

股票代码：688025

半导体激光器

Semiconduct Laser

深圳市杰普特光电股份有限公司

SHENZHEN JPT OPTO-ELECTRONICS CO., LTD.



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目录

CONTENT

01 公司简介.....	P2
Company Profile	
02 行业地位.....	P3
Industry Status	
03 产品介绍.....	P4
Product Presentation	
915nm系列半导体激光器	P5
915nm series(customizable)	
976nm系列半导体激光器	P7
976nm series(customizable)	
808nm系列半导体激光器	P9
808nm series(customizable)	
880nm系列锁模半导体激光器	P11
880nm series(customizable)	
COS封装半导体激光器	P13
COS encapsulated semiconductor laser	
半导体激光器JPT-30W/50W/200W	P15
semiconductor laser JPT-30W/50W/200W	
硅片透射系列检测模组	P17
Silicon transmission series detection module	
04 激光维修中心.....	P18
Laser Repair Center	

公司简介 COMPANY PROFILE

深圳市杰普特光电股份有限公司(股票代码：688025)成立于2006年，是一家集研发、生产和销售激光器、激光/光学智能装备和光纤器件于一体的国家级高新技术企业。经过多年发展，公司搭建了国际化的研发、营销平台，产品和服务覆盖全球。公司以激光核心技术为基础，打造激光与光学、测试与测量、运动控制与自动化、机器视觉等技术平台，持续为客户创造价值。

杰普特坚持走自主知识产权的道路，已申请600余件专利及软件著作权，其中发明专利200余项。公司拥有一支由多位海外留学归国博士及国内知名大学博士、硕士为核心组成的优秀的顾问、管理、研发及销售团队，公司拥有博士30余人，硕士80余人，并且拥有先进的生产设备、配套齐全的研发测试设备。

作为中国首家商用脉宽可调高功率光纤激光器生产制造商，公司坚持“激光+”的定位，深耕核心激光技术，聚焦激光核心模块，围绕消费电子、泛半导体、新能源、生物医疗等重点领域，可为客户提供全品类、各波段、不同模式的光纤激光、固体激光、超快激光等产品，激光精密焊接、脆性材料精密加工、半导体模组检测及标刻、被动元器件、FPC/PCB打孔等专用设备技术解决方案，为先进制造提供动力之源。



Registered in 2006, Shenzhen JPT Opto-electronics Co., Ltd. is a National High-tech Enterprise. The company focuses on the R&D, production, sales, and technical services of lasers, intelligent equipments and optical devices. Based on laser technologies, JPT integrates leading technologies such as optics and measurement, motion control and machine vision, to create value for the customers.

JPT highly values intellectual property and has applied for more than 600 patents & software copyrights. The company is being led by the excellent consultants, management, R&D and sales team, where the key team members consist of several Ph.Ds and Masters from global famous universities and research institutes. JPT is equipped with advanced production equipment and a full range of R&D equipment.

As the first manufacturer of MOPA fiber lasers in China, JPT adheres to the positioning of "laser +", to develop core laser technologies and focus on the laser core modules. Surrounding the key fields of consumer electronics, pan-semiconductors, new energy and bio-medical, JPT provides customers with diverse series of fiber lasers, solid lasers and ultra-fast lasers of various wavelength and modes. JPT provides thorough laser solutions, including precision welding, precision cutting and drilling, inspection and marking of semiconductor modules, passive components, FPC/PCB drilling and etc.

2006 年成立
Registered in 2006

600+ 余件专利及著作权
More than 600 patents & software copyrights.

