



紧凑的带远程控制系统的半导体激光器（可 OEM 定制）

产品简介

iFLEX-Q3™激光器包含一个小型激光头和远程控制模块。基于主动的温度控制，使其输出波长异常稳定，无任何跳模现象。得益于异常紧凑的激光器封装设计，使得这款产品非常适用于狭小空间应用。

产品特点

超长的**寿命**

优异的**功率稳定性**

结构紧凑，坚固耐用

光束质量好

低噪声

输出功率高达 100mW

可根据客户需求**量身定制**

技术参数

激光器													单位	
波长	375	405	445	473	488	515	640	660	670	780	830		Nm	
功率	15	50,85	40	10	50	20	35,00	60	8	60	100		mW	
光学参数														
中心波长													±5	Nm
功率稳定性													<2	%
光学噪声 (20Hz to 2MHz) rms ²													<0.1	%
光学噪声 (20Hz to 2MHz) pk to pk ²													<1	%
电学参数														
电源													12V DC,0.5A(laser) 5V,3A max,1A running(TE Controller)	-
底板温度													<40	°C
散热需求													<12.5	W
光束参数														
偏振比													≤-27	dB
光束直径													^a 2.2 (vertical) x 0.7 (horizontal) ^b 2.1 (vertical) x 0.9 (horizontal) ^c 1.6 (vertical) x 0.9 (horizontal) ^d 2.0 (vertical) x 0.9 (horizontal)	Mm
光束质量 M ²													Typ 1.1	-
指向稳定性													≤5	μ Rad/°C
发散角													衍射极限	-
准直器尺寸													Φ12X50	Mm
光束位置													≤ ±0.25	Mm
光束角度													≤ ±0.5	mRad
工作环境条件														
存储温度													10 to 50	°C
工作压力													标准大气压	
工作温度													10 to 40	°C
工作湿度													无水凝结	-

Datasheet

Compact laser diode module - iFLEX-Q3

diode laser system is guaranteed for long lifetime and delivers exceptional power stability with low amplitude noise. All models feature an interlock and output diagnostics for laser current and temperature as standard.

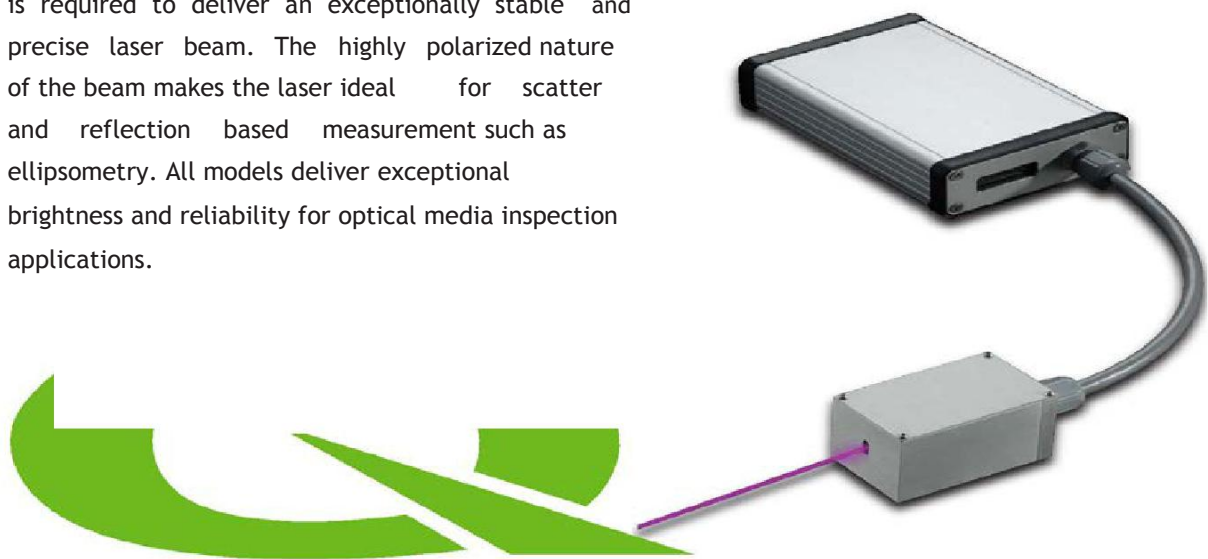
All lasers feature diffraction limited collimated output beams with elliptical profiles as standard. Customized options for circular beam profiles are available. A feature of this laser is low dynamic pointing error and precise static beam alignment tolerances.

