

# 产品. 规格书

## PRODUCT SPECIFICATION

产品名称

Product Name

980/650激光器

产品编号

Product Number

JAP9805-007

规格

Parameter

12\*17\*8.5mm

受控文件

东莞市蓝宇激光有限公司

Dongguan Blueuniverse Laser Co.,Ltd

DESCRIPTION.:

(规格书)

SPECIFICATION

THESE SPECIFICATION ARE THE PROPERTY OF DongGuan  
Blueuniverse Laser Co.,Ltd  
AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE  
MANUFACTURE OR SELL  
OF APPARATUSES OR DEVICES WITHOUT PERMISSION.

Model No.:

JAP9805-007

日期

制定

品管

审核

核准

Document No.:

LY-WI-RD-F1591

REV

A8

2022.4.12 邓卫东 审核 核准

## 980nm 产 品 参 数

## PRODUCT PARAMETERS

| 项目<br>Items                              | 参数<br>Parameter             | 项目<br>Items                 | 参数<br>Parameter |
|------------------------------------------|-----------------------------|-----------------------------|-----------------|
| 结构尺寸:<br>Housing size                    | Φ4*8mm                      | 透镜:<br>Optical Lens         | Φ3/玻璃           |
| 电路板尺寸:<br>Circuit Board Size             | 6*7.5mm                     | 风扇:<br>Fan                  | /               |
| 电路板:<br>Circuit Board                    | 3-5V/PWM调制板                 | 产品材质:<br>Product Material   | 铜/H59           |
| 线材:<br>Wire Rod                          | UL1571 28#<br>5P1.25端子线29mm | 产品净重:<br>Product Net Weight | /               |
| 线材额定温度:<br>Rated temperature of wire rod | 80℃                         |                             |                 |

## 980nm 光 电 参 数

## OPTICAL PARAMETERS

TC=25℃

| 项目<br>Items                | 符号<br>Symbol    | 最小<br>Min | 标准<br>Typ | 最大<br>Max | 单位<br>Unit | 条件<br>Condition |
|----------------------------|-----------------|-----------|-----------|-----------|------------|-----------------|
| 光输出功率:<br>Optical Output   | P <sub>o</sub>  | 1.35      | 1.6       | 1.9       | mW         | 3-5V供电          |
| 工作电流:<br>Working current   | I <sub>op</sub> | /         | 20        | 25        | mA         |                 |
| 工作电压:<br>Operating Voltage | V <sub>op</sub> | 3         | 3.5       | 5         | V          |                 |
| 激光波长:<br>Laser Wavelength  | λ <sub>p</sub>  | 965       | 980       | 995       | nm         |                 |
| 电功率:<br>Electric Power     | W <sub>l</sub>  | 0.06      | 0.07      | 0.125     | W          |                 |

受控文件

|                                   |             |                                            |            |
|-----------------------------------|-------------|--------------------------------------------|------------|
| 控制信号电压:<br>Control signal voltage | 2.5-5.5V    | 控制方式:<br>The control mode                  | PWM调制      |
| 响应频率:<br>Response frequency       | <100KHz     | 起始响应占空比:<br>Initial response duty<br>cycle | 3%         |
| 光斑模式:<br>Laser Beam Mode          | 点状          | 工作模式:<br>Working Mode                      | Pulse work |
| 光点大小:<br>Lightspot Size           | 8M (35±5mm) | 工作温度:<br>Working Temperature               | -10℃至40℃   |
| 镜片角度:<br>The lens Angle           | /           | 储存温度:<br>Storage Temperature               | -40℃至80℃   |
| 工作时间:<br>Working Time             | 10000H      | 外壳带电极性:<br>Enclosure Polarity              | 正极         |

650nm 产 品 参 数  
PRODUCT PARAMETERS

| 项目<br>Items                              | 参数<br>Parameter             | 项目<br>Items                 | 参数<br>Parameter |
|------------------------------------------|-----------------------------|-----------------------------|-----------------|
| 结构尺寸:<br>Housing size                    | Φ 4*8mm                     | 透镜:<br>Optical Lens         | Φ 3/玻璃          |
| 电路板尺寸:<br>Circuit Board Size             | 6*7.5mm                     | 风扇:<br>Fan                  | /               |
| 电路板:<br>Circuit Board                    | 3-5V/APC电路板                 | 产品材质:<br>Product Material   | 铜/H59           |
| 线材:<br>Wire Rod                          | UL1571 28#<br>5P1.25端子线29mm | 产品净重:<br>Product Net Weight | /               |
| 线材额定温度:<br>Rated temperature of wire rod | 80℃                         |                             |                 |

