

## PureFocus850

Revolutionary autofocus for biological & industrial samples



Prior Scientific's PureFocus850 combines advanced optics and intelligent in-built microprocessing to provide a real time focus system for infinity corrected optical systems. A motorized offset lens allows real-time adjustment of the imaging depth into the sample, continuously holding the precise distance between imaging focal point and a reference boundary of choice.

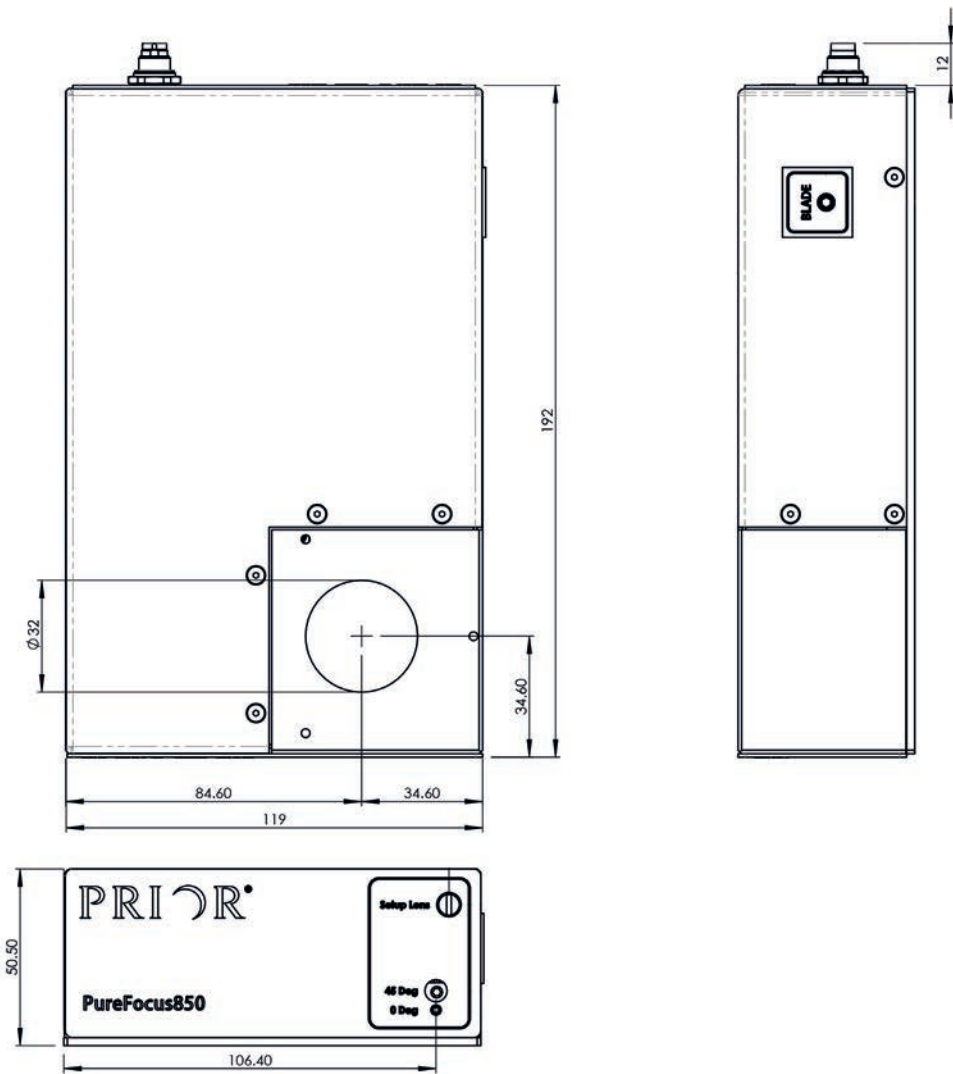
### Key Features of the PureFocus850

- Stepper motor and analog servo and Piezo outputs all available from one controller
- 1 millisecond response time (typical)
- Simple dichroic adjustment for easy install
- Easily adapted to any infinity optical system
- 850nm laser minimizes impact for fluorescence microscopy
- Software setup and control GUI provided
- Stores multiple objective parameters for single and multi-objective use