行业地位

INDUSTRY STATUS

激光技术领导者
The leading manufacturer of laser technology



MOPA脉冲光纤激光器
全球领先

Global leading manufacturer of
MOPA pulsed fiber laser



工业激光器
品类最全

The most complete variety
of industry lasers



激光精密切割、焊接技术
全球领先

Leading laser technology of
precision cutting and welding

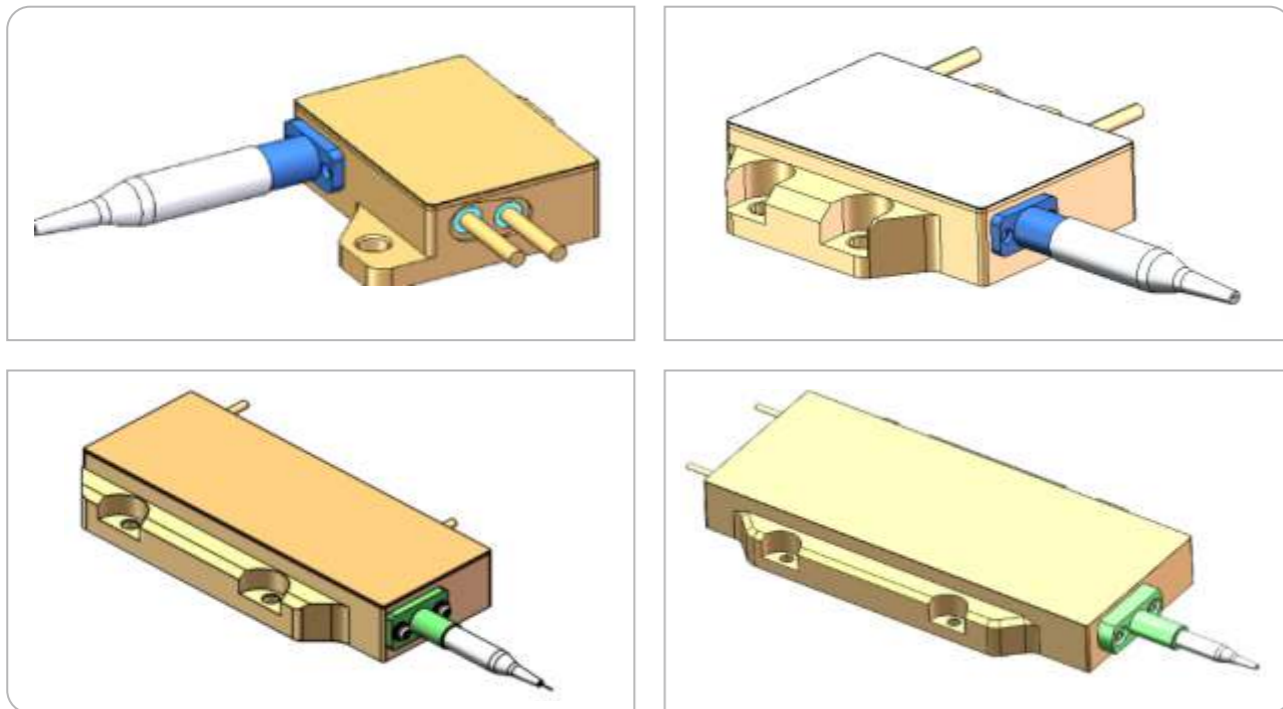


产品介绍

PRODUCT PRESENTATION

 <p>半导体激光器 Semiconduct Laser</p>	
 <p>脉冲光纤激光器 MOPA Fiber Laser</p>	
 <p>连续光纤激光器 CW Fiber Laser</p>	
 <p>固体激光器 DPSS Laser</p>	

915nm系列半导体激光器 915nm series (customizable)

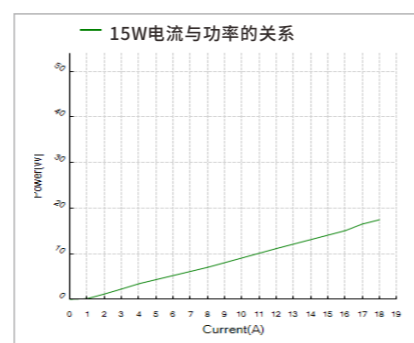


产品描述/ Product Description

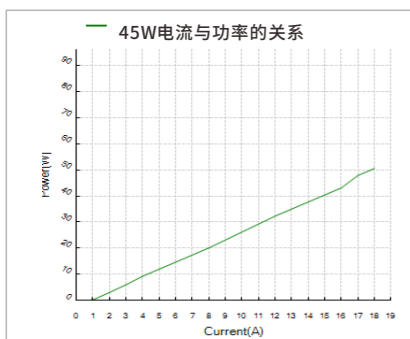
915nm系列光纤耦合高功率二极管激光器
915nm series Fiber Coupled High Power Diode Laser

应用优势/ Application Advantages

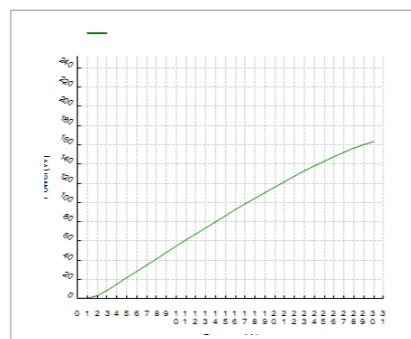
- 多单管耦合, 高可靠性
Multiple single emitter based diode laser, high reliability
- 1040-1200nm防反射保护
1040-1200nm feedback protection



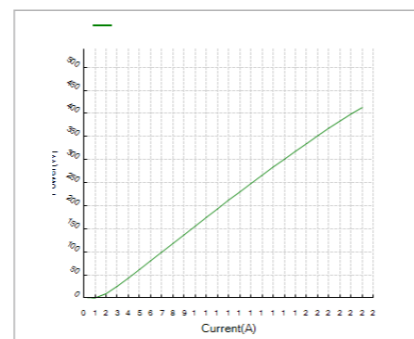
15W功率趋势



15W/45W功率趋势



150W/370W功率趋势



规格指标/ Specification

参数单元 Parameter Unit	参数 Parameter				
系列型号 Product Model	915-15W	915-45W	915-150W	915-480W	可定制
输出功率 Output Power	15W	45W	150W	480W	
中心波长 Central Emission Wavelength	915nm		915nm		
半波全宽 Spectral Width(FWHM)	6nm	6nm	6nm	6nm	
95%出光NA 95% Power Within NA	0.18NA		0.2NA		
防返波段 Back Reflection Isolation Range	1040-1200nm		1040-1200nm		
电光转换效率 Conversion Efficiency	50%		50%		
阈值电流 Threshold Current	1.3A		1.3A		
工作电流 Operating Current	18A		30A		
工作电压 Operating Voltage	1.75V	5.5V	10.5V	33V	
纤芯直径 Core Diameter	105μm		135μm	200μm	
包层直径 Fiber Clad Diameter	125μm		155μm	200μm	
工作温度 Operating Temp	15°C~40°C		15°C~40°C		
存储温度 Storage Temp	-20°C~85°C		-20°C~85°C		
温漂系数 Wavelength Temperature Coefficient	0.3nm/°C		0.3nm/°C		
三维尺寸(WxDxH) Three-Dimensions	62.5mm*29mm*10.02mm	71mm*42mm*11.02mm	122.5mm*48mm*17mm	213.5mm*72mm*21.65mm	
重量 Weight	≈40g	≈87.8g	≈360g	≈1300g	