650nm 光 电 参 数  
OPTICAL PARAMETERS

TC=25℃

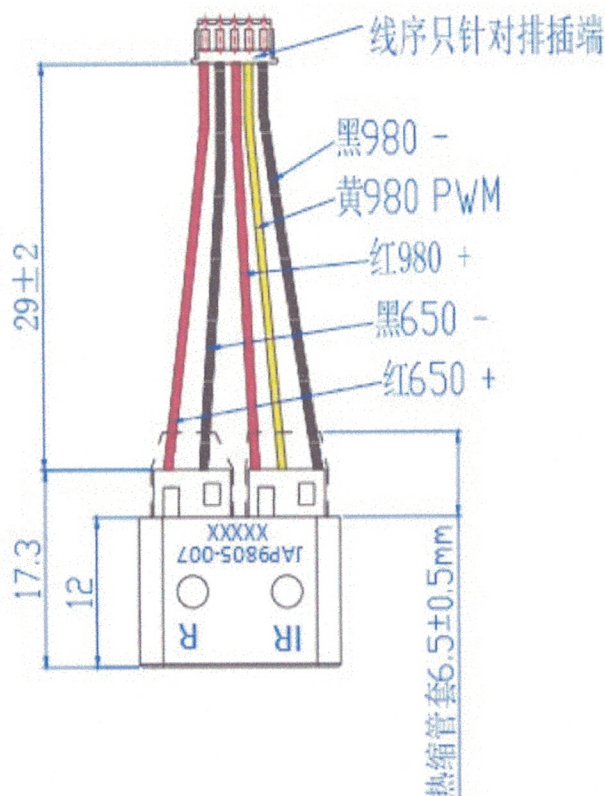
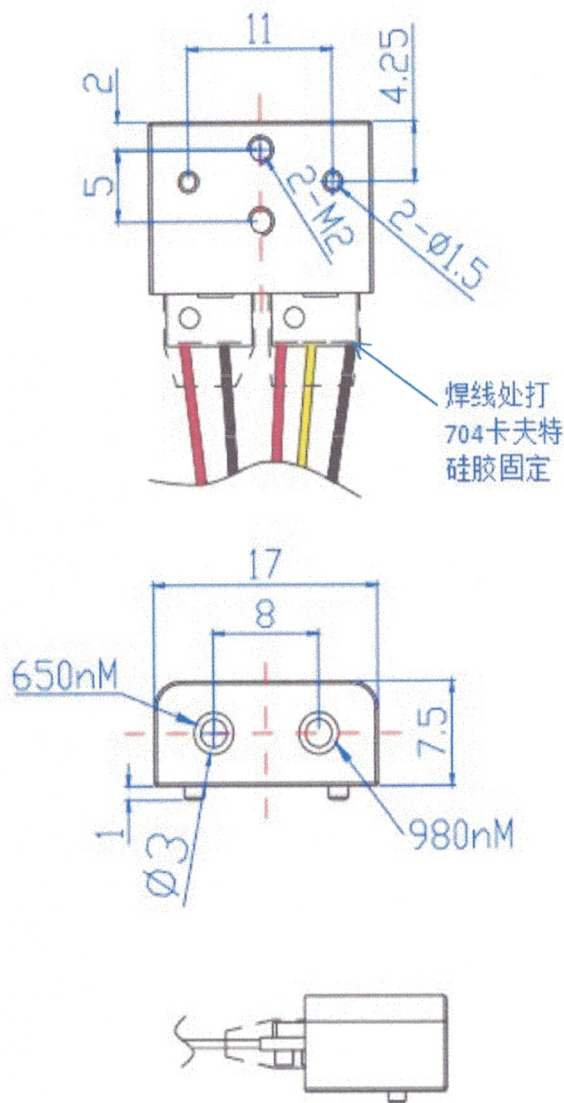
| 项目<br>Items                | 符号<br>Symbol | 最小<br>Min | 标准<br>Typ | 最大<br>Max | 单位<br>Unit | 条件<br>Condition |
|----------------------------|--------------|-----------|-----------|-----------|------------|-----------------|
| 光输出功率:<br>Optical Output   | Po           | 2         | /         | 4         | mW         | 3-5V供电          |
| 工作电流:<br>Working current   | Iop          | /         | 20        | 30        | mA         |                 |
| 工作电压:<br>Operating Voltage | Vop          | 3         | 3.5       | 5         | V          |                 |
| 激光波长:<br>Laser Wavelength  | λ p          | 650       | 655       | 660       | nm         |                 |
| 电功率:<br>Electric Power     | Wl           | 0.06      | 0.07      | 0.15      | W          |                 |

