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Data Sheet

August 13, 2026

ILX LIGHTWAVE

ILX Lightwave 39100 Modular Laser Diode Controller

ILX Lightwave LDC-39100 Modular Laser Diode Controller (LDC-3900 / CSM-39100) Catalog titles "LDC-39100" refer to the ILX Lightwave modular laser diode control platform centered on the LDC-3900 mainframe and the CSM-39100 1000 mA current source module. The LDC-3900 is a four-bay modular controller that accepts interchangeable current source, TEC, and combination modules. The CSM-39100 is the 0 to 1000 mA precision current source module for any of the four rear bays. Modules are electrically isolated from each other and from chassis ground to reduce ground-loop risk. Catalog titles "LDC-39100" refer to the ILX Lightwave modular laser diode control platform centered on the LDC-3900 mainframe and the CSM-39100 1000 mA current source module. The LDC-3900 is a four-bay modular controller that accepts interchangeable current source, TEC, and combination modules. The CSM-39100 is the 0 to 1000 mA precision current source module for any of the four rear bays. Modules are electrically isolated from each other and from chassis ground to reduce ground-loop risk. Multi-channel laser diode drive and temperature control; simultaneous control of multiple lasers from one mainframe; automated multi-LD test via optional GPIB; flexible reconfiguration by swapping modules.



MODEL

**ILX Lightwave
39100**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

39100

LISTING

<https://aumictechlabs.com/products/39100-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The ILX Lightwave 39100 is a laser diode controller that provides precise and stable control of laser diode current and temperature. It features a low-noise current source, high-resolution temperature control, and comprehensive laser diode protection features. The 39100 is ideal for demanding laser applications, such as telecommunications, spectroscopy, and medical instrumentation.

Features & description

From manufacturer datasheet

Features

- LDC-3900 Mainframe
- Four rear-loading module bays
- Interchangeable current source, TEC, and combination modules
- Front-panel LASER and TEC control sections with per-channel adjust
- Optional GPIB for full remote control; LabVIEW driver available
- Laser protection: clamping current limits, output shorting, slow start, AC line filtering, isolated modules
- Save/Recall instrument setups

39100 Characteristics / Specifications

PARAMETER	VALUE
System Designation (catalog)	LDC-39100
Mainframe	LDC-3900
Primary Module (name match)	CSM-39100 1000 mA Current Source
Manufacturer	ILX Lightwave LDC-3900 Mainframe
Slots	4
Size	5.625 in x 16.75 in x 13.625 in (145 × 426 × 346 mm)
Weight	mainframe about 27.5 lb (12.5 kg); module about 2.3 lb (1.05 kg) typical
Power	100/120/220/230-240 V +/-10%, 50-60 Hz
Operating Temperature	0 to +40 C
Humidity	less than 95% RH non-condensing CSM-39100 Current Source Module
Output Current Range	0 to 1000 mA
Setpoint Resolution	100 uA
Setpoint Accuracy	+/-0.1% of FS
Compliance Voltage	6 V at connector
Temperature Coefficient	less than 100 ppm/C
Noise/Ripple (rms)	High BW less than 10 uA; Low BW less than 5 uA; Low BW CW less than 2.5 uA
Operational Transients	less than 2 mA
Current Limit Range	0 to 1000 mA; resolution 4 mA; accuracy +/-10 mA
Photodiode Current Range	0 to 10 mA class (family table)
Modulation Transfer	100 mA/V; High BW DC to 200 kHz; Low BW DC to 5 kHz
Connectors	9-pin D-sub laser; BNC photodiode and modulation Other Available Modules (examples) CSM-39020 (200 mA), CSM-39050 (500 mA), CSM-39400 (4 A), CSM-39800 (8 A) TCM-39034 32 W TEC; LCM combination current+TEC modules Standard Operating Conditions

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	0 to +40 C
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Humidity	less than 95% RH non-condensing
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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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CSM-39100 Current Source Module	
Specifications	
PARAMETER	VALUE
Output Current Range	0 to 1000 mA
Setpoint Resolution	100 uA
Setpoint Accuracy	+/-0.1% of FS
Compliance Voltage	6 V at connector
Temperature Coefficient	less than 100 ppm/C
Short-Term Stability (1 hr): less than 20 ppm	
Long-Term Stability (24 hr): less than 40 ppm	
Specifications	

PARAMETER	VALUE
Noise/Ripple (rms)	High BW less than 10 uA; Low BW less than 5 uA; Low BW CW less than 2.5 uA
Operational Transients	less than 2 mA
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Other Available Modules (examples)
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TCM-39034 32 W TEC; LCM combination current+TEC modules

Standard Operating Conditions
Install modules with power off. Set current limits before enabling outputs. Enter TEC Steinhart-Hart constants when using thermistors.

Operational Notes
If the physical unit is only a CSM-39100 card, it requires an LDC-3900 mainframe. If the unit is a populated LDC-3900, inventory which modules are installed. "LDC-39100" is not a separate single-piece controller model number in ILX literature; it maps to LDC-3900 + CSM-39100 naming.

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

788 S 500 E, Pleasant Grove, UT 84062
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<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
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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.