



## 808nm 200mW TO-18 Laser Diode

Model: AL0808F200T18-XXXX



### Features:

- Output power: 200mW
- Efficient quantum well structure
- Lower threshold current
- Center Wavelength: 808nm
- Package: TO-18 (Φ5.6mm)

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

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

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

| Parameter                          | Symbol                              | Unit                         | Min           | Typ            | Max  | Test Condition           |
|------------------------------------|-------------------------------------|------------------------------|---------------|----------------|------|--------------------------|
| Optical output power               | $P_o$                               | mW                           | 200           | -              | -    | $I_{op}=260\text{mA}$    |
| Center wavelength                  | $\lambda_c$                         | nm                           | 805           | 808            | 811  | $P_o=200\text{mW}$       |
| Spectral width                     | $\Delta\lambda$                     | nm                           | -             | -              | 3.5  | FWHM, $P_o=200\text{mW}$ |
| Threshold current                  | $I_{th}$                            | mA                           | -             | 50             | 80   |                          |
| Operating current                  | $I_o$                               | mA                           | -             | 240            | 260  |                          |
| Operating voltage                  | $V_f$                               | V                            | -             | 1.7            | 2    | $P_o=200\text{mW}$       |
| Slope Efficiency                   | $\eta$                              | W/A                          |               | 1              | -    |                          |
| Beam divergence                    | $\theta_{\perp} \times \theta_{//}$ | $^{\circ}$                   | -             | $40 \times 12$ | -    | FWHM                     |
| Monitoring current                 | $I_m$                               | $\mu\text{A}$                | -             | 300            | 1500 | $P_o=200\text{mW}$       |
| Wavelength temperature coefficient | $d\lambda/dT$                       | $\text{nm}/^{\circ}\text{C}$ | -             | 0.3            | -    | -                        |
| Emitting area                      | -                                   | $\mu\text{m}$                | $30 \times 1$ |                |      | -                        |
| Polarization Ratio                 | -                                   | -                            | TE            |                |      | -                        |

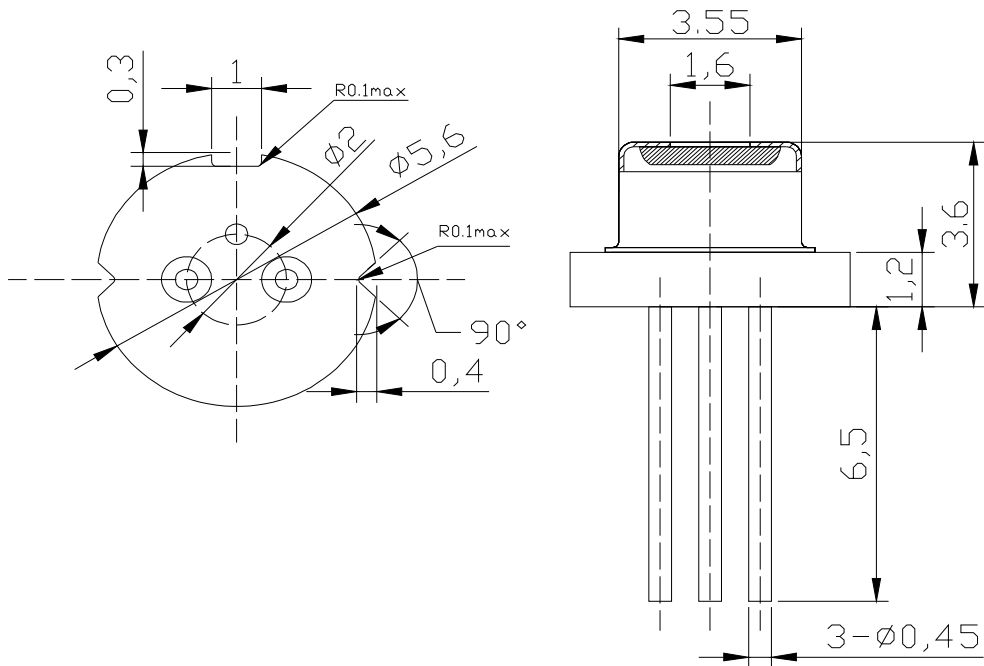
Associated Opto-electronics (Chongqing) Corp. 14# Huayuan Rd., Nanping, Chongqing 400060

