

FISBA READYBeam™

Compact Powerful Laser Source

Your Multicolor Laser for Life Sciences and Industrial Applications

Your Benefits

- **Reduction of complexity:** Turnkey solution facilitates alignment, integration and operation of the laser.
- **Small footprint:** Replaces one or several bulky gas and solid state lasers with just one single compact module.
- **Swiss quality and reliability:** The modules are entirely manufactured under one-roof in Switzerland. FISBA covers the complete value chain of laser module assembly and quality control in-house.



Key Features

- Multicolor concept: 3 channels in one pre-aligned housing
- Turn key solution with standard RS 485 interface
- Singlemode fiber
- Software control
- Embedded TEC cooling
- Embedded electronics
- Individual control of each wavelength
- Digital, analog and mixed modulation modes



Applications

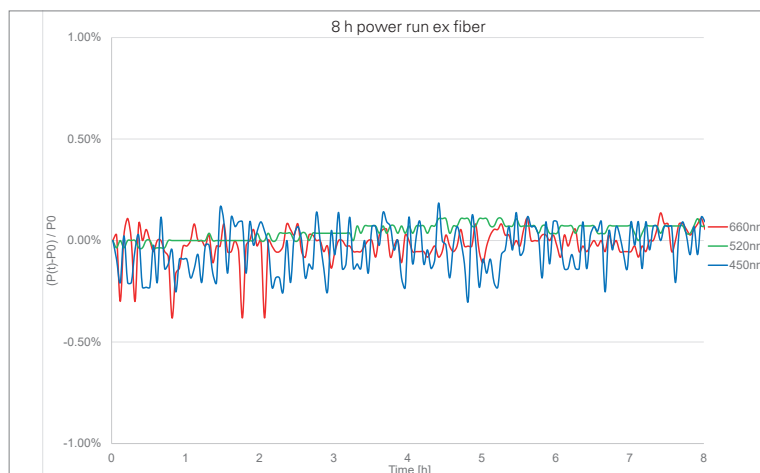
- Flow Cytometry
- Fluorescence Microscopy
- DNA Sequencing
- Microfluidics
- Projection
- Display & Holography

FISBA READYBeam™

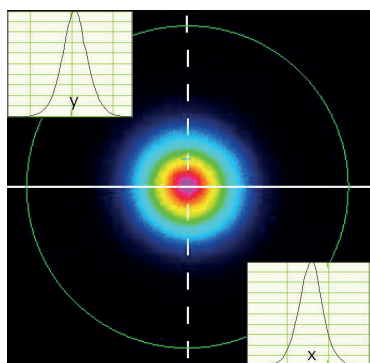
Technical Specifications

Power Stability

The prealigned optomechanical architecture of the FISBA READYBeam™ in combination with its TEC regulation result in a stable single mode fiber output over time.



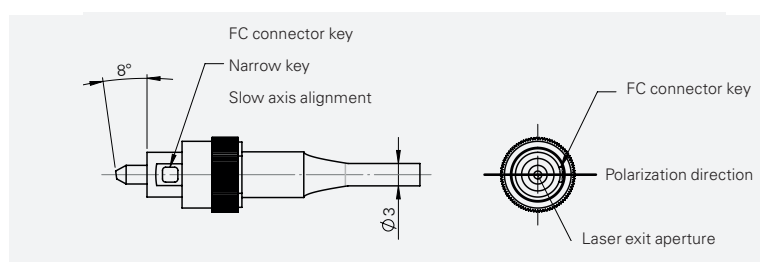
Beam Quality



TEM00 single mode fiber beam profile

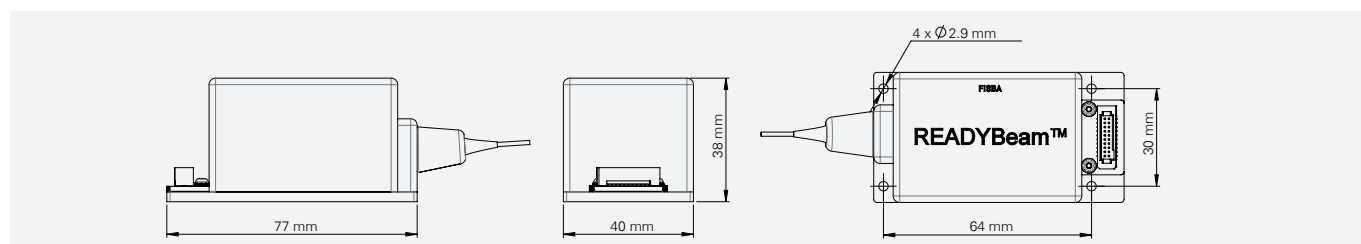
- Minimum dispersion
- Minimum attenuation
- Control over the polarization state
- Gaussian spot and illumination distribution

