

MULTI-LASER PID CONTROLLER

MLC Series

Stabilize the frequency of up to 8 lasers

The Bristol Instruments MLC Series Multi-Laser PID Controller provides the ability to stabilize the frequency of a laser connected to a wavelength meter using a Proportional-Integral-Derivative (PID) feedback loop.

The MLC system was designed specifically for the Bristol Instruments 872 Laser Wavelength Meter that offers a frequency resolution as high as 200 kHz. Combined with the Bristol Instruments FOS Fiber-Optic Switch, as many as 8 lasers can be monitored and stabilized. This will benefit scientists and engineers involved in experiments, such as laser cooling and trapping, that require active regulation of laser frequency.





Wavelength measurement trend of an external cavity diode laser initially showing wavelength drift that was then corrected for and stabilized using the MLC PID control interface.

File View Instrument Help Wavelength Trend Interferogram FOS MLC				
1 © MLC Channel: Disabled	704.4059211 nm-vac	2 O MLC Channel: Disabled	661.1778219 nm-vac	
3 MLC Channel: Enabled	634.9000437 nm-vac	4 MLC Channel: Disabled	660.8409789 nm-vac	
5 MLC Channel: Disabled	854.1855263 nm-vac	6 MLC Channel: Disabled	661.1782099 nm-vac	
7	426.2545036 nm-vac	8 MLC Channel: Disabled	660.8847017 nm-vac	
(1)				

MLC Dashboard provides an overview of each channel's wavelength, locking status and relative output power.



SPECIFICATIONS			
CONFIGURATIONS	4 or 8 Channels		
CONNECTION TYPE	BNC (Female)		
SIGNAL RANGE (VOLTAGE SPAN)	-10 V to +10 V		
SIGNAL IMPEDANCE	50 Ohms		
MAXIMUM CURRENT/CHANNEL	± 5 mAmps		
RESOLUTION	16 bit		
SWITCHING TIME	50 ms		
DIMENSIONS (H x W x D)	2.5" x 5.5" x 9.0" (64 mm x 140 mm x 229 mm)		
WEIGHT	2.5 lbs (1.1 kg)		
POWER REQUIREMENTS	12v DC via external power supply		
INSTRUMENT INTERFACE	USB with Windows-based display program Library of commands (DLL) for custom and LabVIEW programming		
WARRANTY	1 year (parts and labor)		

Note: MLC PID Controller must be used with both the FOS Fiber-Optic Switch and 872 (or 871) Series Wavelength Meter.

Bristol Instruments reserves the right to change the specifications as may be required to permit improvements in the design of its products. Specifications are subject to change without notice.