The iFLEX-Q3 is compatible with a number of commercially available imaging software packages such as Olympus cell[^]R™, MetaMorph® and μManager and a number of add-on interfaces ensure a complete solution for all microscope systems.

The laser has been designed for integrated measurement applications where a small optical head is required to deliver an exceptionally stable and precise laser beam. The highly polarized nature of the beam makes the laser ideal for scatter and reflection based measurement such as ellipsometry. All models deliver exceptional brightness and reliability for optical media inspection applications.

Some of the product features include:

- Available in powers up to 100mW
- Available wavelengths are 375, 405, 445, 473, 488, 515, 640, 660, 670, 780, 830nm
- Compact laser head footprint for limited space applications
- Customizable umbilical connector cable lengths
- Modulation capability on request
- OEM versions available upon request



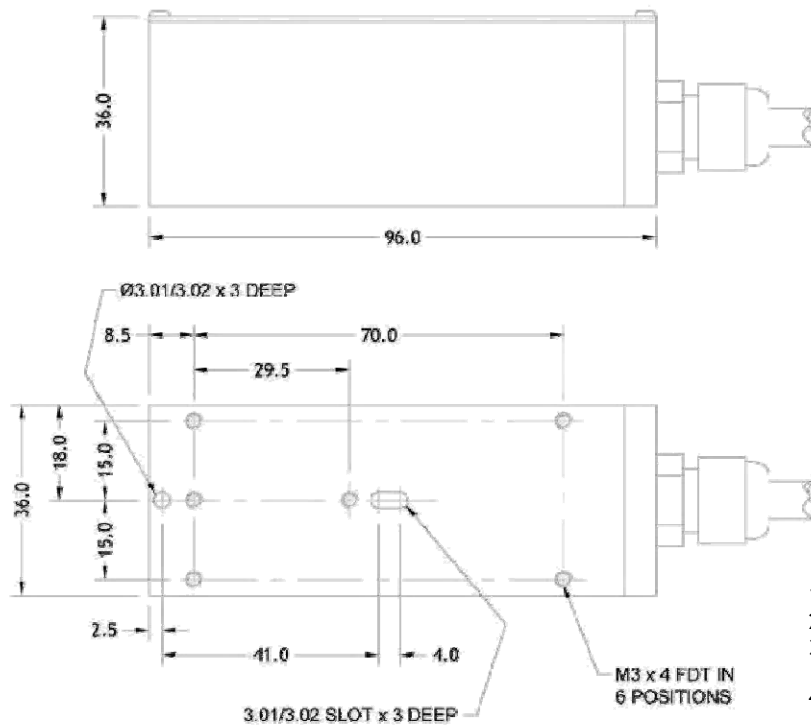
Technical Specifications

Lasers												units	
Wavelength	375 _a 405 _b		445 _a	473 _a	488 _b 640 _c		515 _b	660 _c	670 _a	780 _d	830 _d	nm	
Output power	15	50, 85	40	10	5 0	20	35, 100	60	8	60	100	mW	
Centre wavelengths												± 5	nm
Optical power stability												< 2% (over 8 hours)	-
Optical Noise (20Hz to 2MHz) rms*												< 0.1	%
Optical Noise (20Hz to 2MHz) pk to pk*												< 1	%
Laser beam parameters													
Polarization ratio												≤ -27	dB
Beam diameter												a 2.2 (vertical) x 0.7 (horizontal) b 2.1 (vertical) x 0.9 (horizontal) c 1.6 (vertical) x 0.9 (horizontal) d 2.0 (vertical) x 0.9 (horizontal)	mm
M squared												≤ 1.2*	-
Beam divergence												Diffraction limited	-
Beam position												≤ ±0.25	mm
Beam angle												≤ ±0.5	mrاد
Pointing stability												≤ 5μrad/ °C	-
Mechanical, electrical and environmental													
Dimensions (laser head)												36 x 36 x 90	mm
Power supply (laser)												12 V DC, 0.5A	-
Power supply (TE controller)												5 V DC, 3A max, 1A running	-
Max. base plate temperature												+ 40	°C
Max. heat dissipation												12.5	W
Storage temperature												10 to 50	°C
Operating pressure												Atmospheric	-
Operating temperature												10 to 40	°C
Operating humidity												Non-condensing	-

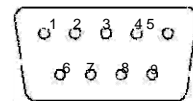
*Model Specific - contact Qioptiq for clarification

