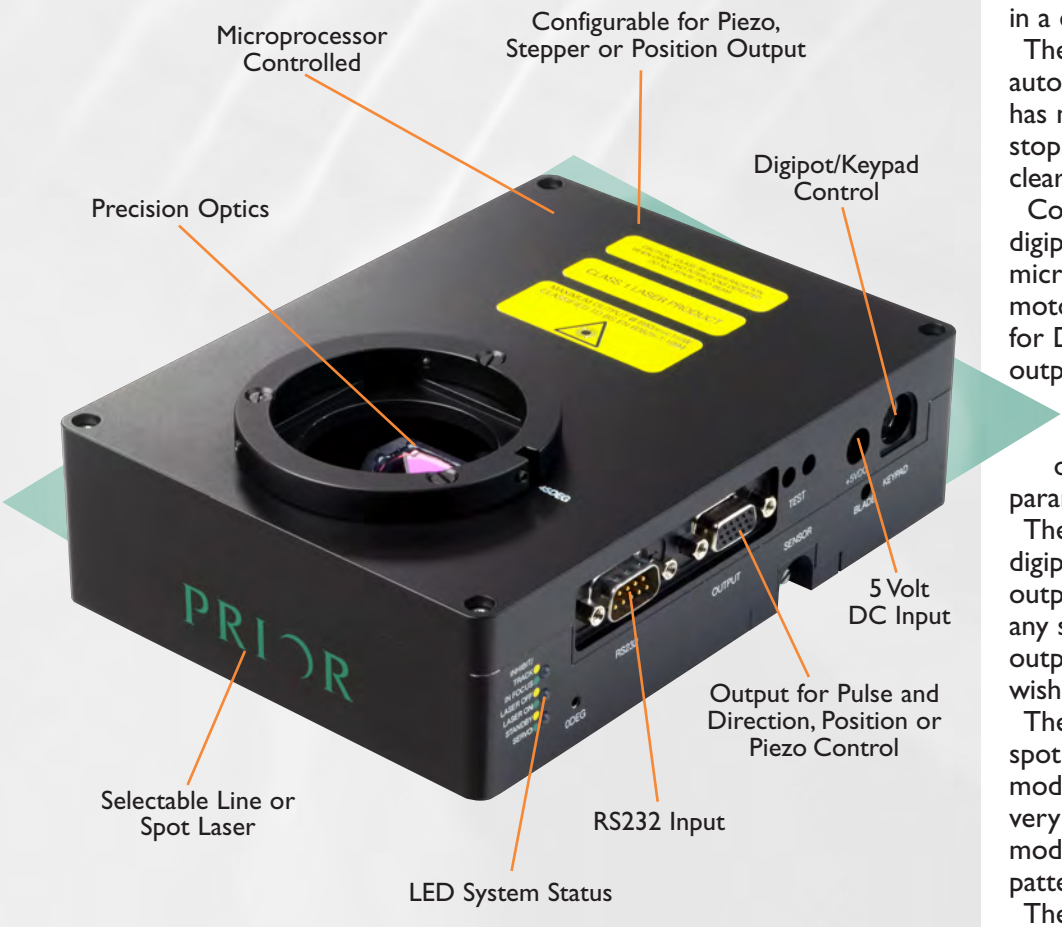
LF210 Laser Autofocus

PRIOR Scientific

Laser Autofocus System

Features



The LF210 combines the latest in intelligent microprocessor control and advanced optics to provide the fastest and most reliable laser autofocus available.

Ideally suited for reflective specimens, the compact module incorporates precision optics that easily adjust to different microscopes and optical systems with infinity corrected optics.

The new optical design eliminates the need to manually adjust the focus trim and loop gain (which is done automatically in the processor) resulting in a dramatic improvement in throughput.

The intelligent digital control automatically senses when the sample has moved out of the field of view and stops the focus drive, while LED's give a clear presentation of the focus status.

Combined with the LF100K digipot/keypad the LF210 provides a microstepping drive for bipolar stepper motors, programmable voltage output for DC or Piezo Z control, and voltage output for open loop height sensor operation. The microprocessor and flash memory allow for programming of gains, servo loops, speed and other parameters.

The step motor drive in the LF100K digipot/keypad plus pulse and direction output allow the LF210 to drive virtually any step motor system. Focus error output is also available for those who wish to provide their own motor control.

The LF210 comes field selectable for spot or line laser mode. The spot laser mode is ideal for smooth samples with very few features while the line laser mode is best for applications such as patterned wafers.

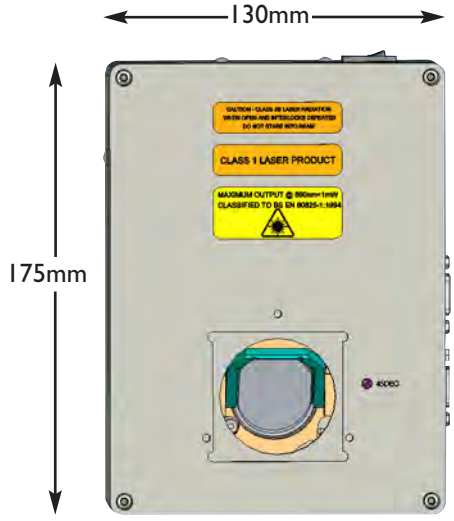
The LF100K Digipot/Keypad allows for easy adjustment of the focus in a manual mode with the digipot. The keypad also lets you turn servo control on and off and has buttons for home, speed, focus up and focus down. Five other keys store information for each objective and are used to change system parameters when the objectives are changed.

The LF100K's internal stepper drive is suitable for controlling most one amp bipolar stepper motors.

General Specifications

Power	Universal 5 V DC external power supply Input: 100-240V, 50/60 Hz, max 15W
Laser	690nm, <1mW output
Computer Interface	RS232C, 115,200 Baud
Communication Protocol	8 bit word, 1 stop bit, no parity, no handshake
Command Controls	Configure for Piezo, stepper or height output: Proportional gain constant Differential gain constant Integral gain constant DAC slew rate Servo delay Set target focus Position error Laser intensity Laser on/off Select objective Analog piezo adjustment Servo on/off In focus status Minimum light intensity for servo control Focus position Keypad on/off Move focus motor Jog focus
Inputs/Outputs:	LF210 Digital: Step motor pulse and direction Inhibit TTL In focus TTL LF210 Analog: -10 to +10VDC error signal selectable to any range within 0-10VDC laser intensity on detector LF100K: Step motor drive: 24 Volt 1 Amp/phase 50,000 pulses/rev (1.8 degree motor)
LED's:	Servo status Focus status Laser status
General:	Response speed of 1ms. Stores and recalls all focus parameters for up to six objectives
Dimensions:	130mm x 175mm x 47mm
Weight:	2.5 lbs., (1.1kg)

Dimensions



Top Side View

Side View

Ordering Information

Microscope Flanges

LF310-Leica
LF320-Nikon
LF330-Olympus BH
LF335-Olympus BX
LF340-Zeiss

Other microscope flanges are also available. Please call Prior Scientific for details.

Ordering Information

LF210	Laser Focus Module (Spot or Line)
LF100K	Laser Focus Digipot/Keypad (required to drive stepper motor)
H122	Focus Drive Motor
H276K	RS232 Cable
W2750	Barrier Filter

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ISO 9001:2000 FM 83854

CERTIFICATE NO: FM 61600
STANDARD: BS EN ISO 9001:2000

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