |     | 986 | nm    |                |
| TY976±3                           | 973  | 976  |     | 979 |       |                |
| Spectral Width                    |      | 3    |     | 7   | nm    |                |
| Threshold Current                 |      | 0.25 |     | 0.4 | A     |                |
| Operating Current                 |      | 2.0  | 2.8 |     | A     |                |
| Operating Voltage                 |      | 1.6  | 1.6 | 2.2 | V     |                |
| Convention Efficiency             |      | 45   | 43  |     | %     |                |
| >90% Power                        |      | 0.15 |     |     | NA    |                |
| Wavelength Tuning vs. Temperature |      | 0.28 |     |     | nm/°C |                |
| Slop Efficiency                   |      | 0.8  |     |     | W/A   |                |
| Storage Temperature               | -30  |      |     | 70  | °C    | Non-Condensing |
| Operating Temperature             | 15   |      |     | 55  | °C    |                |
| Fiber Bend Radius                 | 37.5 |      |     |     | mm    |                |
| Buffer Diameter                   | -    | 250  |     | -   | μm    |                |
| Cladding Diameter                 | -    | 125  |     | -   | μm    |                |
| Core Diameter                     | -    | 62.5 |     | -   | μm    |                |
| Numeric Aperture                  | -    | 0.22 |     | -   | NA    |                |
| Fiber Connector                   | -    | ST   |     | -   |       | SMA905,FC      |

## 2. Dimension Diagram

unit:MM



PIN OUT:

| PIN | Description |
|-----|-------------|
| A   | LD+         |
| B   | LD-         |

## 3. Instructions

- Avoid eyes or skin exposure to direct or scattered radiation;
- ESD protection is required for transportation, storage and operation; short-circuit protection between pins is required for transportation and storage.
- Please connect pins by solder when operating current is over 6A; solder point should be close to the root of pins with a max soldering temperature at 260°C and a duration less than 10 seconds ;
- Drive constant current power supply by laser and avoid surge while working;
- Operate under rated current and rated power;
- Good heat dissipation is required;
- Operating temperature is 15°C~55°C
- Storage temperature is -30°C~+70°C