Note: OEM versions available please call

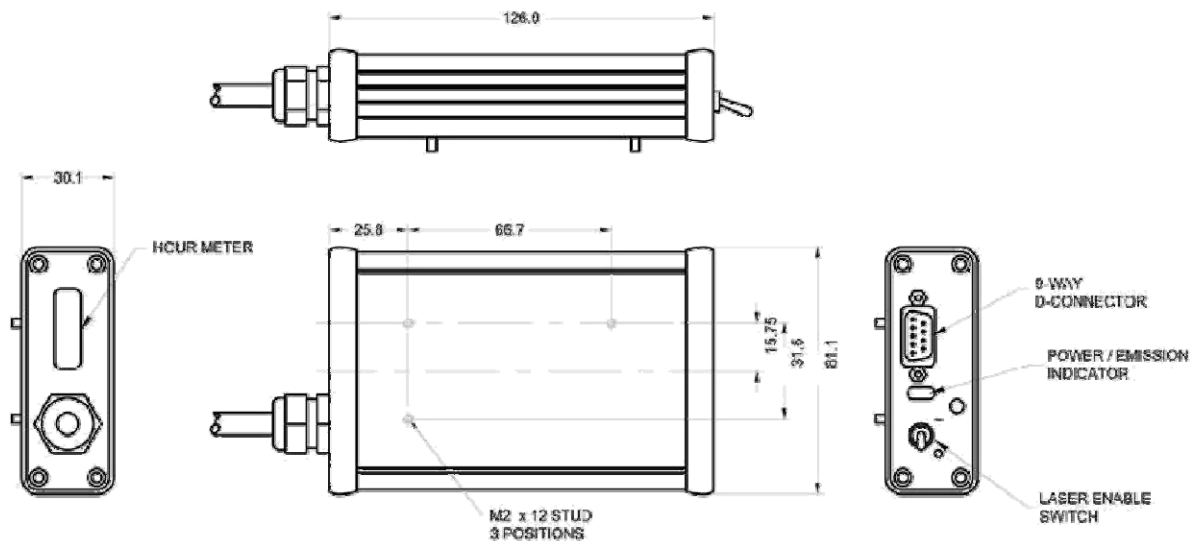
Laser head



Electrical interface



1. 5V \pm 5%DC/3A (Temperature controller)
2. 12V \pm 5% DC/0.5A (Laser driver)
3. Laser enable; 4-5V to enable, <1.2V to disable
4. Temperature OK signal, TTL logic level output (high = temperature locked)
5. External current control (0V fully on; 5V fully off)
6. 0V Temperature controller
7. 0V Laser driver
8. Diode operating current output; (Vop is scaled 10mV/mA laser diode current)
9. Monitor photodiode output (uncalibrated)



Fiber Optics



kineFLEX™

Robust laser beam delivery system for precision measurement applications

- Fiber coupling for DPSS, diode and gas lasers
- Highly repeatable and stable operation
- Greater than 65% coupling efficiency



kineFLEX-HPV™ / kineFLEX-UV™

Robust high power laser beam delivery system for precision measurement applications

- Input power up to 500mW for 488nm or higher
- Input power up to 20mW for 375nm
- OEM multiple wavelength versions available



kineFLEX-DUO™

Robust laser beam delivery system for two laser sources at visible wavelengths

- Efficient and simple beam combination
- Visible wavelengths
- Rugged platform for industrial applications



laserPLATE™

Rapid and convenient mechanical mounting and packaging system for laser to fiber alignment

- Compatible and integrated laser to fiber coupling
- Combined laser chassis and heatsink
- Easy to integrate and align

Lasers



iFLEX2000™

Extremely reliable and robust fiber coupled laser designed for volume manufacturing

- UV, Visible and NIR Wavelengths
- Integrated drive and temperature control electronics
- Modular singlemode fiber delivery system



iFLEX-Mustang™

Fiber coupled solid state laser with on-board acousto-optic modulation

- DPSS lasers, 488, 532 and 561nm
- High long term stability and low noise
- 25mW of output power

Multi-laser Engines



iFLEX-Adder™

5 into 1 fiber-coupled laser beam combination system

- True 'Plug & Play' capability enabling ultimate flexibility of laser suite
- Upgradeable from 2 to 5 wavelengths as required
- Compatible with kineFLEX™ and kineFLEX-HPV™



iFLEX-Viper™

The world's first integrated Multi-laser Engine

- Combines 5 wavelengths in one instrument
- Delivers wavelengths via a singlemode fiber optic cable
- On-board acousto-optic modulation up to 3MHz



Tel: 400 008 1064 www.rayscience.com Email: saleschina@rayscience.com-