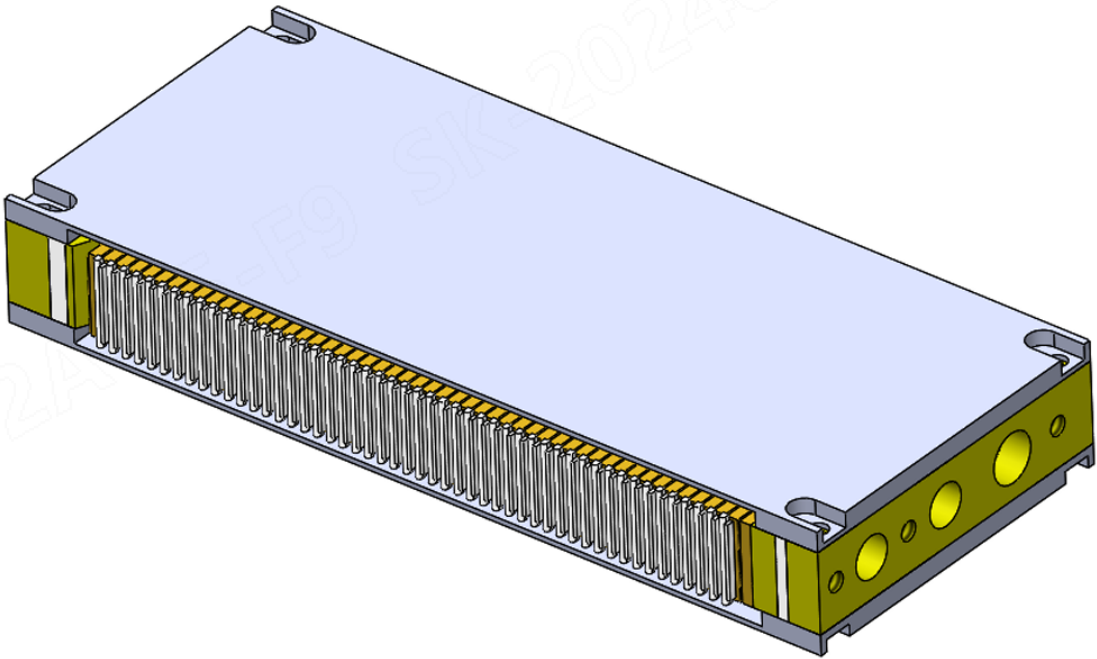


PN: DG-VSC50-C5KW-808-Y

CW 5KW Collimated Wavelength 808nm

Micro-Channel Water Cooled 50Bars Diode Laser



| Version | Change Items | Released Date |
|---------|--------------|---------------|
| Rev 1   | Initial      | 2026.01.06    |
|         |              |               |
|         |              |               |

**主要特性 Key Features:**

- 金锡焊料封装 / Indium packaging
- 高可靠性 / High reliability
- 长脉宽 / Long pulse-width operation