受控文件

|                          |            |                               |            |
|--------------------------|------------|-------------------------------|------------|
| 光斑模式:<br>Laser Beam Mode | 点状         | 工作模式:<br>Working Mode         | continuous |
| 光点大小:<br>Lightspot Size  | 8M (<15mm) | 工作温度:<br>Working Temperature  | -10℃至50℃   |
| 发散角:<br>Divergence Angle | /          | 储存温度:<br>Storage Temperature  | -40℃至85℃   |
| 工作时间:<br>Working Time    | 10000H     | 外壳带电极性:<br>Enclosure Polarity | 正极         |

# 外形尺寸

## Overall dimensions



受控文件

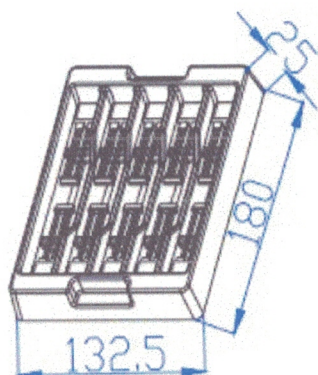
### 技术要求:

1. 端子与HS拉拔力 $\geq 0.8\text{Kgf}$ .
2. 线材与端子拉力 $\geq 1.0\text{Kgf}$ .
3. 线材规格: UL 1571#28AWG, 导体铜丝为镀锡铜.
4. 所有材料需符合ROHS环保要求.
5. 线序只针对排插, 不限制激光器.

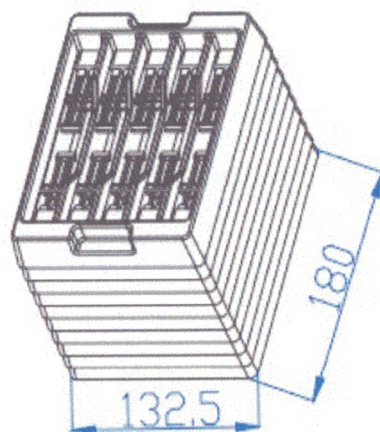
|                                        |           |           |                                                                                       |
|----------------------------------------|-----------|-----------|---------------------------------------------------------------------------------------|
| UNSPECIFIED DIMENSINO TOL(GB/T1804-92) |           |           | VERSION                                                                               |
|                                        | COARSENES | COARSENES |                                                                                       |
| 0.5~3                                  | ±0.02     | ±0.03     |  |
| 3~6                                    | ±0.03     | ±0.04     |                                                                                       |
| 6~30                                   | ±0.05     | ±0.1      | SCALE:1:                                                                              |
| 30~120                                 | ±0.2      | ±0.8      | 1                                                                                     |
| 120~400                                | ±0.5      | ±1.2      |                                                                                       |
| UNSPECIFIED ANGLE OL(GB11359-89-M) ±1° |           |           | UNITS:MM                                                                              |
| FROM NO:FR-04-0013 REVISION:REVO       |           |           |                                                                                       |
| DATE 2016-4-11                         |           |           |                                                                                       |

