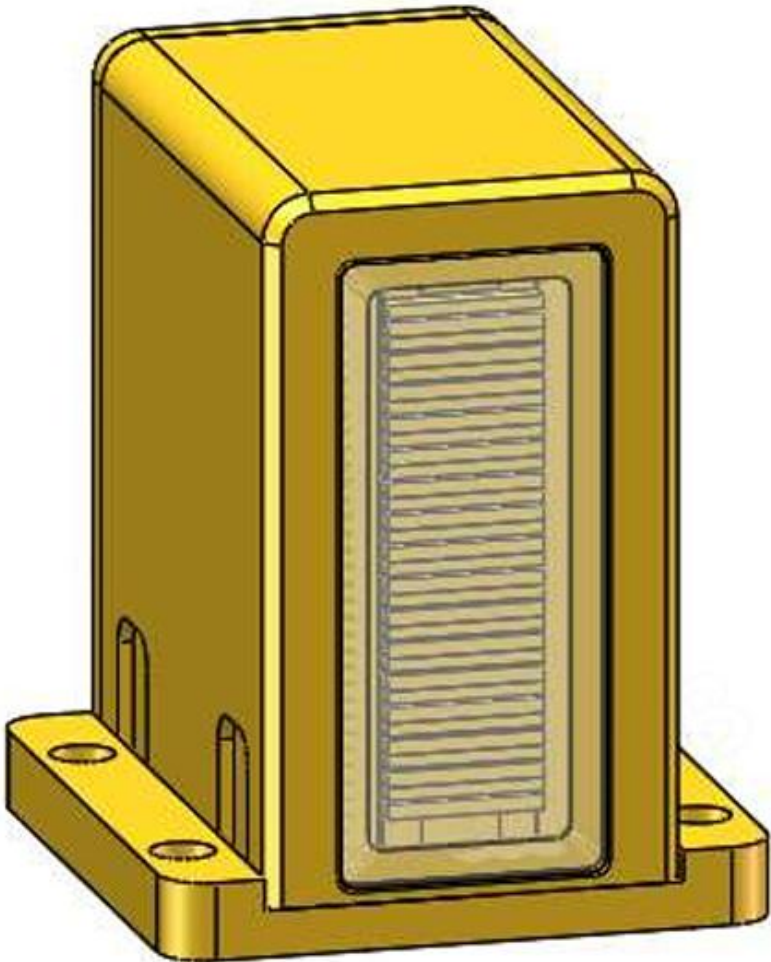


PN: DG-HL 系列

Macro-channel Design Diode Laser Stack

宏通道半导体激光叠阵



Version	Change Items	Released Date
Rev 1.0	Initial	2026.01.07

主要特性 Key Features:

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

应用领域 Application:

- 美容脱毛/ Hair removal

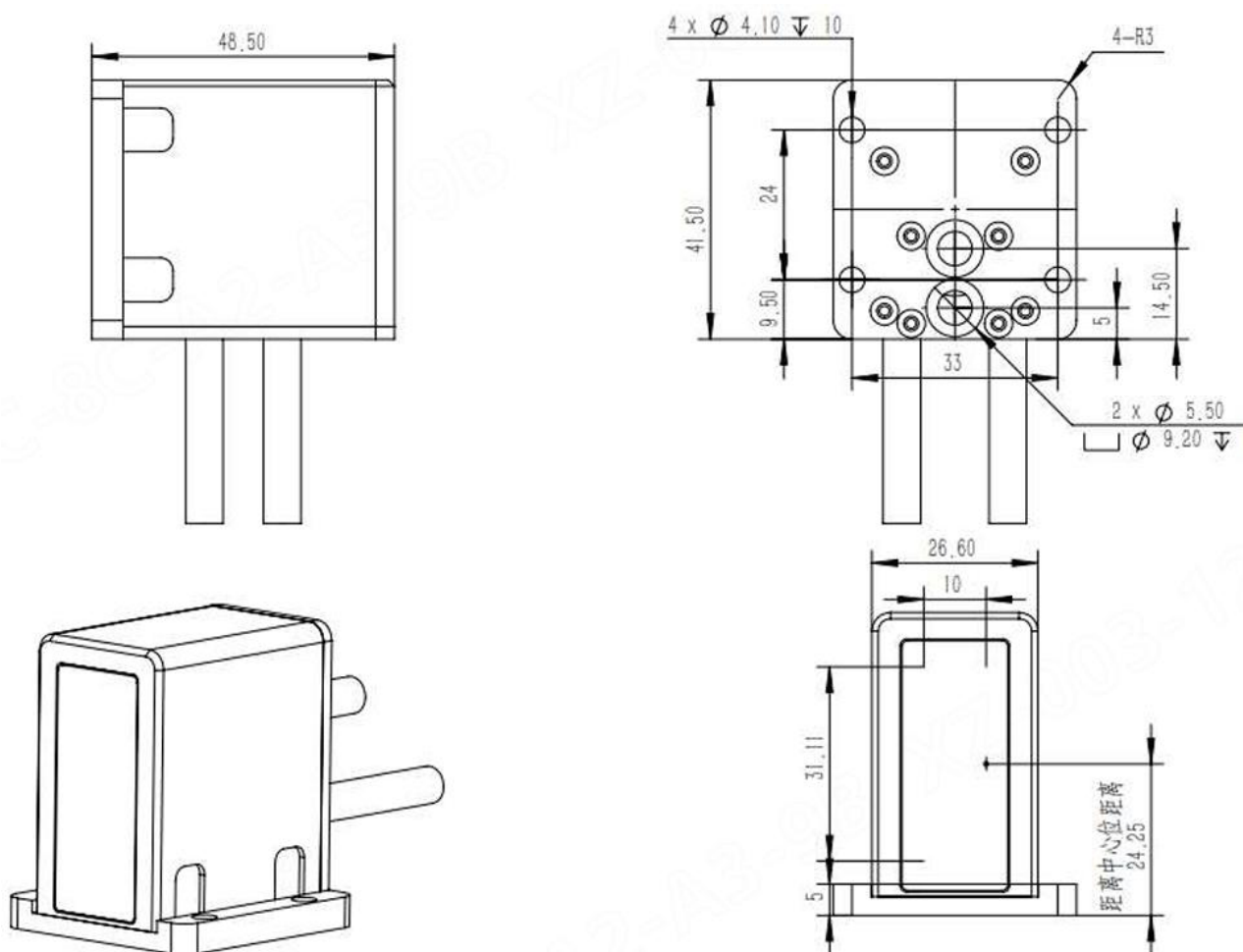
光学参数/ Optical Parameters	单位 /Unit	典型值/Typical DG-HL 系列	典型值/Typical DG-HL 系列
工作模式	-	QCW	QCW
输出峰值功率/Output Peak Power	W	300-800	600-1600
芯片数量/ Number of Bars	-	6-16	6-16
单巴功率/ Power	W	50	100
芯片间距/Pitch	mm	2.05	2.05
中心波长 λ^1 /Center Wavelength λ^1	nm	755/808/940/1064	755/808/940/1064
中心波长公差/Center Wavelength Tolerance	nm	± 10	± 10
快轴 90%能量发散角/F-Axis Divergence Angle	°	70	70
快轴 90%能量发散角(准直)/F-Axis Divergence Angle (Collimated)	°	5-7	5-7
慢轴 90%能量发散角/S-Axis Divergence Angle	°	12	12
偏振度/Polarization	-	TE	TE
电学性能/Electrical Parameters			
电光转换效率/Conversion Efficiency	%	≥ 55	≥ 55
阈值电流/Threshold Current	A	≤ 8	≤ 15
工作电流/Operating Current	A	≤ 50	≤ 100
工作电压(单巴)/Operation Voltage	V	≤ 2	≤ 2
热学性能/Thermal Parameters			
工作温度 T^2 /Operating Temperature Range ²	°C	20 to 30	20 to 30
存储温度/Storage Temperature Range	°C	-40 to 75	-40 to 75
温漂系数/Wavelength Temperature Coefficient	nm/°C	~ 0.3	~ 0.3
工作条件 3 /Operation Condition ³			
脉宽/ Maximum Pulse Width	ms	≤ 200	≤ 200
占空比/ Duty Cycle	%	≤ 20	≤ 20
冷却水流量/ Flow Rate	L/min	3.0	3.0
冷却水要求/ Cooling Water	-	蒸馏水/DI water	蒸馏水/DI water
水压/ Cooling Pressure	Mpa	0.5	0.5

¹ 在热沉 25 摄氏度下测得。Tested at 25°C cooling Temperature.

² 在不结露条件下使用和存储。No-condensing required for operation and storage.

³ 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



使用说明 Application Notes:

- 叠阵输出激光会伤眼睛，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 could hurt eyes, 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,