**应用领域 Application:**

- 科研泵浦 / Research&Pump

| 光学参数 <sup>1</sup> / Optical Parameters <sup>1</sup>         |           | DG-VSC50-<br>C5KW-808-Y | DG-VSC10-<br>C1000-976-Y | DG-VSC50-<br>C5KW-780-Y |
|-------------------------------------------------------------|-----------|-------------------------|--------------------------|-------------------------|
|                                                             |           |                         |                          |                         |
| 输出峰值功率/Output Peak Power                                    | W         | 5000                    | 1000                     | 5000                    |
| 单 bar 功率/Peak Power per bar                                 | W         | 100                     | 100                      | 100                     |
| Bar 条数量/ Number of Bars                                     | -         | 50                      | 10                       | 50                      |
| Bar 条间距/ Bar Pitch                                          | mm        | 1.8                     | 1.8                      | 1.8                     |
| 中心波长/Center Wavelength                                      | nm        | 808                     | 976                      | 780                     |
| 中心波长范围/Center Wavelength Tolerance                          | nm        | ±3                      | ±5                       | ±5                      |
| 光谱宽度/Spectral Width(FWHM)                                   | nm        | ≤4                      | ≤5                       | ≤5                      |
| 快轴发散角/F-Axis Divergence Angle (FWHM) <sup>2</sup>           | °         | 0.5                     | 0.5                      | 0.5                     |
| 慢轴发散角/S-Axis Divergence Angle (FWHM)                        | °         | 8~12                    | 8~12                     | 8~12                    |
| 偏振模式/Polarization Mode                                      | -         | TE                      | TE                       | TE                      |
| 电学性能/Electrical Parameters                                  |           |                         |                          |                         |
| 电光转换效率/Conversion Efficiency                                | %         | ≥55                     | ≥50                      | ≥50                     |
| 斜率效率/Slope Efficiency                                       | W/A       | ≥1.1                    | ≥1                       | ≥1                      |
| 阈值电流/Threshold Current                                      | A         | ≤20                     | ≤20                      | ≤20                     |
| 工作电流/Operating Current                                      | A         | ≤100                    | ≤100                     | ≤100                    |
| 工作电压/Operation Voltage                                      | V         | 100                     | 20                       | 100                     |
| 热学性能/Thermal Parameters                                     |           |                         |                          |                         |
| 工作温度 <sup>3</sup> /Operating Temperature Range <sup>3</sup> | °C        | 20~30                   | 20~30                    | 20~30                   |
| 存储温度/Storage Temperature Range                              | °C        | -40 to75                | -40 to75                 | -40 to75                |
| 工作条件 <sup>4</sup> /Operation Condition <sup>4</sup>         |           |                         |                          |                         |
| 冷却水流量/ Flow Rate                                            | L/min/Bar | 0.3~0.4                 | 0.3~0.4                  | 0.3~0.4                 |
| 冷却水要求/Cooling Water                                         | -         | DI water                | DI water                 | DI water                |
| 水压/Cooling Pressure                                         | Mpa       | ≤0.38                   | ≤0.38                    | ≤0.38                   |
| 过滤器规格/ Filter                                               | um        | 20                      | 20                       | 20                      |

<sup>1</sup> 在热沉 25 摄氏度下测得。Tested at 25°C heat sink.

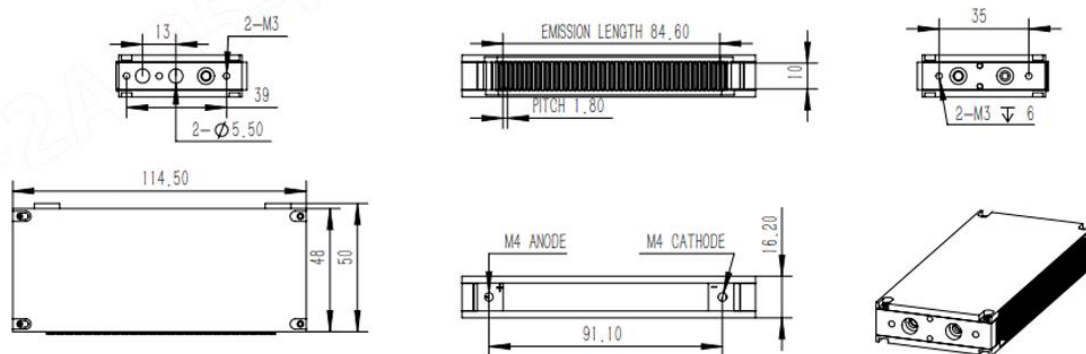
<sup>2</sup> 可根据客户定制。Others available upon request.

<sup>3</sup> 激光波长会随热沉工作温度变化产生漂移。Laser wavelength would shift when heat sink operating temperature is changed.

<sup>4</sup> 超规格使用会导致激光器寿命下降。Reduced lifetime if used above nominal operating condition.

外形尺寸/ Dimension

DG-VSC50-C5KW-808-Y :



Customized dimension available upon request

使用说明 Application Notes:

- 叠阵输出激光是不可见光，使用时须遵守 IEC 四级激光标准安全规范，避免激光直接或间接照射眼睛；  
The laser beam is invisible, please follow the standard safety procedures for IEC Class 4 lasers, avoid eyes exposure to radiation;
- 静电击穿导致半导体激光器失效，激光器安装人员须经过培训，操作时须佩戴防静电手腕带，工作台需接地；在供电连接头与激光器连接前，正负极应处于短接状态；  
ESD cause diode laser failure, The operator should be trained, wearing ESD grounding straps and the work surface should be grounded. The positive and negative poles shall be connected before the power supply is connected with the laser;
- 电流过冲可能损坏激光器，驱动电源须稳定无过冲。  
The current overshoot may damage the laser, and the driving power must be stable without overshoot.