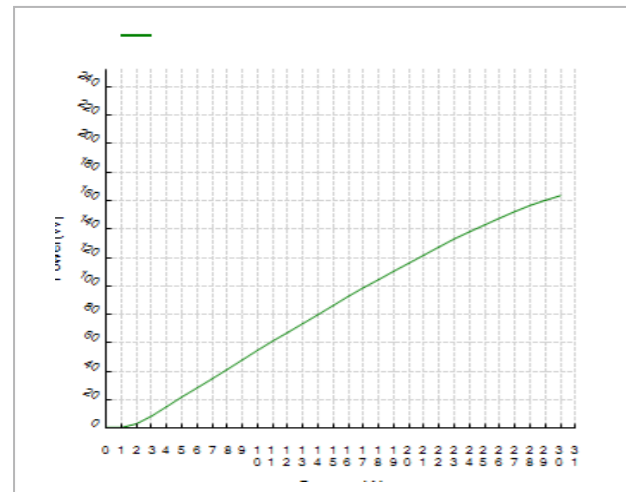
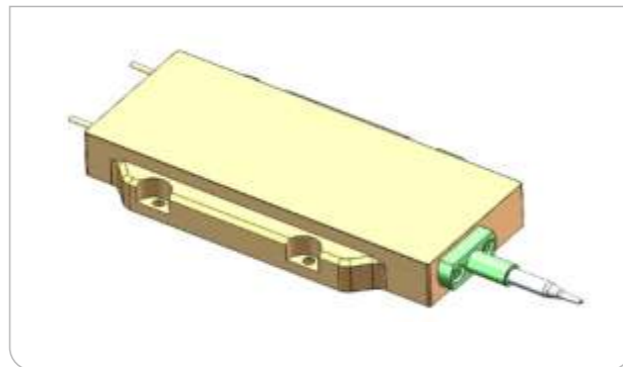
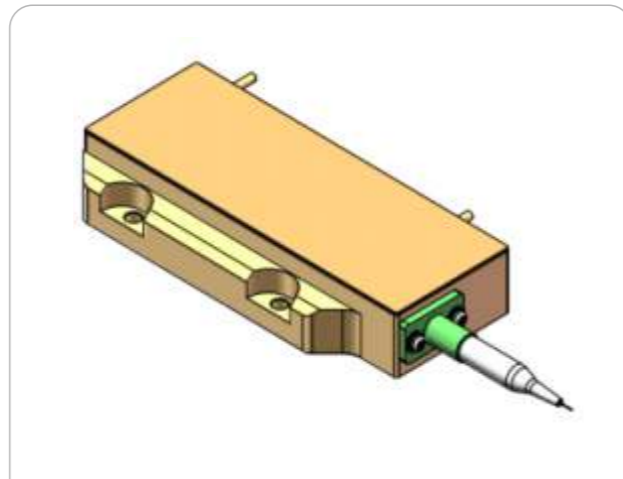
976nm系列半导体激光器 976nm series (customizable)

产品描述/ Product Description

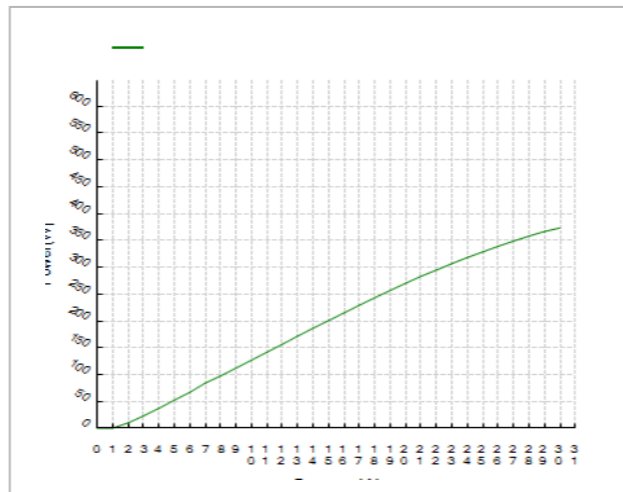
976nm系列光纤耦合高功率二极管激光器
976nm series Fiber Coupled High Power Diode Laser

应用优势/ Application Advantages

- 多单管耦合, 高可靠性
Multiple single emitter based diode laser, high reliability
- 1040-1200nm防反射保护
1040-1200nm feedback protection



150W功率趋势



420W功率趋势

规格指标/ Specification

参数单元 Parameter Unit	参数 Parameter				
系列型号 Product Model	976-150W	976-200W	976-280W	976-450W	可定制
输出功率 Output Power	150W	200W	280W	450W	
中心波长 Central Emission Wavelength	976nm		976nm		
半波全宽 Spectral Width(FWHM)	6nm	6nm	6nm	6nm	
95%出光NA 95% Power Within NA	0.2NA		0.2NA		
防返波段 Back Reflection Isolation Range	1040-1200nm		1040-1200nm		
电光转换效率 Conversion Efficiency	48%		48%		
阈值电流 Threshold Current	1.6A		1.6A		
工作电流 Operating Current	30A		30A		
工作电压 Operating Voltage	10.5V	16V	22.5V	33V	
纤芯直径 Core Diameter	135μm		135μm	200μm	
包层直径 Fiber Clad Diameter	155μm		155μm	220μm	
工作温度 Operating Temp	15°C~40°C		15°C~40°C		
存储温度 Storage Temp	-20°C~85°C		-20°C~85°C		
温漂系数 Wavelength Temperature Coefficient	0.3nm/°C		0.3nm/°C		
三维尺寸(WxDxH) Three-Dimensions	122.5mm*48mm*17mm	168.5mm*72mm*20.65mm	213.5mm*72mm*21.65mm	213.5mm*72mm*21.65mm	
重量 Weight	≈360g	≈1110g	≈1300g	≈1300g	

