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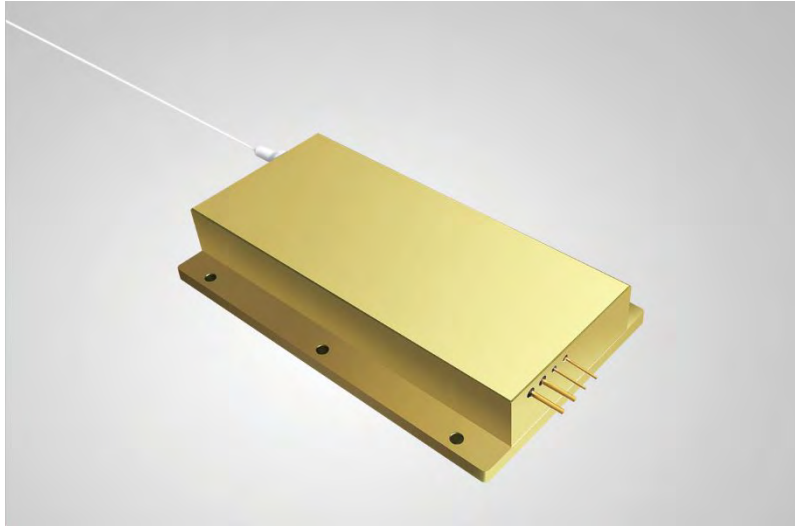


**LASER LAB SOURCE**  
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**976nm 180W Wavelength-Stabilized High Power Fiber Coupled Diode Laser**  
**K976AA9RN-180.0W**



**Features :**

- ◆ 976nm wavelength
- ◆ 180W output power
- ◆ 200 $\mu$ m fiber core diameter
- ◆ 0.22N.A.
- ◆ Narrow bandwidth  $\Delta\lambda < 1\text{nm}$
- ◆ 1040nm-1200nm feedback protection

**Applications:**

- ◆ Fiber laser pumping
- ◆ Material processing

BWT Beijing's High Power Diode Laser Modules are manufactured by adopting specialized fiber-coupling techniques, resulting in volume products with a high efficiency, stability and superior beam quality. The products are achieved by transforming the asymmetric radiation from the laser diode chip into an output fiber with small core diameter by using special micro optics. Inspecting and burn-in procedures in every aspect come to a result to guarantee each product with the reliability, stability and long lifetime.

Our research staffs are constantly improving and innovating the processing technology in the producing process, based on the professional knowledge and experience accumulated in long-terms. We are also continuously developing new products to meet customers' specific needs.

At BWT Beijing, to provide high quality products with reasonable price is our always goal.