APC Connector



Typical 10 dB improvement in return loss

Technical Drawing



FISBA READYBeam™

Technical Specifications

	Wavelength ¹⁾					
	405 nm	450 nm	488 nm	520 nm	638 nm	660 nm
FISBA READYBeam™ bio 1 1006061	x		x		x	
FISBA READYBeam™ bio 2 1008062			x	x	x	
FISBA READYBeam™ bio 3 1011446	x			x	x	
FISBA READYBeam™ ind 1 1006062		x		x		x
FISBA READYBeam™ ind 2 1007773		x		x	x	
Output power calibrated values ²⁾	40 mW	40 mW	30 mW	30 mW	40 mW	40 mW
Power stability 8 h	< 2%					
Fiber type	SM/PM, 3 µm core, end capped, APC Connector					
Fiber cable length	1 m					
Polarisation ratio ³⁾	typ. 17 dB					
Spatial mode	TEM 00					
M2	< 1.1					
Optical noise RMS, 20Hz – 20MHz	typ. 0.2, max. 0.5 %					
Laser operation modes	CW, modulated					
Digital modulation	TTL input					
Digital modulation frequencies	1 MHz					
Digital rise time 10 – 90%	11 ns					
Digital fall time 90 – 10%	11 ns					
Analog modulation bandwidth	0 – 3.3 V input voltage					
Analog modulation frequencies	20 KHz					
Analog rise time 10 – 90%	12 µsec					
Analog fall time 90 – 10%	12 µsec					
Laser safety class	3B					
Max. storage temperature range	- 10° C to + 60° C					
Operational temperature range	+ 15° C to + 40° C					
Power consumption	typ. 5 W, max. 12 W					
Temperature stabilization	internal TEC controlled					
Communication interface	RS 485					

¹⁾ Laser center wavelength tolerances: **405**: 400 – 410nm ; **450**: 440 – 460nm; **488**: 486 – 490nm; **520**: 515 – 530 nm; **638**: 632 – 643nm; **660**: 655 – 665nm

²⁾ Linear calibrated power range from 10% to 100% (max)

³⁾ min. 13dB, max. 26 dB

FISBA READYBeam™ –highpower⚡

Technical Specifications

	Wavelength ¹⁾				
	405 nm	450 nm	488 nm	520 nm	638 nm
FISBA READYBeam™ bio highpower 1011792	x		x		x
FISBA READYBeam™ ind highpower 1011793		x		x	x
Output power calibrated values ²⁾	100 mW	100 mW	100 mW	70 mW	100 mW
Power stability 8 h	< 2%				
Fiber type	SM/PM, 3 µm core, end capped, APC Connector				
Fiber cable length	1 m				
Polarisation ratio ³⁾	typ.17 dB				
Spatial mode	TEM 00				
M2	< 1.1				
Optical noise RMS, 20Hz – 20MHz	typ. 0.2, max. 0.5 %				
Laser operation modes	CW, modulated				
Digital modulation	TTL input				
Digital modulation frequencies	1 MHz				
Digital rise time 10 – 90%	11 ns				
Digital fall time 90 – 10%	11 ns				
Analog modulation bandwidth	0 – 3.3 V input voltage				
Analog modulation frequencies	20 KHz				
Analog rise time 10 – 90%	12 µsec				
Analog fall time 90 – 10%	12 µsec				
Laser safety class	3B				
Max. storage temperature range	- 10° C to + 60° C				
Operational temperature range	+ 15° C to + 40° C				
Power consumption	typ. 22 W, max. 35 W				
Temperature stabilization	internal TEC controlled				
Communication interface	RS 485				

¹⁾ Laser center wavelength tolerances: **405**: 395 – 415nm; **458**: 450 – 465nm; **488**: 483 – 493nm; **520**: 510 – 535 nm; **638**: 634 – 644nm

²⁾ Linear calibrated power range from 10% to 100% (max)

³⁾ min.13dB, max. 26 dB

FISBA READYBeam™

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Model numbers

FISBA READYBeam™ bio 1	1006061
FISBA READYBeam™ bio 2	1008062
FISBA READYBeam™ ind 1	1006062
FISBA READYBeam™ ind 2	1007773

FISBA READYBeam™ highpower bio	1011792
FISBA READYBeam™ highpower ind	1011793

Explore our compact multi-color laser modules
fisba.com/readybeam