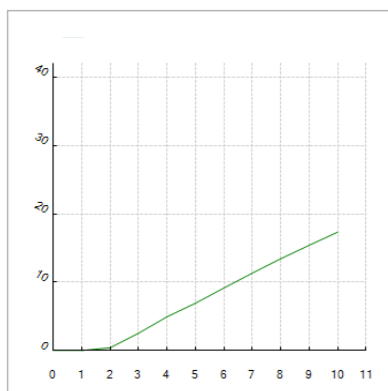
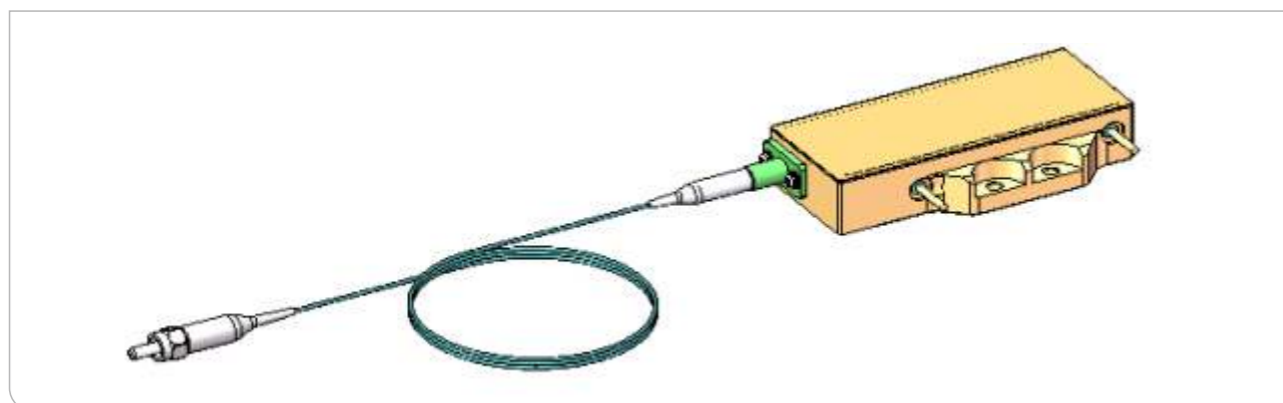
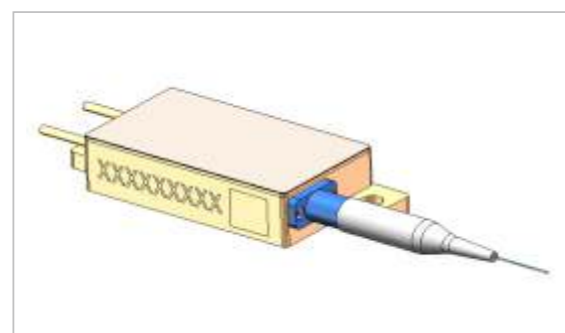
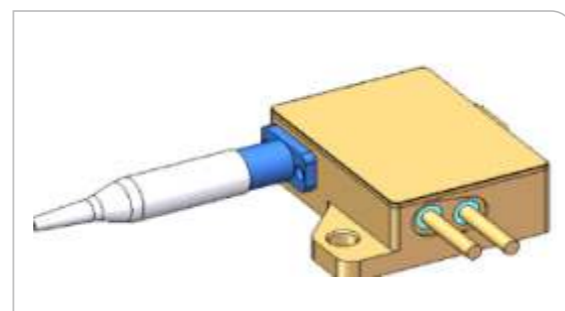
808nm系列半导体激光器 808nm series (customizable)

产品描述/ Product Description

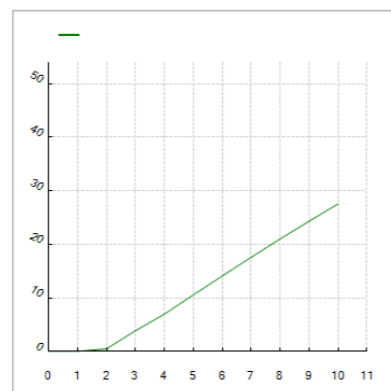
808nm系列光纤耦合高功率二极管激光器
808nm series Fiber Coupled High Power Diode Laser

应用优势/ Application Advantages

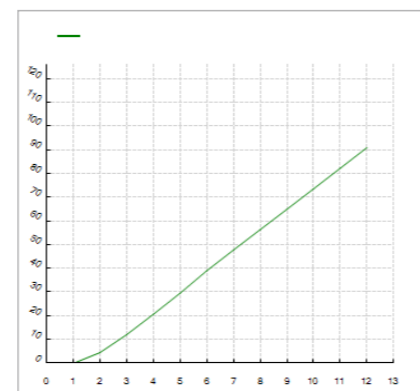
- 多单管耦合, 高可靠性
Multiple single emitter based diode laser, high reliability
- 1040-1200nm防反射保护
1040-1200nm feedback protection



16W功率趋势



25W电流功率趋势



50W电流功率趋势

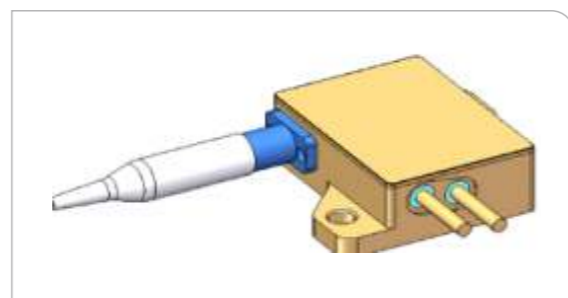
规格指标/ Specification

参数单元 Parameter Unit	参数 Parameter				
系列型号 Product Model	808-8W	808-16W	808-25W	808-50W	可定制
输出功率 Output Power	8W	16W	25W	50W	
中心波长 Central Emission Wavelength	808nm		808nm		
半波全宽 Spectral Width(FWHM)	6nm	6nm	6nm	6nm	
95%出光NA 95% Power Within NA	0.22NA		0.22NA		
防返波段 Back Reflection Isolation Range	1040-1200nm		1040-1200nm		
电光转换效率 Conversion Efficiency	50%		50%		
阈值电流 Threshold Current	1.8A		1.8A		
工作电流 Operating Current	12A		12A		
工作电压 Operating Voltage	1.8V	3.6V	5.4V	14.5V	
纤芯直径 Core Diameter	400μm		400μm		
包层直径 Fiber Clad Diameter	440μm		440μm		
工作温度 Operating Temp	15°C~40°C		15°C~40°C		
存储温度 Storage Temp	-20°C~85°C		-20°C~85°C		
温漂系数 Wavelength Temperature Coefficient	0.3nm/°C		0.3nm/°C		
三维尺寸(WxDxH) Three-Dimensions	62.5mm*29mm*10.02mm	71mm*42mm*11.02mm	77mm*38.5mm*10.95mm	122.5mm*48mm*17mm	
重量 Weight	≈40g	≈87.8g	≈92g	≈310g	