# 包装规格

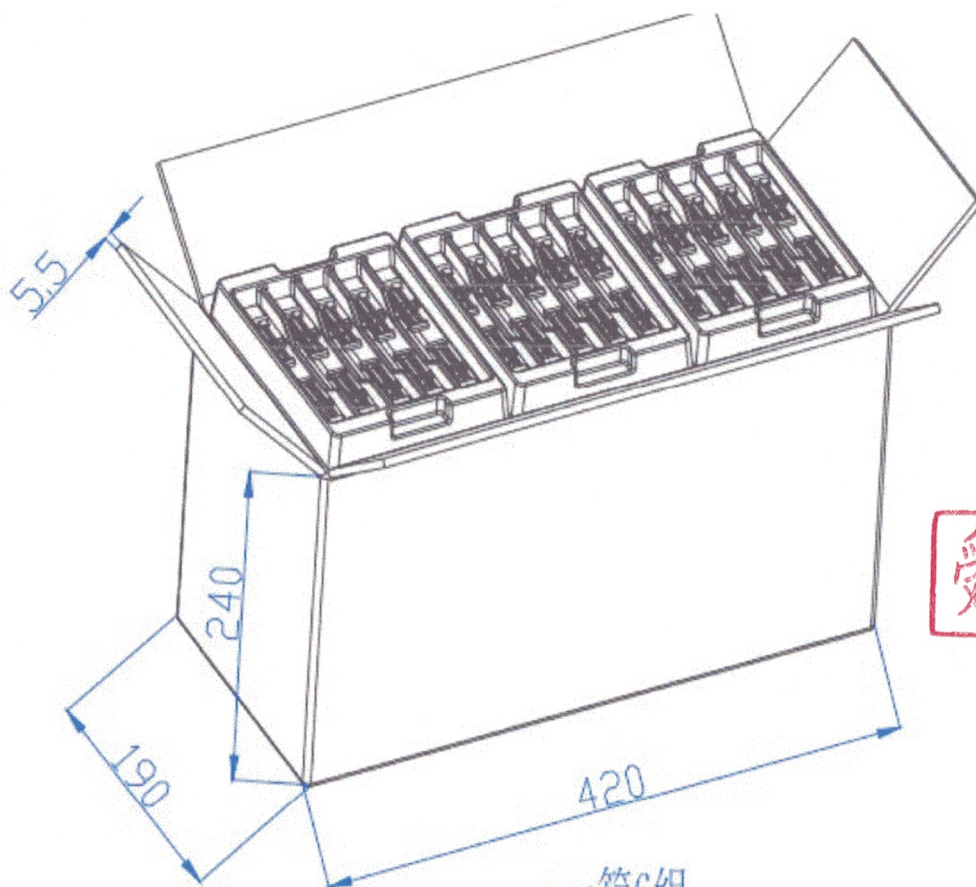
Packing specification



一盘装10pcs



一组10盘



一箱6组

受控文件

包装防静电等级:  $<10^{+11}$

# 注 意 事 项

## CAUTIONS

1. 激光模组发射的激光有可能对眼睛造成伤害。激光模组工作时，严禁直接注视其端面，并佩戴防护眼镜。

The laser light emitted by the laser module is likely to injure persons' eye, so do not directly gaze its end surface and wear appropriate safety glasses to prevent laser light when it is working.

2. 器件需要合适的驱动电源，激光模组和电源连接时，电源输出电压应为零；电流调节时应缓慢增加或减少，以免冲击电流损坏器件。

Laser module needs an appropriate laser driver(PCB). When the laser module connects with power supply, please set the output voltage to zero. The adjustment of the current should be slowly increased or decrease to avoid damaging the device.

3. 器件应当存放或工作于干燥环境，防尘等级达到百万级，以免镜片落入灰尘影响光斑。

Keep the device working or storing in a dry environment. The anti-dust grade is over one million, in order to prevent dust inside the lens to affect the laser dot shape.

4. 在较高温度下工作，会增大阈值电流，降低转换效率，加速器件的老化。

Working at high temperatures will increase the threshold current, reduce conversion efficiency and speed up the aging of the device.

5. 输出功率高于指定参数工作，会加速器件老化。

When output power is higher than it's specific parameter of operation, it will accelerate the aging of the device.

6. 连续工作中激光管温度达到40℃要做好散热。

When the operation temperature of the laser diode is over 40degree, please do well heat dissipation of it.

7. 本产品属于静电敏感器件，在人体有良好接地的情况下才可拿取，防静电可采用防静电手镯的方法。

This laser module is an electrostatic sensitive device. Please make sure ground yourself or wear an antistatic wrist strap before you take it.



Dongguan Blueuniverse Laser Co.,Ltd

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<http://www.bu-laser.Com>

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