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Data Sheet

August 14, 2026

ILX LIGHTWAVE

ILX Lightwave CSM-39050: 4-CH Laser Diode Current Source Module

ILX Lightwave Power Supply Modules. Accuracy: $\pm 400 \mu\text{A}$, Resolution: $4 \mu\text{A}$, Accuracy: $\pm 2.5 \mu\text{A}$.



MODEL

**ILX Lightwave
CSM-39050**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

CSM-39050

LISTING

<https://aumictechlabs.com/products/csm-39050-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The ILX Lightwave CSM-39050 is a 4-channel laser diode current source module engineered for precision control and modulation of laser diodes within the LDC-3900 Modular Laser Diode Controller platform. Each module installs into any of the four rear-loading bays and operates with full electrical isolation from other installed modules. The CSM-39050 delivers stable, accurate current drive for independent laser diode operation across research, development, and production environments. Technical Specifications Current Source Performance: Output current range: 0.00 to 500.00 mA Set point accuracy: $\pm 400 \mu\text{A}$ Set point resolution: $4 \mu\text{A}$ Current limit range: 0 to 500 mA with 2 mA resolution Compliance voltage (fixed): 6.5 V maximum Temperature coefficient: $< 60 \text{ ppm}/^\circ\text{C}$ Stability (1 hour): $< 20 \text{ ppm}$ Stability (24 hours): $< 40 \text{ ppm}$ Output Noise & Ripple: High bandwidth mode: $< 5 \mu\text{A rms}$ (DC to 200 kHz) Low bandwidth mode: $< 3 \mu\text{A rms}$ (DC to 5 kHz) CW mode with 320 cable: $< 1.5 \mu\text{A rms}$ (DC to 30 Hz) Photodiode Feedback: Range: 5 to 5000 μA

Output stability: $\pm 1 \mu\text{A}$ Accuracy: $\pm 2.5 \mu\text{A}$ Bias voltage: 0 to 5 V reverse bias ($\pm 10\%$, adjustable)
Current resolution: $1 \mu\text{A}$ Current accuracy: $\pm 2 \mu\text{A}$ Display & Readout: Laser drive current: 0.00 to 500.00 mA with 0.01 mA resolution ($\pm 0.1\%$ FS @ 25°C) Optical power: 0 to 500.00 mW with 0.1 mW resolution Responsivity: 0 to 600.00 $\mu\text{A}/\text{mW}$ with 0.01 $\mu\text{A}/\text{mW}$ resolution 5-digit green LED display Key Features Four independent current source channels with electrically isolated outputs Dual-mode bandwidth selection for optimized noise and response characteristics Integrated photodiode feedback loop with calibrated responsivity control GPIB/IEEE-488.2 interface for remote programming and automated control 9-pin D-sub output connector Compatibility & Integration The CSM-39050 installs directly into the LDC-3900 controller. All four module bays accept this current source interchangeably with other LDC-3900 compatible modules. Each channel operates with complete electrical isolation. Environmental Operating temperature: 0 to 40°C Storage/transportation temperature: -40 to 70°C Maximum humidity: $<80\%$ RH (non-condensing) Maximum altitude: 3000 m

CSM39050 Characteristics / Specifications

PARAMETER	VALUE
Output Current Range	0 to 500 mA
Module Type	Current source only (no TEC on module)
Mainframe	LDC-3900
Bay Compatibility	Any of four rear bays
Photodiode Feedback Mode	yes
Modulation Input	yes
Modulation Transfer Function Class	50 mV/A class per manual modulation note
Modulation Input Impedance	10 kOhm
Calibration Interval Class	12 months or when verification fails
Closed Case Calibration	yes
Save Recall Compatibility	LDC-3900 front panel
Isolation Class	Isolated from other modules and earth ground
Form Factor	Plug-in current source module
Laser Connector Class	9-pin D-sub family practice
Photodiode Path	Supported with bias adjust
Intended Current Class	500 mA laser diodes and LEDs
Display Integration	LDC-3900 front panel LAS channel
GPIB Control	Via LDC-3900 mainframe option
Protection Class	Laser diode protection features of LDC-3900 system
Interchangeability	Interchangeable with other LDC-3900 modules
Manufacturer	ILX Lightwave
Family Peers	CSM-39020 CSM-39100 CSM-39400
Operating Warmup Class	Per LDC-3900 manual practice
Power Deriving	From LDC-3900 mainframe backplane

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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Laser Connector Class	9-pin D-sub family practice
Photodiode Path	Supported with bias adjust
Intended Current Class	500 mA laser diodes and LEDs
Display Integration	LDC-3900 front panel LAS channel
GPiB Control	Via LDC-3900 mainframe option
Protection Class	Laser diode protection features of LDC-3900 system
Interchangeability	Interchangeable with other LDC-3900 modules
Manufacturer	ILX Lightwave
Family Peers	CSM-39020 CSM-39100 CSM-39400
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Power Deriving	From LDC-3900 mainframe backplane
Notes	
500 mA rating, modulation port, and modular features from ILX CSM-39050 instruction manual. Detailed setpoint	

noise and photodiode numeric tables should be taken from the full specification pages of that manual revision.

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.