880nm系列锁模半导体激光器 880nm series (customizable)

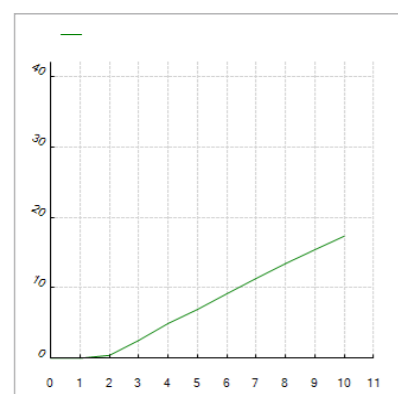
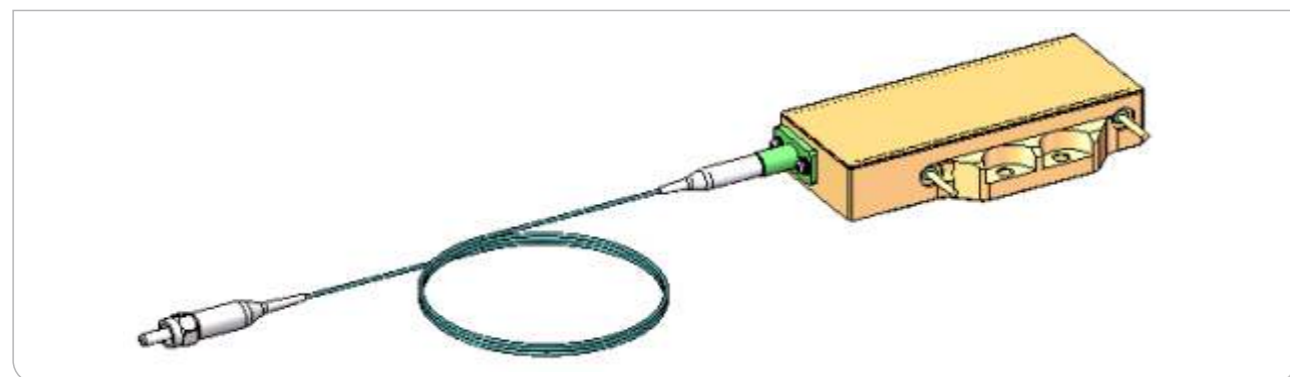
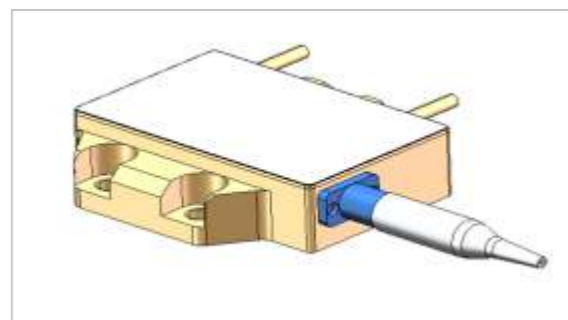
产品描述/ Product Description

880nm系列光纤耦合高功率二极管激光器
880nm series Fiber Coupled High Power Diode Laser

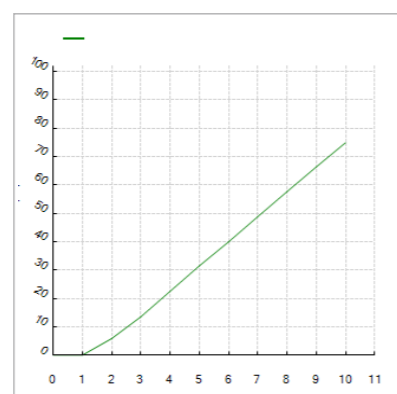


应用优势/ Application Advantages

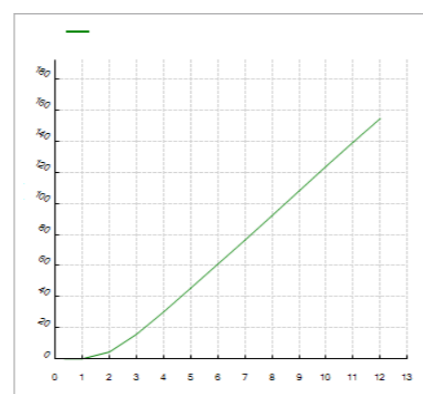
- 878.6nm稳波
878.6nm Wavelength-Stabilized
- 多单管耦合, 高可靠性
Multiple single emitter based diode laser, high reliability
- 1040-1200nm防反射保护
1040-1200nm feedback protection



16W功率趋势



65W电流功率趋势



120W电流功率趋势

规格指标/ Specification

参数单元 Parameter Unit	参数 Parameter				
系列型号 Product Model	880-8W	880-30W	880-65W	880-120W	可定制
输出功率 Output Power	8W	30W	65W	120W	
中心波长 Central Emission Wavelength	878.6nm		878.6nm		
半波全宽 Spectral Width(FWHM)	0.5nm	0.5nm	0.5nm	0.5nm	
95%出光NA 95% Power Within NA	0.22NA		0.22NA		
防返波段 Back Reflection Isolation Range	1040-1200nm		1040-1200nm		
电光转换效率 Conversion Efficiency	50%		50%		
阈值电流 Threshold Current	1.8A		1.8A		
工作电流 Operating Current	12A		12A		
工作电压 Operating Voltage	1.8V	3.6V	14.5V	21.5V	
纤芯直径 Core Diameter	400μm		400μm		
包层直径 Fiber Clad Diameter	440μm		440μm		
工作温度 Operating Temp	15°C~40°C		15°C~40°C		
存储温度 Storage Temp	-20°C~85°C		-20°C~85°C		
温漂系数 Wavelength Temperature Coefficient	0.03nm/°C		0.03nm/°C		
三维尺寸(WxDxH) Three-Dimensions	62.5mm*29mm*10.02mm	77mm*38.5mm*10.95mm	119.5mm*48mm*17mm	163.5mm*48.5mm*20.65mm	
重量 Weight	≈40g	≈92g	≈310g	≈638g	

