

FISBA READYBeam™

Compact multi-color laser source



The FISBA READYBeam™ is the answer to customers increasing demand for compact, powerful and reliable multi-color laser sources which easily integrate into existing set ups. The module is available in four primary configurations: READYBeam™ bio 1 and bio 2, and READYBeam™ ind 1 and ind 2.

Areas of applications

Flow Cytometry

Fluorescence Microscopy

Display Technology

Cell Screening & Sorting

Analytical Instrumentation

Projection

Advantages

The development of diode emitters towards increasing power and variety, facilitated their usage in a rapidly growing field of scientific and industrial applications. The replacement of one or several bulky gas and solid state lasers with just a single compact module reduces complexity of:

- **Alignment**
- **Integration**
- **Operation**

Key features

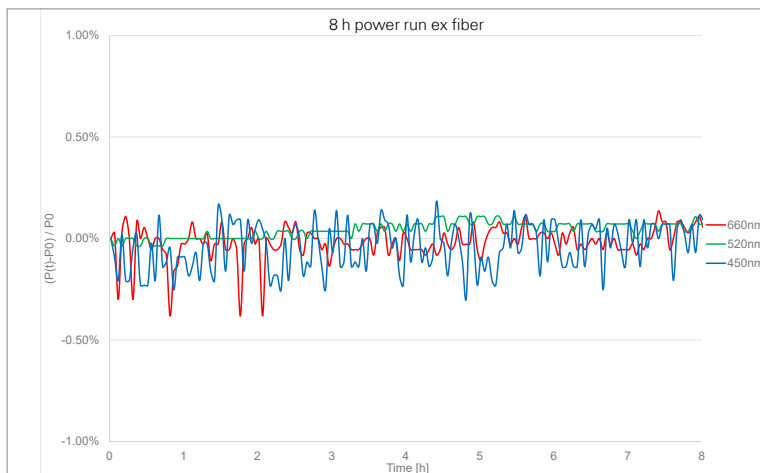
- Turn key solution with standard RS 485 interface
- Embedded electronics and driver
- Embedded thermoelectric regulation (TEC)
- Fiber coupled, prealigned collinear emission
- Single mode, polarization maintaining
- Individual control of each color
- Complete dark state in fluorescence applications
- Digital, analog and mixed mode modulation capabilities
- Software included

FISBA READYBeam™

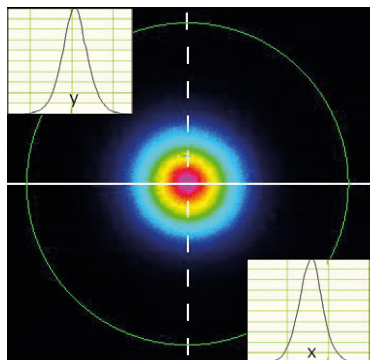
Technical specifications

Laser power stability

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



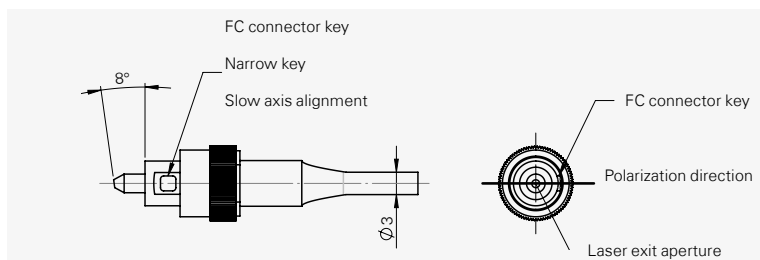
Beam quality



TEM00 single mode fiber beam profile

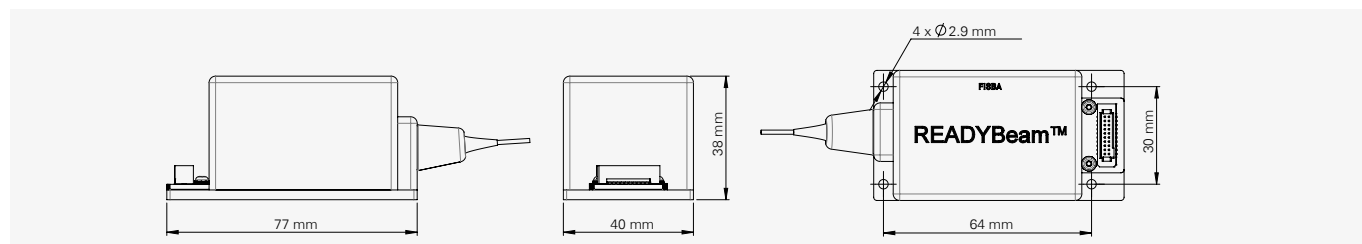
- Minimum dispersion
- Minimum attenuation
- Control about the polarization state
- Gaussian spot and illumination distribution

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 READY Beam™ bio 1 1006061	x		x		x	
FISBA READY Beam™ bio 2 1008062			x	x	x	
FISBA READY Beam™ ind 1 1006062		x		x		x
FISBA READY Beam™ 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™

READY for the future

Model numbers

FISBA READY Beam™ bio 1	1006061
FISBA READY Beam™ bio 2	1008062
FISBA READY Beam™ ind 1	1006062
FISBA READY Beam™ ind 2	1007773

Explore our compact multi-color laser modules

fisba.com/readybeam

