



## 980nm 200mw Laser Diode

**Model: AL0980F200TXX-XXFW**



### Features:

- Output power: 200mW
- Efficient quantum well structure
- Lower threshold current
- Center Wavelength: 980nm
- Package: TO-18 (Φ5.6mm) 、 TO-5 (Φ9mm)

### Absolute Maximum Ratings( $T=25^{\circ}\text{C}$ )

| Parameter                 | Symbol     | Unit               | Min | Max | Note           |
|---------------------------|------------|--------------------|-----|-----|----------------|
| Reverse Voltage           | $V_r$      | V                  | -   | 2   | -              |
| Operating Temperature     | $T_o$      | $^{\circ}\text{C}$ | -10 | 30  |                |
| Storage Temperature       | $T_{stg}$  | $^{\circ}\text{C}$ | -10 | 85  |                |
| Solder Reflow Temperature | $S_{temp}$ | $^{\circ}\text{C}$ | -   | 260 | 10 seconds max |

### Electro-Optical Characteristics( $T=25^{\circ}\text{C}$ )

| Parameter                          | Symbol                              | Unit                         | Min           | Typ            | Max  | Test Condition           |
|------------------------------------|-------------------------------------|------------------------------|---------------|----------------|------|--------------------------|
| Optical output power               | $P_o$                               | mW                           | 200           | -              | -    | $I_{op}=400\text{mA}$    |
| Center wavelength                  | $\lambda_c$                         | nm                           | 970           | 980            | 990  | $P_o=200\text{mW}$       |
| Spectral width                     | $\Delta\lambda$                     | nm                           | -             | -              | 5    | FWHM, $P_o=200\text{mW}$ |
| Threshold current                  | $I_{th}$                            | mA                           | -             | 70             | 100  |                          |
| Operating current                  | $I_o$                               | mA                           | -             | 300            | 400  |                          |
| Operating voltage                  | $V_f$                               | V                            | -             | 1.7            | 2    | $P_o=200\text{mW}$       |
| Slope Efficiency                   | $\eta$                              | W/A                          | -             | 0.9            | -    |                          |
| Monitoring current                 | $I_m$                               | $\mu\text{A}$                | -             | 400            | 1500 | $P_o=200\text{mW}$       |
| Beam divergence                    | $\theta_{\perp} \times \theta_{//}$ | $^{\circ}$                   | -             | $40 \times 12$ | -    | FWHM                     |
| Wavelength temperature coefficient | $d\lambda/dT$                       | $\text{nm}/^{\circ}\text{C}$ | -             | 0.3            | -    | -                        |
| Emitting area                      | -                                   | $\mu\text{m}$                | 30 $\times$ 1 |                |      | -                        |
| Polarization Ratio                 | TE                                  |                              |               |                |      | -                        |

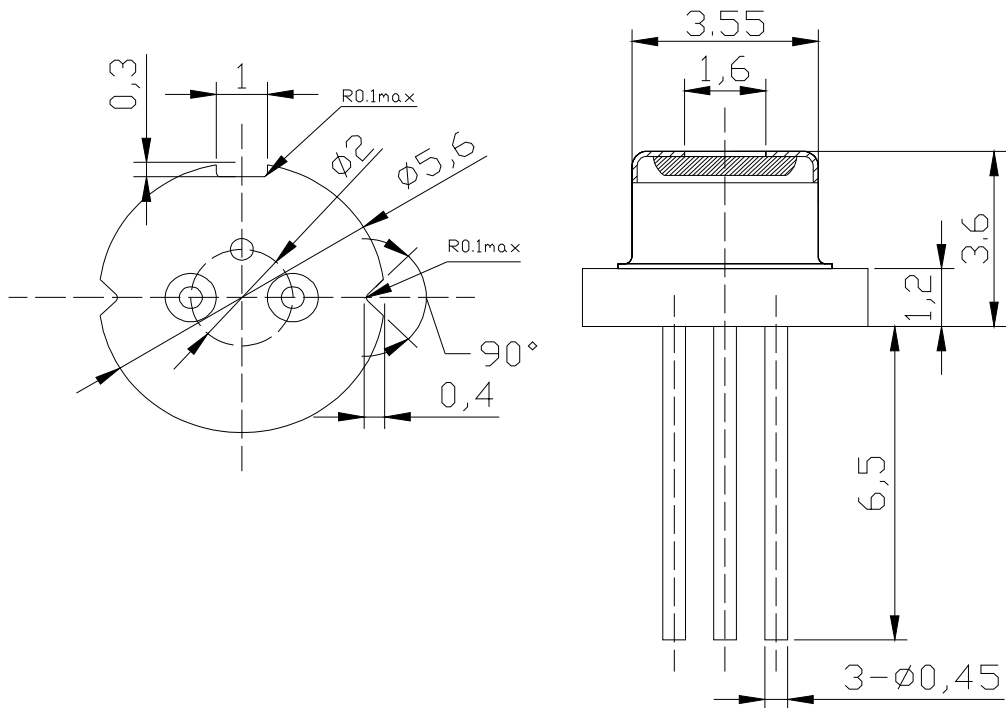
Associated Opto-electronics (Chongqing) Corp. 14# Huayuan Rd., Nanping, Chongqing 400060