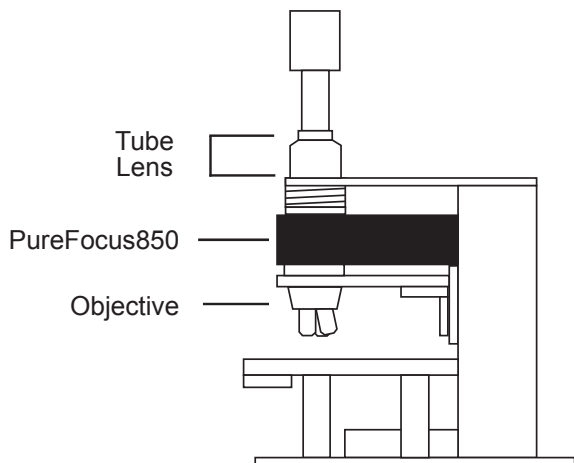
# PureFocus850

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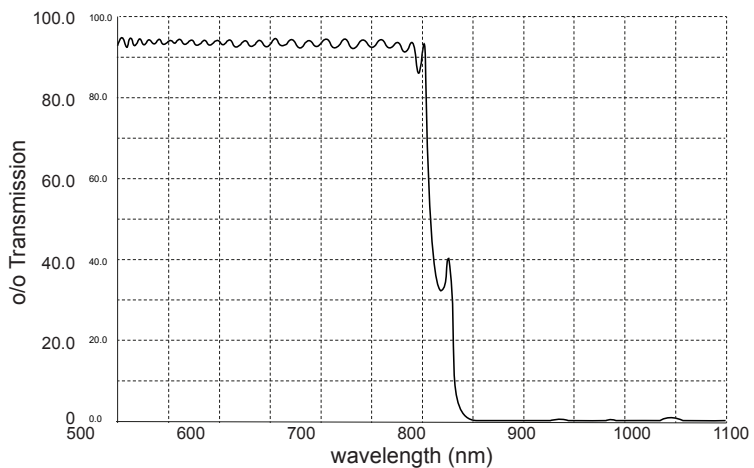
## Technical Specifications for the PF185 PureFocus Head



### Typical Setup



### Dichroic Transmission



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## Technical Specifications for the PF185 PureFocus Head

Parameter	Value	Units
Static physical		
Material	Aluminum	
Size	192 L x 119 W x 50.50 H	mm
Weight	1.5	kg
Typical		
Laser wavelength	850	nm
Laser optical output power	< 0.77	mW, Class 1
Dichroic 50% cut-off	800	nm
Dichroic clear aperture, diameter	32	mm
Dynamic Physical (Typical Values)		
Typical		
*Update rate	1	ms

General Information	Value	Units	Notes
Microscope geometries	Upright / Inverted / OEM		Note 1
Sample types	Glass slides / glass bottom dishes / flow chambers / well plates / wafers / other reflective materials		
Objective types	2x, 4x, 10x, 20x, 40x, 50x, 60x, 100x dry / water immersion / oil immersion		Note 2
Power input (controller)	24	V DC	
	35	W	
Power & data cables	1.5	m	

Controller Motor Connections		
Pin Number	Function	Comments
1	Motor Phase A+	Minimum motor current rating = 1A.
9	Motor Phase A-	
2	Motor Phase B+	
10	Motor Phase B-	
3	Limit Switch +ve	Limit switches should be wired "normally open"
11	Limit Switch -ve	
4	Limit Switch Common	
12	Piezo Ground Return	
15	Piezo Output (0-10V)	

\*These parameters are measured and supplied with each mechanism.

### Notes 1

Please contact Prior for complete microscope OEM solutions.

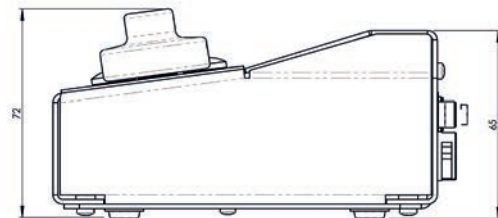
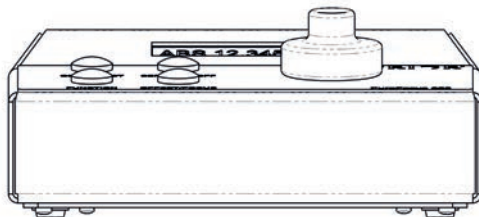
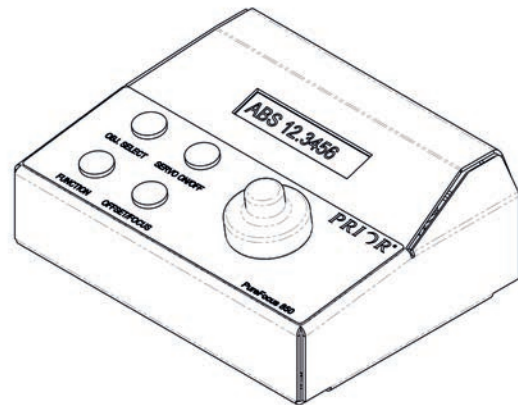
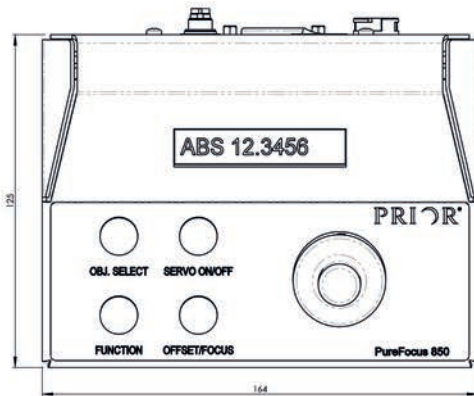
### Note 2

With samples in media behind a coverslip, for oil and 100x objectives the media must have a refractive index different to glass. Please contact Prior for more information.