## 976nm 180W Wavelength-Stabilized High Power Fiber Coupled Diode Laser K976AA9RN-180.0W

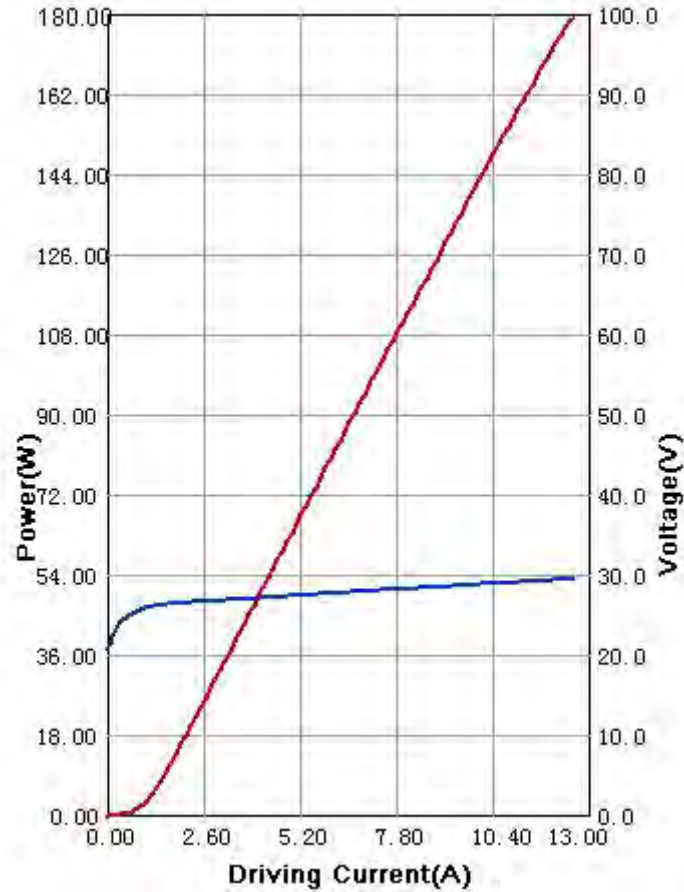
| Specifications(25°C)           |                                   | Symbol            | Unit             | K976AA9RN-180.0W |         |         |
|--------------------------------|-----------------------------------|-------------------|------------------|------------------|---------|---------|
|                                |                                   |                   |                  | Minimum          | Typical | Maximum |
| <b>Parameter<sup>(1)</sup></b> | CW Output Power                   | P <sub>O</sub>    | W                | 3                | -       | -       |
|                                | Threshold current                 | I <sub>th</sub>   | A                | -                | 1       | -       |
|                                | Operating current                 | I <sub>op</sub>   | A                | -                | -       | 5.5     |
|                                | Operating voltage                 | V <sub>op</sub>   | V                | -                | -       | 1.6     |
|                                | Reverse Voltage                   | V <sub>re</sub>   | V                | -                | 2.5     | -       |
|                                | Slope Efficiency                  | η                 | W/A              | -                | 0.85    | -       |
|                                | Electrical-to-Optical Efficiency  | PE                | %                | 40               | -       | -       |
|                                | Center wavelength                 | l <sub>c</sub>    | nm               | 975.5            | -       | 976.5   |
|                                | Spectral width(FWHM)              | Δl                | nm               | -                | 0.5     | -       |
|                                | Back reflection wavelength Range  | λ                 | nm               | 1040             | -       | 1200    |
|                                | Back reflection isolation         | -                 | dB               | -                | 30      | -       |
|                                | Wavelength Shift with Temperature | -                 | nm/°C            | -                | 0.02    | -       |
|                                | Light within 0.15NA               | -                 | NA               | -                | 95      | -       |
|                                | Life Time                         | MTTF              | H                | -                | 10000   | -       |
|                                | <b>Fiber Date</b>                 | Buffer diameter   | D <sub>buf</sub> | μm               | -       | 250     |
| Cladding diameter              |                                   | D <sub>clad</sub> | μm               | -                | 125     | -       |
| Core diameter                  |                                   | D <sub>core</sub> | μm               | -                | 105     | -       |
| Numeric aperture               |                                   | NA                | NA               | -                | 0.22    | -       |
| Fiber length <sup>(2)</sup>    |                                   | l <sub>c</sub>    | m                | -                | 1       | -       |
| Fiber Bend Radius              |                                   | -                 | -                | -                | 35      | -       |
| <b>Others</b>                  | ESD                               | -                 | V                | -                | -       | 500     |
|                                | Storage temperature               | -                 | °C               | -20              | -       | 70      |
|                                | Lead Soldering Temp               | T <sub>is</sub>   | °C               | -                | -       | 260     |
|                                | Lead Soldering Time               | T <sub>is</sub>   | sec              | -                | -       | 10      |
|                                | Operating case temperature        | T <sub>op</sub>   | °C               | 25               | -       | 30      |
|                                | Relative Humidity                 | -                 | %                | 15               | -       | 75      |

(1) Data measured under operation output at 180W.

(2) Other fibers available upon request.

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Characteristics



Typ. spectrum