Tel: 023-62925588

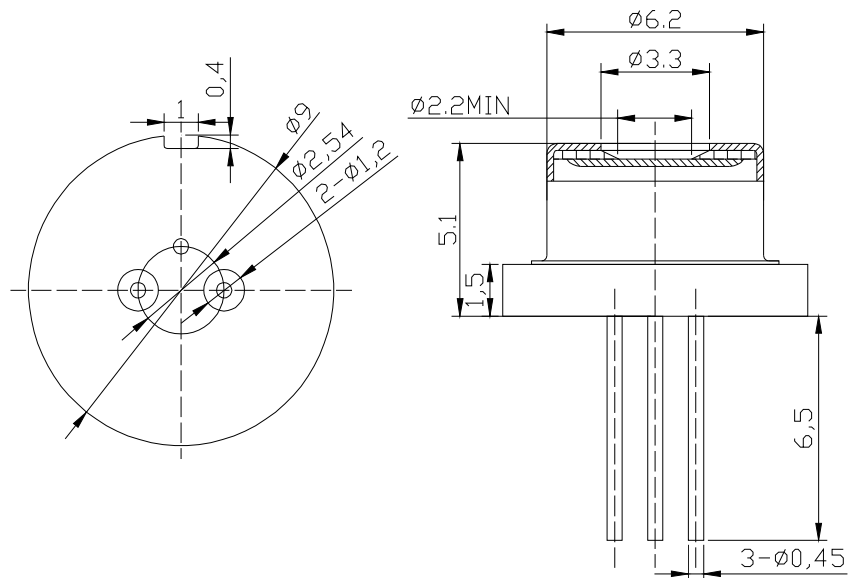
Fax: 023-62804240

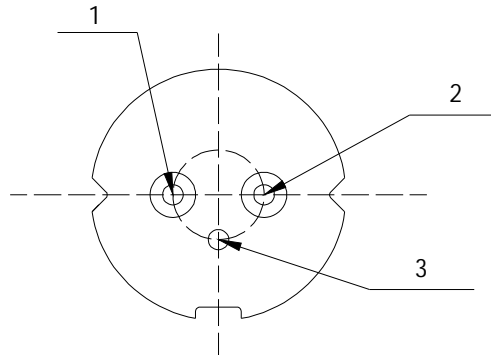
Web: [www.aocq.com](http://www.aocq.com)