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### Technical Specifications for the PF100 PureFocus Controller



### Controller Connections

USB

Power (5 pin DIN)

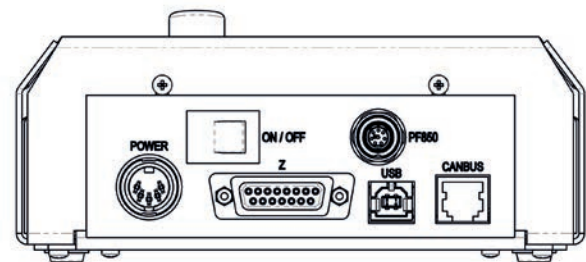
15 Way D connector includes:

- Plug and play detection for Prior focus motors
- Stepper motor drive with limit switches
- Analog 0-10V output

Power and data to head

### Head Connections

Power and data from controller



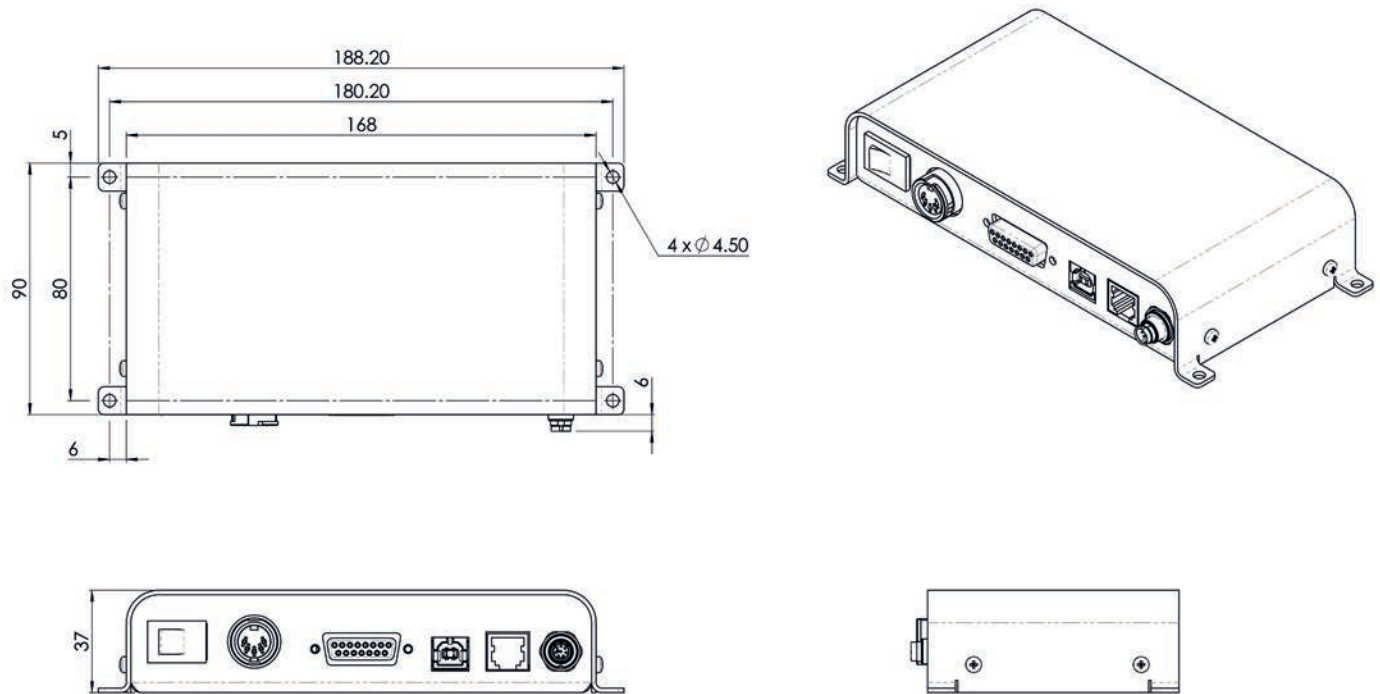
### Technical Specifications for the PF100 PureFocus Controller

Parameter	Value	Units
Static physical		
Material	Aluminum	
Size	122 L x 163 W x 65 H	mm
Weight	0.5	kg

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**Technical Specifications for the PF301 PureFocus Controller OEM**



**Technical Specifications for the PF301 PureFocus Controller OEM**

Parameter	Value	Units
Static physical		
Material	Aluminum	
Size	188 L x 90 W x 37 H	mm
Weight	0.4	kg

**PureFocus850 AutoFocus System Ordering Information**

Part Number	Description
PF850	PureFocus controller, head, cables & PSU
PF100	PureFocus controller
PF301	PureFocus controller OEM
PF185	PureFocus head
PF209	Sample setup slide
PF300	PureFocus setup camera jig
PF200	PureFocus setup camera kit type 1
PF201	PureFocus setup camera kit type 2

Part Number	Description
PF202	IX73 PureFocus mounting kit
PF203	IX71 PureFocus mounting kit
LF335	Flange set (Olympus BX)
LF320	Flange set (Nikon 150)
LF312	Flange set (Leica LB)
LF341	Autofocus flanges (Zeiss Axioskop 2/40)
PF208	IX73 basic PureFocus mounting kit