



Optical Chopper

ELEMENTAL ANALYSIS
FLUORESCENCE
GRATINGS & OEM SPECTROMETERS
OPTICAL COMPONENTS
FORENSICS
PARTICLE CHARACTERIZATION
RAMAN
SPECTROSCOPIC ELLIPSPOMETRY
SPR IMAGING

Digital optical chopper



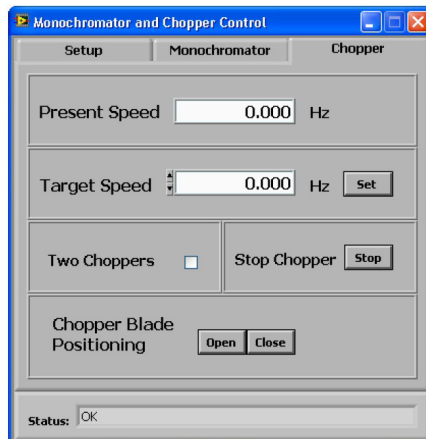
The optical chopper from OBB is a stepper motor driven, digital, optical chopper that includes a USB stepper motor controller. It is used to convert a continuous light beam into a pulsed, or chopped, light beam. The most common application is for signal recovery techniques with a lock-in amplifier to reduce signal noise. The optical chopper operates across a range of frequencies and is controlled by micro stepping with angular movement accuracy which is better than few degrees.

Features and Benefits

- Remote on/off control when not “chopping” —can be stopped at any precise open or closed position for a given optical setup. In this way the optical chopper can also act as a automated control shutter.
- Superior speed and accuracy—0 to 15,000 Hz speed with accuracy of 0.16 Hz
- Synchronous control of two optical choppers
- Simplicity of operation— remote computer control with USB stepper motor controller and LabVIEW™ driver, or simple manual on/off control.
- Low cost

Software

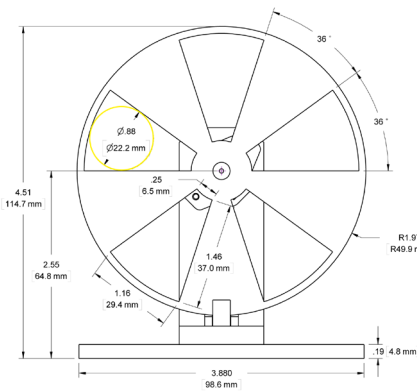
The Optical Chopper can be remotely controlled by a PC with the MD-2000 dual stepper motor controller with USB interface. The chopper comes with a simple software control program, MoCo 3.0, to allow for direct setup and control of the chopper. The software and motor controller can remotely control two choppers or a chopper and a monochromator with a stepper motor, as well as a TTL shutter. Once set up in the software, the chopper can be manually controlled without a computer, using the hardware setting last established with the software.



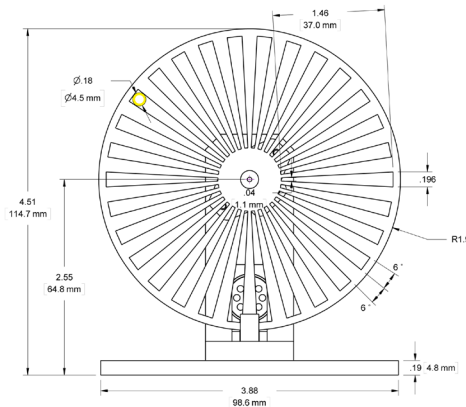
Specifications

Chopper control	MD-2000 two stepper motor controller
Number of phases per motor	2
Output current per phase	Maximum 1A
Stepper motor voltage	5 to 10 V
Stepping modes	Full, Half and Micro (1/8) steps
Chopper slew rate	to 62,500 micro steps per second
Chopping speed	0 to 500 Hz with 5 sector blade 0 to 3,000 Hz with 30 sector blade
Chopping accuracy	0.016 Hz with 5 sector blade 0.096 Hz with 30 sector blade
Synchronization output	TTL output for each motor step
TTL shutter output	Solenoid type shutter control up to 0.6 A
Communication interface	USB 2.0
Software	MoCo 3.0 program, LabVIEW™ driver & source code

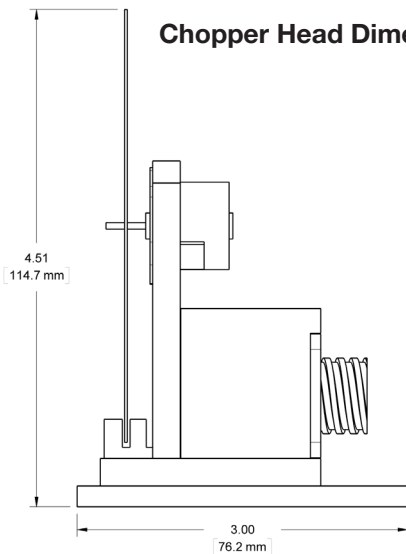
5 Sector Chopper Head



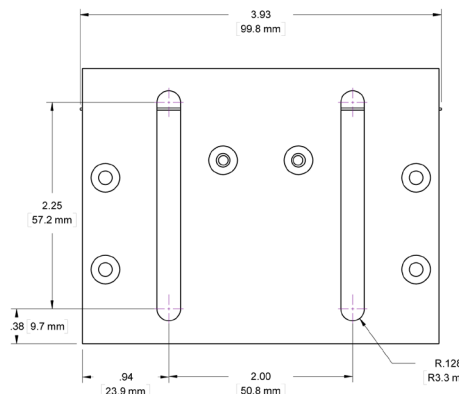
30 Sector Chopper Head



Chopper Head Dimensions



Chopper Mounting bracket Dimensions



OPTICAL BUILDING BLOCKS



HORIBA
Scientific

contact@OBB1.com

USA: +1 732 494 8660
UK: +44 (0)20 8204 8142
China: +86 (0)21 6289 6060

France: +33 (0)1 69 74 72 00
Italy: +39 2 5760 3050
Brazil: +55 (0)11 5545 1500

www.obbcorp.com

Germany: +49 (0)89 4623 17-0
Japan: +81 (0)3 6206 4721
Other: +1 732 494 8660