**Outline Drawings (TO-18) (in: mm)**

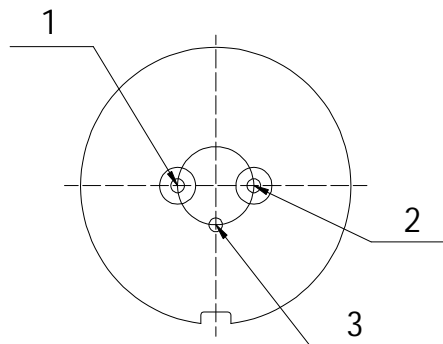


**Outline Drawings (TO-5) (in: mm)**



**Pin Assignment (TO-18) (Bottom View)**


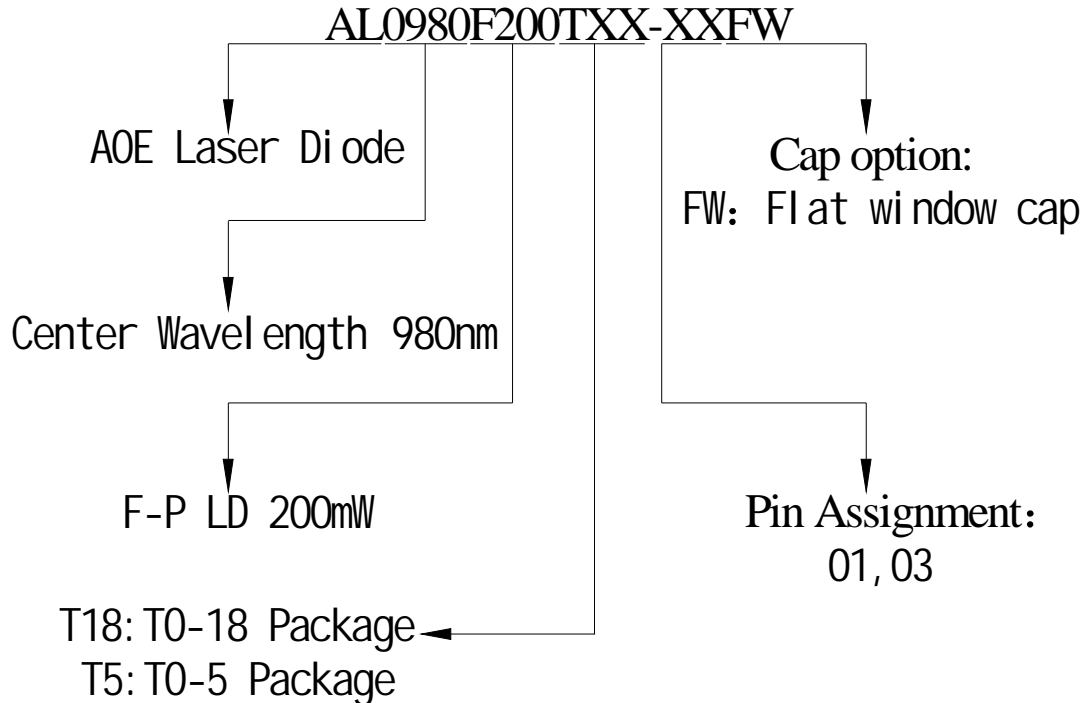
| Pin Assignment |          |            |                     |
|----------------|----------|------------|---------------------|
| Type \ Pin     | 1        | 2          | 3                   |
| 01             | PD Anode | LD Cathode | LD Anode/PD Cathode |
| 03             | -        | LD Cathode | LD Anode            |

**Pin Assignment (TO-5) (Bottom View)**


| Pin Assignment |          |            |                     |
|----------------|----------|------------|---------------------|
| Type \ Pin     | 1        | 2          | 3                   |
| 01             | PD Anode | LD Cathode | LD Anode/PD Cathode |
| 03             | -        | LD Cathode | LD Anode            |



**Ordering information:**



**Precaution:**

- (1) The laser diodes should be handled in the same manner as ordinary semiconductor device to prevent the electro-static damages. For safety keeping and carrying, the modules should be packaged with ESD proof material. For assembling, the workbench, the soldering iron and the human body should be grounded.
- (2) Please pay special attention to the atmosphere condition because the dew on the module may cause some damages.
- (3) Under such a strong vibration environment as in automobile, the performance and reliability are not guaranteed.
- (4) A voltage stabilizer should be taken into consideration for the power supply, and shock voltage should be avoided during the process of switching on and off of the supply in order to prevent the device from damaging.

**Warning:** Direct exposure of one's eyes to the laser beam or long time exposure of one's skin to the beam must be avoided.