Tel: 023-62925588

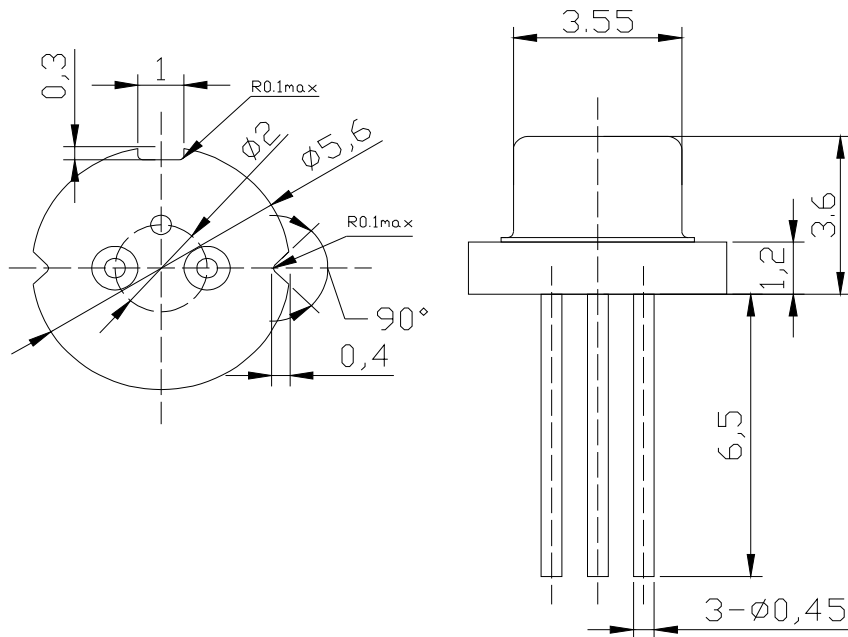
Fax: 023-62804240

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

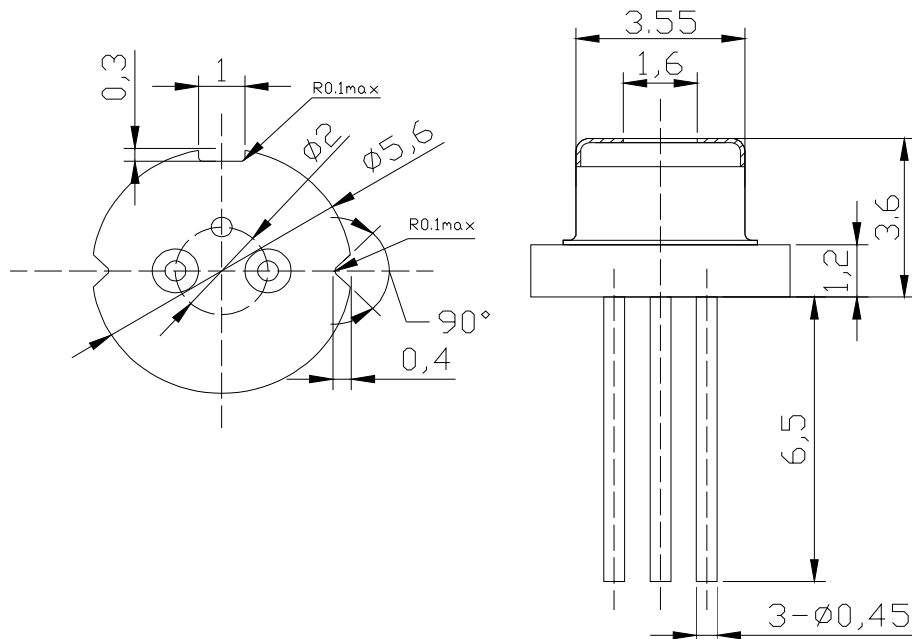
**Outline Drawings(FW) (in: mm)**



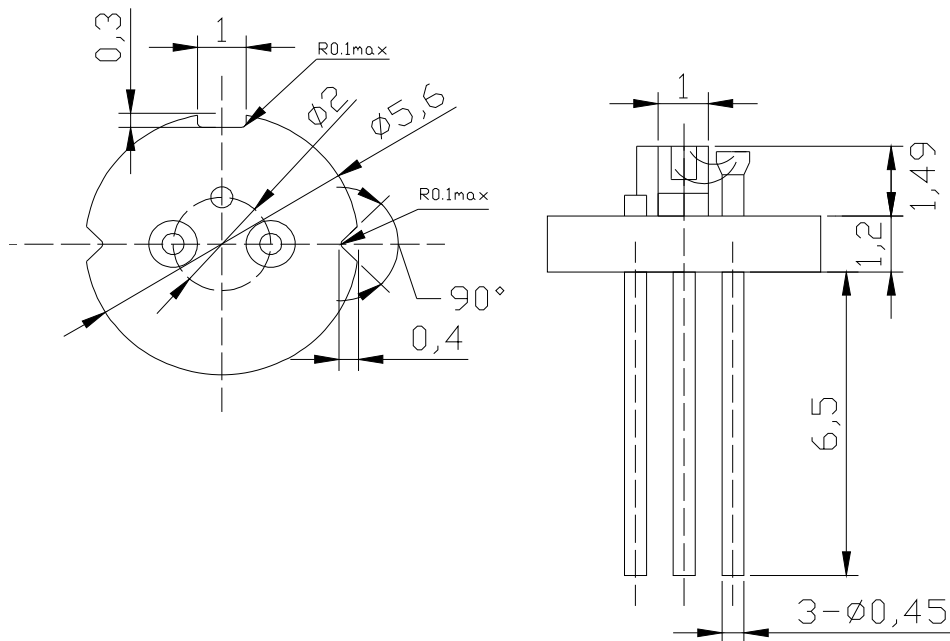
**Outline Drawings(AC) (in: mm)**



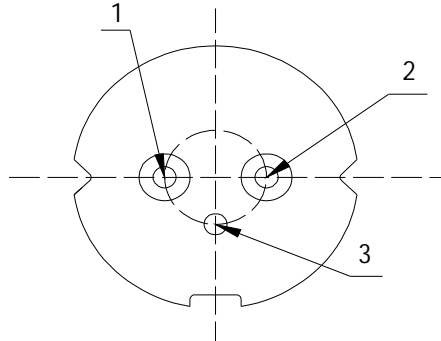
**Outline Drawings (NGC) (in: mm)**



**Outline Drawings (NC) (in: mm)**

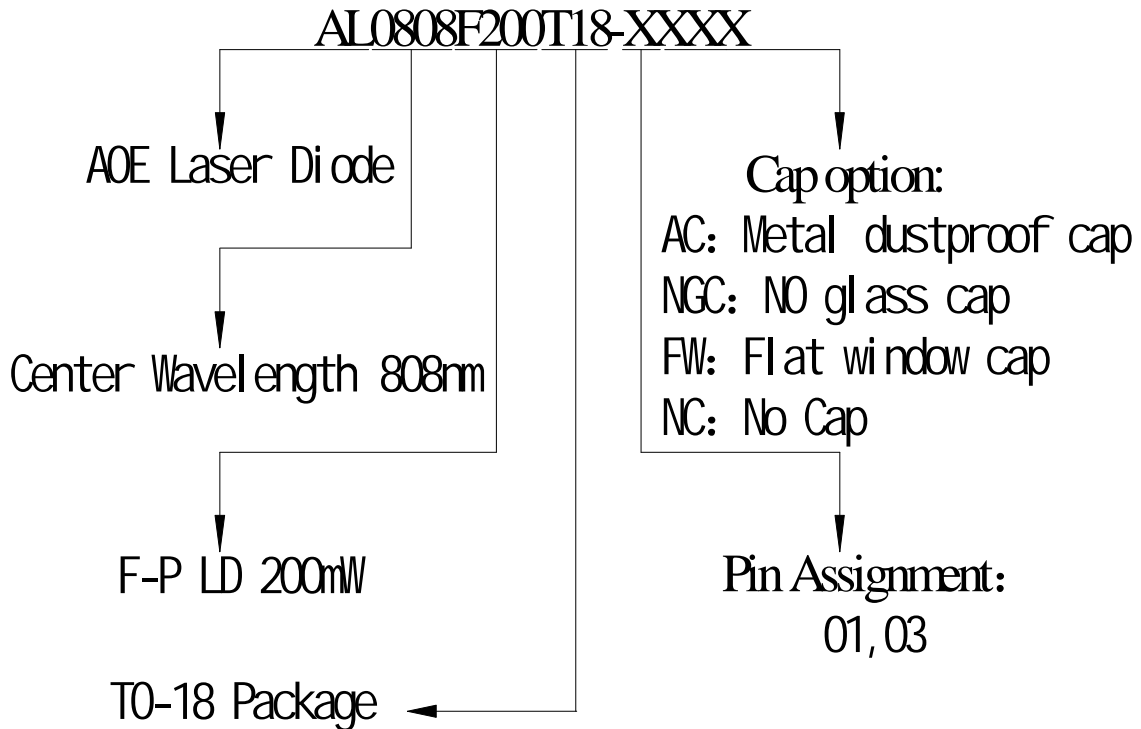


**Pin Assignment (Bottom View)**



| 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.
