

**Aumictech**

Test & measurement • bought, sold, repaired, calibrated

Data Sheet

August 14, 2026

ILX LIGHTWAVE

ILX Lightwave LDC-3752M: 2/4 A Laser Diode Controller

The ILX Lightwave LDC-3752M is a precision laser diode controller capable of delivering 2A or 4A of current. It features advanced laser diode protection, high stability, and user-friendly interface for demanding laser control applications.



MODEL

ILX Lightwave LDC-3752M

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

LDC-3752M

LISTING

<https://aumictechlabs.com/products/ldc-3752m-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The ILX Lightwave LDC-3752M is a precision laser diode controller combining high-stability current delivery with integrated temperature management. It has dual-range current output (2A/4A), advanced laser protection, and hybrid P-I temperature control from -100°C to 199°C , serving demanding laboratory and production environments requiring simultaneous optical and thermal regulation.

Technical Specifications

Laser Current Source

Dual current ranges: 2A / 4A

Setpoint accuracy: $\pm 0.05\%$

Setpoint resolution: $40\text{ }\mu\text{A}$ (2A range) / $80\text{ }\mu\text{A}$ (4A range)

Noise and ripple: $< 10\text{ }\mu\text{A}$

Short-term stability: $< 20\text{ ppm}$

Compliance voltage: 10V

Low bandwidth mode: DC operation with external modulation to 15 kHz

High bandwidth mode: Modulation to 1 MHz for dithering and wavelength tuning

Constant power mode: Rear facet or external photodiode feedback

Analog modulation: Differential input for improved laser protection

Temperature Controller

TEC output power: 32W

TEC output current: 4A

TEC output

voltage: 8V Temperature control range: -100°C to 199°C Temperature stability: $\pm 0.004^{\circ}\text{C}$ (with calibrated sensor) Temperature measurement accuracy: $\pm 0.05^{\circ}\text{C}$ (with calibrated sensor) Temperature setpoint resolution: 0.01°C Control loop: Hybrid P-I Sensor types: Thermistor, IC, RTD Control modes: Constant temperature, constant sensor, constant TE current Key Features Independent current limits with adjustable threshold Slow-start turn-on circuitry Adjustable compliance voltage Intermittent contact protection Output shorting relays and semiconductor switch Isolated laser and temperature control power supplies Fast output shut-off response Power line surge and EFT transient protection Redundant current limit Temperature sensor or TE module open-circuit shutoff Typical Applications High-precision laser diode characterization Wavelength-tuned optical systems Production-line laser module testing Research and development optical platforms Compatibility & Integration Supports thermistor, IC, and RTD temperature sensors. Capable of measuring temperature, current, resistance, and voltage across TEC circuit.

LDC3752M Characteristics / Specifications

PARAMETER	VALUE
Laser Current Rating	6 A
Instrument Family	LDC-3700 series
Model Class	LDC-3752 / LDC-3752M high current controller
Remote Interface	GPIB IEEE-488
Operating Modes Class	constant current high bandwidth constant optical power family modes
Laser Protection Slow Start	yes
Laser Protection Shorting Relay	yes
Laser Protection Adjustable Limits	yes
Photodiode Feedback Class	supported for constant power mode
TEC Integration Class	series integrated temperature control
Sensor Compatibility Class	thermistor IC RTD class on series
Display Class	front panel laser and TEC sections
Form Factor	benchtop laser diode controller
Intended Current Class	high power laser diodes to 6 A
Manufacturer	ILX Lightwave / Newport lineage
Current Continuity	6 A rated output
Family Current Span Context	sits above 2/4 A 374x models
Modulation Support Class	external modulation on series current modes
Isolation Class	independent laser and TE supplies on series
Stability Class	high stability low noise series design
Protection Intermittent Contact	yes on series
Power Line Transient Protection	yes on series
Bandwidth	constant optical power family modes

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	
Specifications	
PARAMETER	VALUE
Laser Current Rating	6 A
Instrument Family	LDC-3700 series
Model Class	LDC-3752 / LDC-3752M high current controller
Remote Interface	GPIO IEEE-488
Operating Modes Class	constant current high bandwidth constant optical power family modes
Laser Protection Slow Start	yes
Laser Protection Shorting Relay	yes
Laser Protection Adjustable Limits	yes
Photodiode Feedback Class	supported for constant power mode
TEC Integration Class	series integrated temperature control
Sensor Compatibility Class	thermistor IC RTD class on series
Display Class	front panel laser and TEC sections
Form Factor	benchtop laser diode controller
Intended Current Class	high power laser diodes to 6 A
Manufacturer	ILX Lightwave / Newport lineage
Current Continuity	6 A rated output
Family Current Span Context	sits above 2/4 A 374x models
Modulation Support Class	external modulation on series current modes
Isolation Class	independent laser and TE supplies on series
Stability Class	high stability low noise series design
Protection Intermittent Contact	yes on series
Power Line Transient Protection	yes on series
Notes	
6 A rating from ILX LDC-3700 series comparison tables for LDC-3752. M-suffix treated as same current class; confirm any M-specific interface options on the faceplate/manual.	

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
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
30-day returns
NAICS 423690 · 811210 · 541380
Generated August 14, 2026

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