

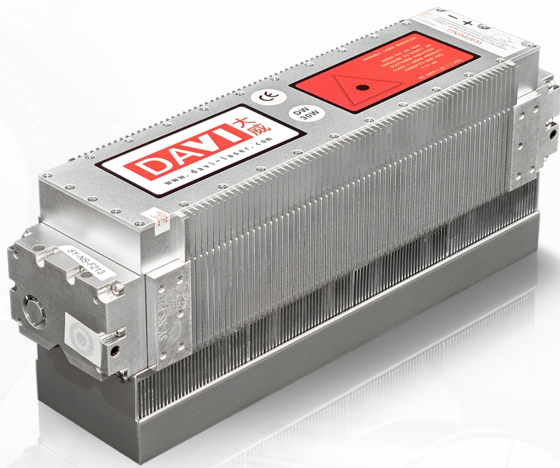
D30/35

二氧化碳射频激光器

Carbon dioxide RF laser

D30/35系列射频 CO₂ 激光器以高可靠性著称,其紧凑设计将射频电源与激光腔体集成于一体,确保了卓越的光束质量和功率稳定性。

The D30/35 series RF CO₂ lasers are well-known for their high reliability, featuring a compact design that integrates the RF power supply with the laser cavity. This configuration ensures excellent beam quality and power stability.



产品特点

- ◆ 光束质量卓越
- ◆ 功率输出稳定
- ◆ 射频电源与激光腔体一体化设计
- ◆ 可靠性高
- ◆ 支持风冷与水冷双模式
- ◆ 能对多种材料进行高质量激光加工

Product Features

- ◆ Excellent beam quality
- ◆ Stable power output
- ◆ Integrated design of RF power supply and laser cavity
- ◆ High reliability
- ◆ Both air and water cooling available
- ◆ Capable of high-quality laser processing on a variety of materials

应用场景

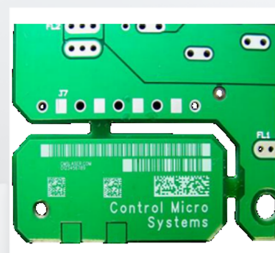
Application Scenarios



薄膜切割
PE film Cutting



饮料瓶标记
Beverage Bottle Marking



PCB打码
PCB boards Marking



纸板打标
Cardboard Marking

产品参数

Product parameter

参数 SPECIFICATIONS	型号 MODEL	D30/35i		D30/35		GMIT35
	波长(μm) Wavelength(μm)		9.3	10.2	10.6	
输出功率(W) ^① Optical Output Power(w) ^①		≥ 25W	≥ 35W	≥ 40W		≥ 38W
功率稳定性 ^{②③} Power Stability(%) ^{②③}				< ± 5%		< ± 4.5%
光束质量(M ²) Mode Quality (M ²)				M ² < 1.3		M ² < 1.15
光束椭圆度 Beam Ellipticity				< 1.2:1		< 1.15:1
光束直径(mm) Beam Size(mm)				1.8 ± 0.2		
光束发散角(mrad全角) Beam Divergence(mrad, full angle)				7.5 ± 0.5		
偏振(线性偏振, 平行于宽度) Polarization				> 100:1		
脉冲频率 Pulse Frequency (kHz)				0 ~ 25kHz		
占空比 Duty Cycle				0 ~ 100%		
重量 Weight				6.3kg(风冷Fan) / 5.6kg(水冷Water)		
尺寸: 长*宽*高(mm) Dimensions(mm)				359.2 × 92 × 140.1(风冷Fan) / 359.2 × 92 × 94.8(水冷Water)		
散热方式 Cooling				风冷Fan/ 水冷Water		
热负荷 Heat Dissipation(W)				< 600W		
电源要求 Input Power						
输入电压 DC Input Voltage (VDC)				48VDC		
输入电流 ^④ DC Input Current(A) ^④				12.5A		
环境条件 Environment Condition						
外壳最高温度 Maximum Case Temperature				< 55°C		
工作环境温度 Temperature				5°C ~ 35°C		
海拔高度 Altitude				< 2000m		
湿度 Humidity				无冷凝Non-Condensing		
航运和存储环境 Shipping/Storage Environment				-10°C ~ 60°C, 无冷凝Non-Condensing		
冷却水要求 Coolant						
流速 Dynamic Coolant Flow Rate(l/min)				4L/min		
最大压力 Coolant Maximum Static Pressure(kPa)				500kPa		
温度 Coolant Setpoint Temperature Range				20°C - 30°C		
硬度 (CaCO ₃) Hardness of water (CaCO ₃)				< 250mg/L		

以上规格如有变动, 恕不另行通知

说明:

① 激光输出功率在激光器温度25°C条件下测得, 高于25°C每上升1°C输出功率约降1%

② 功率稳定性定义: $\pm (P_{max}-P_{min})/(2P_{max})$

③ 功率稳定性测量条件: 在正常的工作环境下, 占空比恒定, 出光10分钟后

④ 在10 kHz的脉冲重复频率和100%占空比条件下, 测量最大平均输入电流

The above specifications are subject to change without prior notice

Notes:

① Measured at 25°C and derated by 1%/°C for higher laser head temperatures

② Power Stability definition: $\pm (P_{max}-P_{min})/(2P_{max})$

③ Measured at constant duty cycle after 10 minutes laser out operating condition

④ Measured at 10 kHz and 100% duty cycle operation, maximum average input current