C995 Optical Chopper

Features:

- Large 5 Digit LED Display
- Frequency resolution of 0.001 Hz
- External Clock Synchronization
- Covers 4 Hz to 5 KHz with only one blade
- Computer Interface for easy control
- Enclosed Chopper Blade

4Hz to 5KHz Optical Chopper

The C-995 is a microprocessor-based control system that utilizes direct-digital-synthesis to deliver precise optical chopping rates from 4 Hz to 5000 Hz. Equipped with a large five-digit LED readout, the C-995 controller enables digital entry of the desired chopping rates from the front panel. Additionally, the C-995 is equipped with a bidirectional Rs-232 port that permits the user to set the desired chopping rate to a resolution of .001 Hz and to read the status of the instrument.

The C-995, designed with a phase-locked-loop control system, allows the chopping rate to also be synchronized to a user-supplied external clock ranging from 4 Hz to 5 KHz. The controller is then used to measure and display the frequency of the external clock.

The C-995 chopping head is attached to the controller by means of a 10 foot coiled cord. The precision etched blade is fully enclosed for protection from inadvertent damage. (An optional open blade version is also available.)

There are two apertures and two sections (30 slots and 3 slots) for the high and low frequency ranges, respectively. The aperture diameter is 15 mm with a slot width of 4.5 mm (30 slot section) or 30 mm (3 slot section). The small 4.75 inch square outline and two inch maximum depth permits easy integration into compact optical setups. Dual #8-32 mounting holes permit the apertures to be placed at a height as low as 0.75 inches above an optical bench, or with the included 1/2 inch rod and stand, as high as 13 inches above the mounting surface.

The ease of use and convenience of this instrument are matched only by the high performance to price ratio that is typical of products from Terahertz Technologies Inc. The C-995 is backed by our standard two year warranty and our guarantee of customer satisfaction.

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C995 Optical Chopper

Specifications	
Chopping Frequency Range	4 Hz to 500 Hz (Inner slots), 40 Hz - 5 KHz (outer slots)
Aperture Size	0.6 inch diameter (15 mm), and 0.6 inch by 0.2 inch (15 x 4.5 mm)
Frequency Control	Phase-Locked-Loop, Direct Digital Synthesis
Frequency Uncertainty	±.0025 % of setting
Phase Jitter (Internal Operation Only)	0.1 % peak to peak, 3 slot section, 1.0 % peak to peak, 30 slot section
Settling Time to Phase Lock	< 3 seconds
External Clock Input Requirements	TTL, CMOS Compatible Square Wave, 4 Hz to 5000 Hz
Sync Signal Output	TTL, CMOS Compatible Square Wave
Display	Five Digit, high intensity green, 0. 5 “ high
Temp. Coefficient of Chopping Frequency	< 10 ppm/C
Frequency Resolution (W/Rs-232 Control)	.001 Hz
Frequency Resolution (W/Front Panel Control)	.01 Hz
Counter Resolution using External Clock	0.1 Hz, 1 Hz
Rs-232 Interface	9600 Baud, N-8-1, 3 wire
Chopper Head Mounting	Standard 8-32 tapped holes, mounting rod and stand is provided
Chopper Blade Diameter	4.1 inch diameter
Operating Temperature Range	0 - 40 C
Dimensions (Head)	4.5 “ H x 4.5 “ W x 2 “ D, 114 mm x 114 mm x 51 mm
Dimensions (Controller)	2.7 “ H x 7 “ W x 9.1 “ D, 69 mm, 178 mm, 231 mm
Interconnecting cable supplied	Coiled Cord 10 feet max length
Power Requirements	95-260 VAC, 50-60 Hz, 15 VA Max
CE Certification	Yes
Weight	3 lbs, 1.36 Kg
Accessories Provided	Mounting rod and stand, Rs-232 cable, Power Cord, Operating Manual
Standard Warranty	Two years, Components and Workmanship, 30 Day Satisfaction Guarantee
Application Software Provided	Downloadable from TTI website, www.teratec.us

Part Numbers	
C-995	4 Hz to 5KHz Optical Chopper with Closed Head (5/8” Apeture) and 3/30 Slot Blade
C-995-OH	4 Hz to 5KHz Optical Chopper with Open Chopper Head and 3/30 Slot Blade
C-995-3	4 Hz to 500Hz Optical Chopper with Closed Head (1” Aperture) and 3 Slot Blade
C-995-OH-3	4 Hz to 500Hz Optical Chopper with Open Chopper Head and 3 Slot Blade
C-995 -Blade	3/30 Slot Blade
C-995 -Blade-3S	3 Slot Blade

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