COS封装半导体激光器

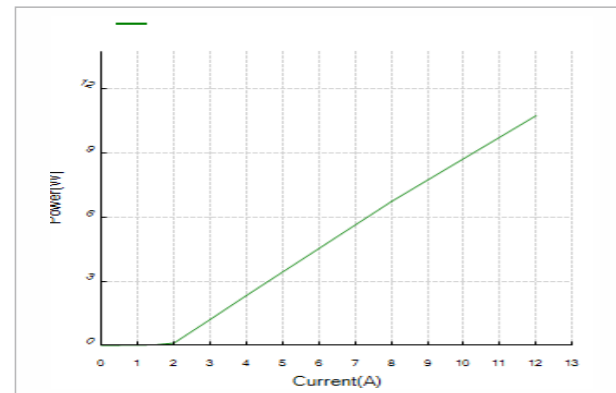
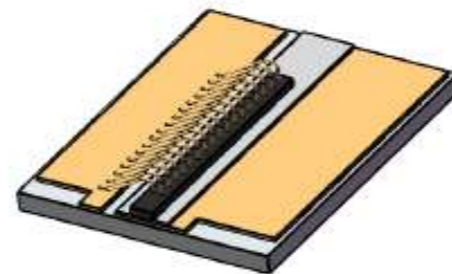
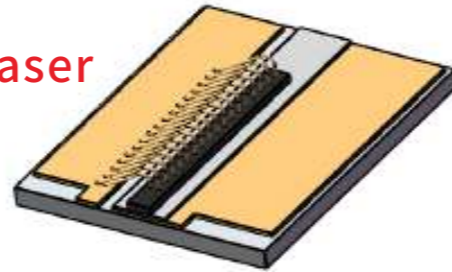
COS encapsulated semiconductor laser

产品描述/ Product Description

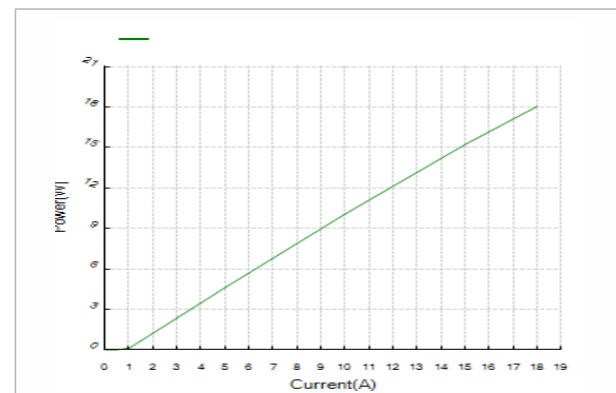
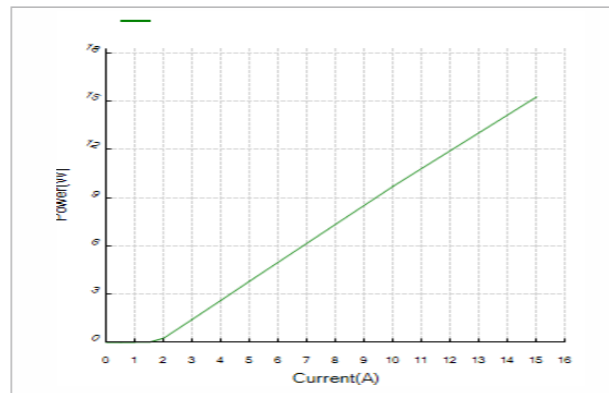
COS封装半导体激光器
COS encapsulated semiconductor laser

应用优势/ Application Advantages

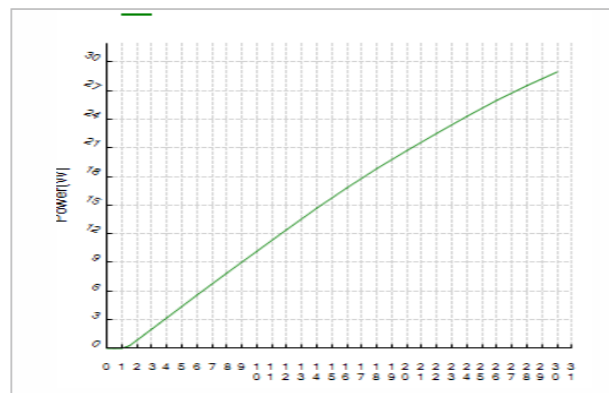
- 230μm发光面宽度
230μm luminous surface width
- 高偏振态可用于偏振合束
High polarization states can be used to polarize the beam
- 高稳定性, 高可靠性
High stability, high reliability



