

# CONTROL MODULE

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The Cascade Control Module provides a programmable low noise high voltage supply to the laser module and incorporates thermoelectric controllers to ensure excellent wavelength stability for the QC laser. When combined with the laser module it enables the end user to quickly and simply incorporate the pulsed laser system into a laboratory set up. Incorporating a precision digital pulse/delay generator, a microcontroller and a host of high resolution ADC's and DAC's, it provides stand alone control of the laser and control modules. Proprietary Windows based software gives instant access to all control parameters and engineering data whilst the provision of Labview drivers enables rapid software development for customer specific applications.

## Features

- Programmable low noise high voltage supply for laser module
- Ultra stable thermoelectric control for laser wavelength stability
- USB Interface for 'plug and play'
- Precision digital pulse/delay generator ensures repeatable and accurate timing.
- Output triggers provided for easy integration into experiments
- Digital Signal Processor (DSP) for generating current ramps and variable pulse sequences
- High resolution ADC's and DAC's for controlling and monitoring engineering data.
- Proprietary Windows based control software and Labview drivers provided



## Characteristics

Parameter	Ratings	Units	Comment
<b>Programmable Voltage Output</b>	0 - 40	V	
Ripple	20	mV	pk
Average Current	1.5 (3A at High Power)	A	
<b>Thermoelectric Controller</b>	2.5 amps bipolar – 15 V compliant		
Stability	+/- 0.005	° C	over 1 hour
Drift	< 0.008	° C	over 24 hours
Pulse/Delay Generator	10 - 2000	ns	
Resolution	2	ns	
Jitter	< 200	ps	
Repetition Frequency	5	MHz	Internal Trigger
<b>Input &amp; Outputs signals</b>	5V into 50 Ohms		
Modulation In	0-1	MHz	± 1V
Weight	2000	g	
Dimensions	320 x 235 x 130	mm	l x w x h
Housing Material	Anodised Al		