- (5) Pay attention to the dust polluting. The device may be damaged when operating in atmosphere because the dust may be absorbed onto the region of lighting under the action of electric field.

***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.



文件类型

产品规格书

文件编号

AOE/GJS-17-2012

文件名称

808nm200mWTO18 封装  
激光器规格书

版次

2.0

总页数

5

修改记录

| 版次  | 修改内容   | 修改/日期            | 审核/日期            | 批准/日期             | 生效日期      |
|-----|--|------------------|------------------|-------------------|-----------|
| 2.0 | 1: 产品型号由 AL0808F200T18-03XX 调整为 AL0808F200T18-XXXX。<br>2: 输出功率参数的测试条件由 $I_{op}=280mA$ 调整为 $I_{op}=260mA$ 。<br>3: 中心波长参数的测试条件由 $I_{op}=250mA$ 调整为 $P_o=200mW$ 。<br>4: 光谱宽度参数的测试条件由 $FWHM, I_{op}=250mA$ 调整为 $FWHM, P_o=200mW$ 。<br>5: 增加监视电流参数典型值 $300\mu A$ 和最大值 $1500\mu A$ 以及相应的测试条件 $P_o=200mW$ 。<br>6: 工作电流的典型值/最大值由 $250/280mA$ 调整为 $240/260mA$ 。<br>7: AL0808F200T18-XXFW/AC/NGC 的管座下边缘至管相顶端距离由 $3.5mm$ 调整为 $3.6mm$ 。<br>8: 完善 Pin Assignment 管脚定义 (增加 01 管脚定义)。 | 降颯<br>2016.11.29 | 樊译<br>2016.11.29 | 沈石屏<br>2016.11.29 | 2016.12.1 |
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| 编制   | 降颯      | 审核 | 樊译   | 批准        | 沈石屏 |
| 编制部门 | 功率激光事业部 |    | 生效日期 | 2016.12.1 |     |