808-10W/880-15W电流功率趋势



915-19W/976-30W电流功率趋势

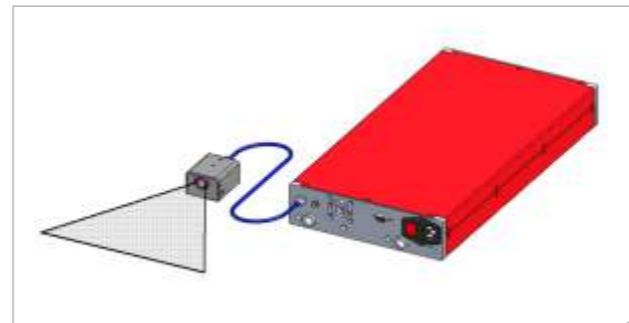
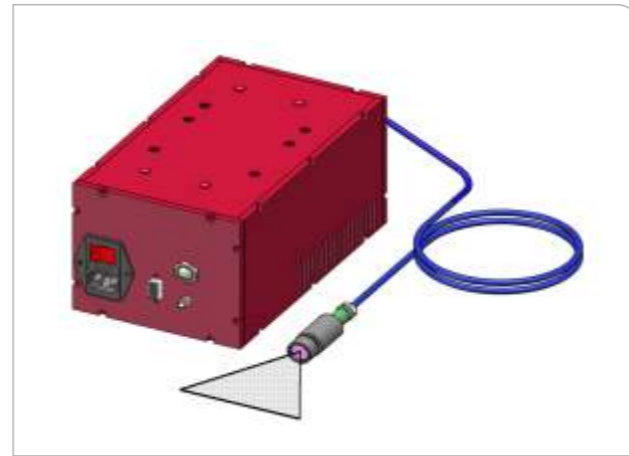
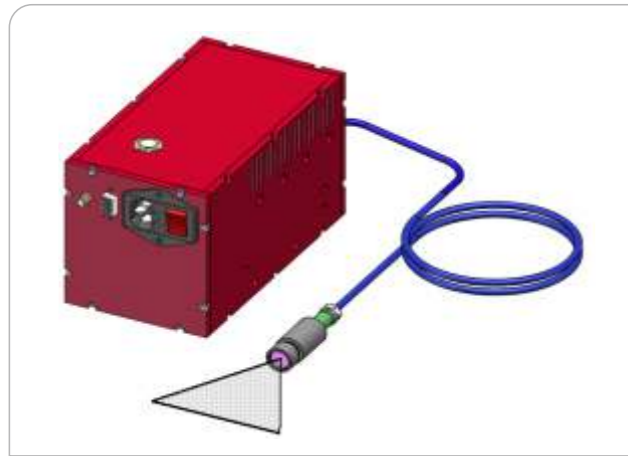


规格指标/ Specification

参数单元 Parameter Unit	参数 Parameter				
系列型号 Product Model	808	880	915	976	可定制
输出功率 Output Power	8~10W	10~15W	12~35W	12~35W	
中心波长 Central Emission Wavelength	808nm	878nm	915nm	976nm	
阈值电流 Threshold Current	1~1.8A	1.5A	0.6~1.8A	0.6~1.8A	
工作电流 Operating Current	8.5~11A	11~15A	12~35A	12~35A	
工作电压 Operating Voltage	1.75V		1.75V		
快轴发射角 (95%) Vertical Far field 95% PIB[deg]	58°		58°		
慢轴发射角 (95%) Lateral Far field 95% PIB[deg]	11°		11°		
斜率效率 Slope efficiency	1.1		1.03		
电光转换效率 Conversion Efficiency	52~54%	52~57%	55~57%	55~57%	
中心波长 (2A波长) Wavelength Center (I=2A)	800-804	874~872	903-915	903-915	
半波全宽 Spectral Width(FWHM)	3nm		3nm		
偏振态 Polarisation ratioTE/(TM+TE)	95%				
发光面宽度 Emitter Width	200~400um	400~200um	96~230um	100~230um	
焊接温度 Welding Temperature	≤260°C		≤260°C		
工作温度 Operating Temp	15°C~85°C		15°C~85°C		
存储温度 Storage Temp	0°C~70°C		0°C~70°C		
温漂系数 Wavelength Temperature Coefficient	0.3nm/°C		0.3nm/°C		
三维尺寸(WxDxH) Three-Dimensions	4.80mm*4.05mm*0.458mm	4.80mm*4.05mm*0.458mm	4.80mm*4.05mm*0.458mm	4.80mm*4.05mm*0.458mm	
重量 Weight	<1g	<1g	<1g	<1g	

JPT-30W/50W/200W

半导体激光器 semiconductor laser

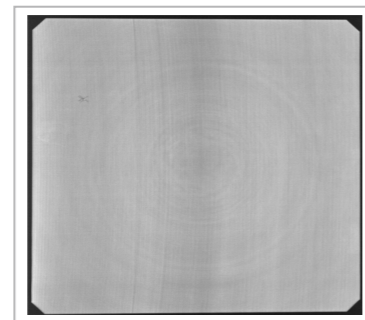


应用优势/ Application Advantages

- 可以根据客户需求定制不同功率输出产品
Different power output products can be customized according to customer needs
- 光斑均匀度高, 有利于相机捕捉荧光成像
The spot uniformity is high, which is conducive to the camera's catch fluorescence imaging
- 可以根据不同工作距离配置不同的激光器镜头
Different laser lenses can be configured according to different working distances
- 软件控制出光容易扩展应用
Software control out of the light easy to expand the application



