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Data Sheet

August 15, 2026

HORIBA / PTI

Horiba / PTI OC-4000 Optical Controller

The Horiba / PTI OC-4000 Optical Controller is a device designed to control and manage optical components within spectroscopy systems. It enables precise adjustments and synchronization of light sources, detectors, and other optical elements, ensuring optimal performance in various analytical and research applications.



MODEL

Horiba / PTI OC-4000

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

OC-4000

LISTING

<https://aumictechlabs.com/products/oc-4000-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Horiba PTI OC-4000 Optical Controller provides precise synchronization and phase control of optical choppers and detectors in spectroscopy systems. This unit delivers selectable disk configurations - 5-sector and 30-sector - enabling operation across wide frequency and exposure time ranges. The OC-4000 combines analog external control, TTL synchronization outputs, and phase adjustment capability to support lock-in detection and time-resolved measurements in fluorescence and absorption spectroscopy. Technical Specifications Frequency Range 5-Sector Disk: 5 Hz to 667 Hz 30-Sector Disk: 30 Hz to 4000 Hz Exposure Time 5-Sector Disk: 750 μ s to 100 ms 30-Sector Disk: 125 μ s to 17 ms Phase Jitter 5-Sector: 3.0% at 5 Hz, 1.5% at 10 Hz, 0.36% above 20 Hz 30-Sector: 0.18% at 25 Hz, 0.12% at 50 Hz, 0.06% above 100 Hz Linearity: $\pm 0.5\%$ Accuracy: $\pm 0.5\%$ of least significant digit across entire range Phase Control Range: 0 to 180 degrees External Control Input: 0 to 4 VDC TTL Output: 5 Volt standard Key

Features LED frequency readout for direct monitoring Wide-range speed control knob for chopper frequency adjustment Precise phase adjuster for optical signal alignment relative to chopper blade position Switchable disk configurations (5-sector and 30-sector) for application-specific frequency requirements RJ-12 connector for chopper drive control BNC connectors for synchronization and reference signals Typical Applications The OC-4000 serves lock-in detection systems, time-correlated single-photon counting experiments, and modulated light source synchronization in fluorescence spectroscopy. Its dual-disk design accommodates both low-frequency chopping and high-speed modulation requirements in research and analytical laboratories. Compatibility & Integration Standard 5 Volt TTL output interfaces directly with lock-in amplifiers, signal averagers, oscilloscopes, and computer data acquisition systems. External control via 0–4 VDC input allows speed regulation from remote equipment. RJ-12 connectivity integrates with PTI fluorescence systems. BNC signal outputs enable straightforward synchronization with detection and analysis instruments.

OC4000 Characteristics / Specifications

PARAMETER	VALUE
Model	OC-4000
Instrument Type	Optical chopper controller
Five Sector Frequency	5 to 667 Hz
Thirty Sector Frequency	30 to 4000 Hz
Five Sector Exposure	750 us to 100 ms
Thirty Sector Exposure	125 us to 17 ms
Phase Jitter At 5 Hz	3.0 percent (5-sector disk)
Phase Jitter At 10 Hz	1.5 percent (5-sector disk)
Phase Jitter At 15 Hz	0.36 percent (5-sector disk)
External Control	0 to 4 VDC
Linearity	plus or minus 0.5 percent
Reference Output	standard 5 V TTL
Readout	LED frequency display
Speed Control	wide-range front-panel plus external analog
Phase Control	front-panel phase adjuster
Mode Select	internal or external control selector
Compatible Instruments	lock-in amplifiers, signal averagers, oscilloscopes, computers
Manufacturer	Photon Technology International / Horiba Scientific
Family	PTI optical chopper
Disk Types	5-sector and 30-sector
Minimum Five Sector	5 Hz
Maximum Thirty Sector	4000 Hz
Application Class	optical chopping for spectroscopy
Install	simple install and operate per PTI chopper literature

OC4000 Specifications

PARAMETER	VALUE
Key Features	5-sector 5 to 667 Hz and 30-sector 30 to 4000 Hz
Phase adjuster and internal/external selector	0 to 4 VDC external speed control
Technical Specifications	Model: OC-4000

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Notes

From PTI/Horiba OC-4000 Optical Controller published frequency, exposure, jitter, external-control, and TTL-output tables. Confirm installed 5-sector versus 30-sector disk.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.