

Datasheet

iFLEX-iRIS™ CLM Laser Systems

Fiber-coupled

The iFLEX-iRIS™ laser series is a range of solid-state, high-performance lasers with low amplitude noise. For ease of use and integration, all diode wavelengths are offered in the same compact package with the same control inputs. The lasers are wavelength stabilized as a result of active temperature control. They are ideally suited for integration into instruments that demand high performance, yet need to retain a small form factor.

The innovative Closed Loop Modulation (CLM) feature allows the lasers to operate with automatic power control feedback in all modes of operation; CW, plus digital, analogue and dual-mode modulation. Unlike traditional open-loop laser modulation, there is no need for calibration reset when using iFLEX-iRIS lasers with CLM feature.

Lasers with CLM are ultra-low noise in terms of RMS, RIN and periodic noise. They also offer precision power adjustment. This is very useful for imaging applications where a stable, ultra-low noise source will improve the signal-to-noise ratio and image resolution.

Increased freedom of design and ease of servicing is offered with the detachable kineFLEX® single-mode polarization-maintaining fiber delivery system. The single-mode fiber output ensures circular, Gaussian output beam as a result of spatial filtering. This detachable fiber delivers true “Plug & Play” versatility. Fiber may be selected with order.

Features:

- Fully integrated electronics
- TEM₀₀ output - Gaussian, spatially filtered output beam
- Class leading power and beam pointing stability
- Ultra low noise performance
- Analogue, digital and dual-mode modulation with CLM feature
- Modular single-mode polarization maintaining fiber output
- All diode wavelengths are the same compact size
- Easy to use: true “Plug & Play” versatility

Options:

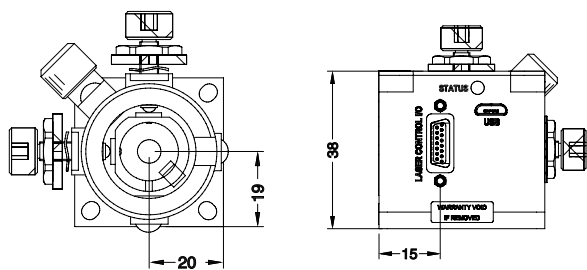
- Various fiber lengths
- Collimated or connectorized outputs
- Integrated beam shaping
- OEM and CDRH compliant versions



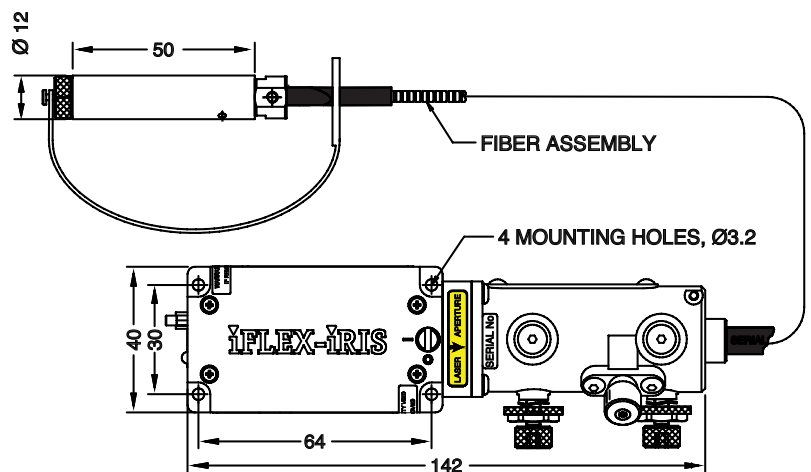
iFLEX-iRIS™ CLM fiber-coupled specification overview

Wavelength (nm)	375	405	415	445	458	473	488	505	515	520	532	561	594	633	640	647	660	670	730	780	852	
Power after fiber (mW)	25	30	65	30	45	50	25	30	40	20	25	25	12	20	25	30	50	6	10	45	20	
	30	60		50			65							45	65							
		100					90								95							
		140																				
Wavelength tolerance (nm)	± 5						± 2						± 5									
Power stability, 8 hrs	< 2 %						< 2 %						< 2 %									
Noise (rms) 20Hz-20MHz	< 0.1* %						< 0.3* %						< 0.1* %									
Spatial mode, TEM ₀₀	M ² ≤ 1.1																					
Fiber output	Single-mode polarization maintaining fiber 1 m, 2 m or 3 m 0.7 mm diameter collimated or connector FCP / APC / FCP8 OEM custom options																					
Pointing stability	< 1 μrad/°C																					
Polarization ratio	≥ 100:1																					
Power supply	12 V DC, 1 A																					
Max. base plate temp.	40 °C																					
Max. heat dissipation	12 W, < 5 W typ																					
CW	0 %, 0.1 - 100 %						0 %, 50 - 100 %						0 %, 0.1 - 100 %									
Digital Modulation Bandwidth Extinction ratio Rise / fall time	Digital signal DC to 5 MHz 1,000,000:1 < 100 ns						OEM options						Digital signal DC to 5 MHz 1,000,000:1 < 100 ns									
Analogue Modulation Bandwidth Extinction ratio Rise / fall time Power adjustment	0-5 V signal DC to 5 MHz 1,000,000:1 < 100 ns Off and 0.1-100%						OEM options						0-5 V signal DC to 5 MHz 1,000,000:1 < 100 ns Off and 0.1-100 %									
Laser and kineMATIX®	142(L) x **51(W) x **51(H) mm (**full extension travel on screws. Typical setting 48.5 mm x 48.5 mm)																					

*Wavelength specific. More information available on request.



iFLEX-iRIS™ front and rear view



Fiber-coupled iFLEX-iRIS™

For further information please contact:

Mitchell Point, Ensign Way, Hamble, Hampshire, UK, SO31 4RF
Email: sales.ham@excelitas.com
Tel: +44 (0) 23 80 744 500 | Fax: +44 (0) 23 80 744 501



www.excelitas.com
www.qioptiq.com

iFLEX-iRIS™ and kineFLEX® are trademarks of Qioptiq Photonics Ltd. Copyright ©2019 Qioptiq Photonics Ltd.
Qioptiq Photonics Ltd. follows a policy of continuous improvement. Specifications are subject to change without notification.
O-LF_DS-iFLEX-iRIS_2019.10