JPT-30W/50W相机捕捉示意图



JPT-200W相机捕捉示意图

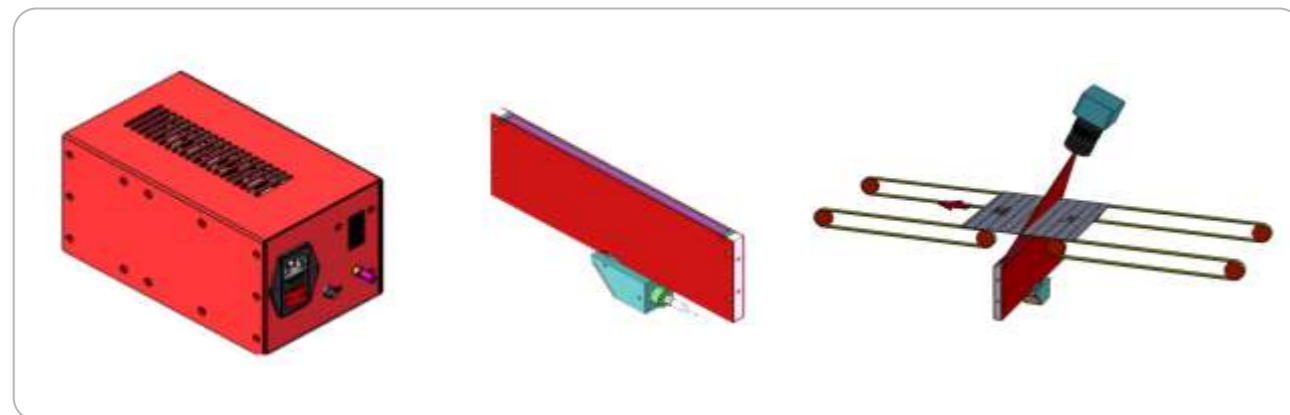
规格指标/ Specification

参数单元 Parameter Unit	参数 Parameter		
系列型号 Product Model	JPT-30W	JPT-50W	JPT-200W
输出功率 Output Power	30W	50W	200W
中心波长 Central Emission Wavelength	808nm		915nm
中心波长偏差 Center wavelength deviation	±5	±5	±10
典型工作距离 Typical working distance	230mm-260mm	230mm-260mm	230mm-260mm
可检硅片尺寸 The size of the silicon wafer can be checked	≤230mm	≤230mm	≤230mm
配电需求 Distribution demand	220V	220V	220V
IO接口 IO interface	白 0-24V+/黑 0-0.5V- White 0-24V+/ Black 0-0.5V-	白 0-24V+/黑 0-0.5V- White 0-24V+/ Black 0-0.5V-	白 0-24V+/黑 0-0.5V- White 0-24V+/ Black 0-0.5V-
平均功耗 Average Power Consumption	100W	130W	560W
出光控制方式 Outgoing light control mode	GUI/IO接口IO interface	GUI/IO接口IO interface	GUI/IO接口IO interface
功率调节方式 Power regulation moder	GUI	GUI	GUI
工作温湿度 Operating Temp.&RH	20°C~30°C; <80%	20°C~30°C; <80%	20°C~30°C; <80%
激光器三维尺寸 Three-Dimensional Size	205mm*111mm*123mm (L*W*H)	232mm*140mm*122mm (L*W*H)	450mm*235mm*70mm (L*W*H)
重量 Weight	≈4kg	≈5kg	≈10kg
使用寿命 Service life	8000H	8000H	8000H
适用工艺 Applicable technology	硅片镀膜后工艺	硅片扩散后工艺	硅原片以后工艺
冷却方式 Cooling Method	风冷	风冷	水冷

JPT-10W-1064-01

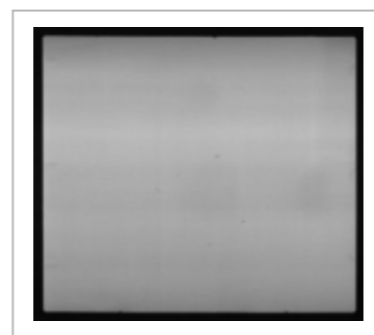
硅片透射系列检测模组

Silicon transmission series detection moduler



应用优势/ Application Advantages

- 硅片透射系列检测模组以激光穿透为基本原理, 实现全工艺硅片的隐裂和崩边缺角检测
Silicon wafer transmission series detection module based on laser penetration as the basic principle, to achieve the full process of silicon wafer hidden cracks and edge collapse Angle detection.
- 激光出光头与控制箱分体版本, 配合高清线扫相机可完成自制绒下料开始的所有工艺段的隐裂、崩边、脏污检测
Laser head and control box split version, with high-definition line scan camera can complete the hidden crack, edge collapse, dirt detection of all process segments starting from the self-made pile



相机捕捉示意图

规格指标/ Specification

参数单元 Parameter Unit	参数 Parameter	参数单元 Parameter Unit	参数 Parameter
激光器类型 Laser Type	JPT-10W-1064-01	平均功耗 Average Power Consumption	150W
型号 Model Number	15W	出光控制方式 Outgoing light control mode	GUI/编码开关Code switch IO接口IO interface
中心波长 Wavelength	1100nm	功率调节方式 Power regulation mode	GUI/编码开关Code switch
中心波长偏差 Center wavelength deviation	±5	工作温湿度 Operating Temp.&RH	20°C~35°C; <80%
平均功率 Mean Power	15W	控制器三维尺寸 Three-Dimensional Size	218mm*122mm*111mm (L*W*H)
典型工作距离 Typical working distance	10mm-25mm	光学模组三维尺寸 Three-Dimensional Size	316mm*33mm*138mm (L*W*H)
出光口尺寸 Dimensions of the optical outlet	280mm*10mm	重量 Weight	≈4kg
可检硅片尺寸 The size of the silicon wafer can be checked	≤230mm	使用寿命 Service life	8000H
配电需求 Distribution demand	220V	适用工艺 Applicable technology	硅原片及制绒后的硅片
IO接口 IO interface	白0-24V+/黑0-0.5V- White 0-24V+/ Black 0-0.5V-		

激光维修中心 Laser Repair Center

激光服务中心拥有全国最先进的激光器检测维修设备与专业的技术人员。我们将围绕时间满意、过程满意、结果满意的三个标准, 为您提供超预期值的高端服务体验, 全面为您保驾护航! 您可以通过售后服务人员、400-880-1002电话、微信小程序等多渠道联系我们。我们将7X24在线, 迅速解决您的使用问题!

JPT laser service center with the advanced instruments and equipment and most professional engineer team. Follow the standards: Time Satisfaction, Process Satisfaction, Result Satisfaction, offer customer the best of best service support, fully ensure the best experience to use JPT products. Service Engineer, 400 Hotline, Wechat App and others all can reach us easily, service be 7*24hrs online to solve your problem at first time.

售后 Service Team



维修 Maintenance



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JPT



企业使命 MISSION

推动智造进步，共创美好未来
Advancing Intelligent Manufacturing for a Common Bright Future.



企业愿景 VISION

以激光核心技术驱动，持续为客户创造价值
Drive with Core Technologies of Laser, Continuously Create Value for Customers.



核心价值观 VALUE

诚信创新、心怀梦想、追求卓越、协同共赢
Innovate with Integrity, Dream Big, Pursue Excellence, Collaborate to Succeed