精密曝光

紫外激光光源

UV Laser Source





紫外激光光源是将多颗半导体激光器耦合到光纤，多根光纤集束实现高功率输出。波长范围包括375nm、395nm、402nm、405nm、425nm、435nm等多个波段，高功率版本输出3W~150W，低功率版本输出300mw±5mW，有风冷或水冷两种散热系统。产品其有高稳定性，小型化、高效率、高功率、多波长选配和长寿命等优点，主要应用于PCB板线路曝光、阻焊曝光、泛半导体曝光、医疗美容、3D打印、明暗场检测、科研实验室等场景，可提供定制化设计。

The UV laser source couples multiple semiconductor lasers into optical fibers, and bundles fibers for high-power output. Covering wavelengths like 375 nm, 395 nm, 402 nm, 405 nm, 425 nm and 435 nm, it offers 3~150W (high-power) and 300 mW±5 mW (low-power) options, with air or water cooling systems.Featuring high stability, compact size, high efficiency, high power, selectable multi-wavelengths and long lifespan, it applies to PCB exposure, semiconductor lithography, medical aesthetics, 3D printing, inspection and research, with customizable designs available.

产品特点

空间耦合技术，峰值波长为375/395/402/405/425/435nm;
Space coupling technology, peak wavelength is 375/395/402/405/425/435nm;

TEC风冷或水冷，结构紧凑且易于维护;
TEC+ air cooling or liquid cooling, compact and easy to maintain;

寿命长，超过10000小时;
Life time is more than 10000 hours;

输出功率4W~60W@TEC风冷；3W~150W @水冷;
The output power 4W~60W @ TEC + air cooling, 3W~150W @ liquid cooling;

在寿命期间具有高稳定性;
High stability during the full life time;

PWM或CW输出;
PWM & CW working mode;

散斑对比缩小了4%。
Speckle contrast has been reduced by 4%.

应用场景

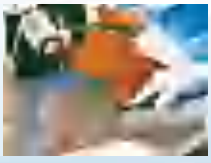
增材制造
Additive Manufacturing



光刻/激光直写
Lithography/
Laser Direct Imaging



半导体先进封装
Semiconductor
Packaging Lithography



生物检测
Biological Detection



微机电系统
MEMS Lithography



产品参数

技术参数 Technical Data	 紫外激光光源（水冷）	 紫外激光光源（水冷）	低散斑激光光源
型号 Model	LTH-wUV-38x/40x	LTH-wUV-40x	LTH-aUV-40x-LS
波长 Wavelength	375/395/402/405/425/435nm		402nm，波长带宽6nm@1/e² 402nm, Bandwidth is 6nm@1/e²
输出光功率 Optical Power	3W~150W	4W~60W	10w, 波动<1% 10w with fluctuation<1%
光纤 Fiber Parameter	集束光纤输出@0.22NA Bundle Fiber Output@0.22NA		SMA905(可定制)，Max NA0.22 SMA905(customizable), Maximum NA0.22
功率稳定性 Power Fluctuation	>99%		
工作电压 Operating Voltage	24V		
I/O	D-sub		
报警信息 Alarm	指示灯 / RS485 / RS232 Indicator light / RS485 / RS232		过温&过压 Over-Temperature & Over-Voltage Protection
冷却方式 Cooling System	水冷 Liquid Cooling		TEC+风冷 TEC+Air Cooling
寿命 Life Time	>10000hrs		
自保护功能 Safety Strategy	过温&电源过压保护 Over-Temperature & Over-Voltage Protection		
工作温度/湿度 Operating Temperature/Humidity	+10℃~+30℃ / <70%RH		
储存温度 Storage Temperature	+10℃~+60℃		