



350C/CD Miniature Optical Chopper

FEATURES

- 5Hz – 600Hz standard chopping frequency range (6kHz option is available)
- Photochemically etched brass blades
- Very Compact chopper head
- Low noise and vibration

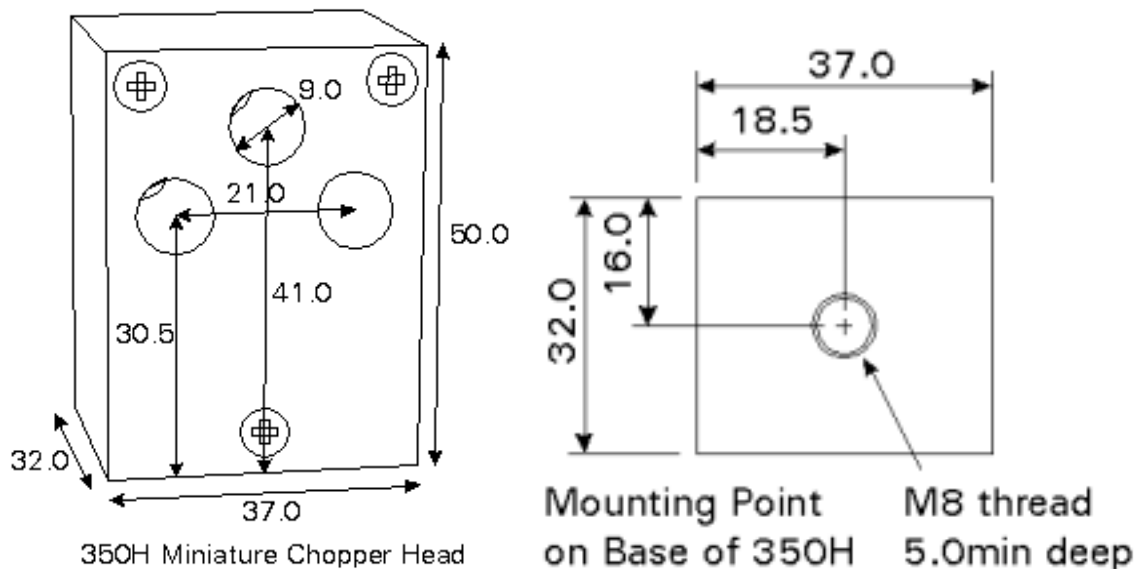
DESCRIPTION

Scitec Instruments **Model 350C** and **Model 350CD** are high stability variable frequency optical choppers. They comprise a chopper control unit and chopping head, which is supplied with two chemically blackened discs. These discs are of two and four slots and allow operation over the frequency range 5Hz to 600Hz.

The miniature chopping head completely encloses the chopping disc, drive motor, and reference pickup. Three optical apertures of 9mm diameter provide flexibility in beam positioning. The chopper head has an M8 threaded hole in its base for mounting on an optical stalk (bench rod).

The chopping frequency is set using a ten turn dial mounted on the front panel of the control unit or by applying a voltage to the external control input. The reference output is a TTL pulse at the chopping frequency and has a constant phase relative to the chopping action

The **Model 350CD** has a 5 digit LED display which give a direct read-out of the chopping frequency.



SPECIFICATIONS

Model 350C/CD Control Unit	
Frequency read-out (Model 350CD Only)	5 digit 11mm (0.43 inches)LED display with user selected update rates of 1 second (1Hz display resolution) or 10 second (0.1Hz display resolution)
Output voltage	6V DC maximum
Stability	Better than 0.01%/C
Frequency control	Internal-Manual control via ten turn potentiometer fitted with a turns counting dial External-BNC connector for 0 to 15V
Frequency stability	Short term- see phase jitter. Long term- better than +/-0.1% of reading within 10 to 100% of maximum frequency
Reference output	5V HCT TTL pulse via BNC socket
Power requirements	90-130V or 180-260V, 50/60Hz, 12VA
Dimensions	254(W) x 76(H) x 178(W)mm
Weight	2.6kg
Model 350H Chopper Head	
Motor	5 pole DC motor, sleeve bearings with more than 5000 hours lifetime, 0-9500rpm reversible
Reference pick-up	IR LED and phototransistor pair with Schmitt trigger
Dimensions	50.0(H) x 32.0(L) x 37.0(D)mm, without blade
Mounting	Optical stalk or bolt with M8 thread
Chopper Blades	
Material	Half hard brass, 0.25mm (0.01 inches)
Diameter	30mm (1.2 inches)
Surface Finish	Chemically blackened or gold plated
Mark-Space Ratio	1:1

OPTIONS

Chopper Synchroniser: The chopper can be synchronized to another chopper or to an external source through the use of a chopper synchronizer. See the 300Synch for more details.

40 Slot Disc Giving 6kHz Chopping Frequency: Chopping frequency range can be increased to 6kHz with the use of a 40 slot mini disc. However, this disc does limit the chopped beam diameter to 1.0mm.

