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Data Sheet

August 1, 2026

ILX LIGHTWAVE

ILX Lightwave LDX-32420: Precision Current Source, 10/20A, LDX-36000 Series

The ILX Lightwave LDX-32420 is a precision current source designed for driving laser diodes and other high-current devices. It is part of the LDX-36000 Series and offers selectable current ranges of 10A and 20A. This current source is ideal for demanding applications that require precise and stable current control.



MODEL

**ILX Lightwave
LDX-32420**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

LDX-32420

LISTING

<https://aumictechlabs.com/products/ldx-32420-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The ILX Lightwave LDX-32420 is a precision current source engineered to drive high-power laser diodes and similar devices requiring stable, accurate current control. Part of the LDX-36000 Series, this instrument delivers up to 20 A of DC current across dual selectable ranges (10 A and 20 A) with 4 V compliance voltage. It operates in constant current and constant optical power modes, incorporating real-time forward voltage measurement via four-wire sensing and integrated photodiode current measurement with adjustable reverse bias. The unit combines low-noise operation with modulation capability to 100 kHz bandwidth, making it suitable for both CW and dynamic laser characterization. Comprehensive protection circuitry - including adjustable voltage and current limits, output shorting relays, and transient suppression - safeguards

connected devices during power-up and normal operation. IEEE488/GPIB and USB 2.0 interfaces enable remote control and integration with automated test systems; LabVIEW drivers are available. Note: This model has been discontinued by the manufacturer.

Technical Specifications

Current Output Maximum output: 20 A across dual ranges (10 A, 20 A) Setpoint resolution: 1 mA Setpoint accuracy: 0.1% or $\pm 0.1\%$ reading + 10 mA Output stability (1 hour): ± 50 ppm Noise/ripple (rms): < 5 mA or < 100 ppm at full scale Modulation bandwidth: DC to 100 kHz Forward Voltage

Measurement Accuracy: ± 5 mV Resolution: 1 mV Four-wire sensing system Photodiode Current Measurement Range: 0 to 5000 μ A Accuracy: ± 2 μ A Adjustable reverse bias: 0 to -5 V Voltage Compliance: 4 V

Key Features Constant current (CW) operation in low and high bandwidth modes Constant optical power mode with programmable photodiode responsivity Output shorting relays and slow turn-on/off circuits Fast error detection and intermittent contact protection 5-digit green LED display Power input: 220 VAC

Typical Applications High-power single-emitter laser diode testing and characterization Precision current control for high-current optical devices Modulated and CW laser operation with optical feedback control

Compatibility & Integration IEEE488/GPIB interface USB 2.0 connectivity LabVIEW driver support

Features & description

From manufacturer datasheet

Features

- Dual current ranges: 0 to 10 A and 0 to 20 A
- Compliance voltage: 4 V (adjustable 0 to 4 V)
- Setpoint resolution: 1 mA
- Constant current and constant optical power modes
- Photodiode feedback with adjustable reverse bias 0 to 5 V
- External analog modulation input; trigger output
- Four-wire forward voltage measurement
- Adjustable voltage and current limits; dual interlocks
- Output shorting relay; soft enable delay per laser safety practice
- GPIB (IEEE-488) and USB 2.0 remote interfaces
- Save/recall configurations; LabVIEW drivers available historically

LDX32420 Key Specifications

PARAMETER	VALUE
Dual current ranges	0 to 10 A and 0 to 20 A
Compliance voltage	4 V (adjustable 0 to 4 V)
Setpoint resolution	1 mA

Specifications

PARAMETER	VALUE
Model	LDX-32420 (variants such as LDX-32420-120V for 120 VAC line)
Manufacturer	ILX Lightwave (Newport / MKS)
Instrument Type	High-power precision laser diode current source
Output Current Ranges	0 to 10 A; 0 to 20 A
Setpoint Resolution	1 mA (both ranges)
Setpoint Accuracy	+/-0.1% of reading + 10 mA
Compliance Voltage	4 V
Compliance Voltage Adjust	0 to 4 V; 100 mV resolution; +/-2.5% of FS accuracy
Temperature Coefficient	less than 50 ppm/C

Specifications

PARAMETER	VALUE
Current Limit	0.1 to 10.1 A (10 A range); 0.2 to 20.2 A (20 A range); 100 mA resolution; +/-1% of FS
Modulation Input	0 to 10 V, 1 kohm; transfer 1 A/V (10 A range) or 2 A/V (20 A range)
Modulation Bandwidth (3 dB)	DC to 100 kHz (high BW); DC to 20 kHz (low BW)
Photodiode Current Range	0 to 5000 uA; resolution 1 uA; accuracy +/-2 uA
Forward Voltage Range	0 to 4.000 V; resolution 1 mV; accuracy +/-5 mV
Interlocks	Interlock 1 normally open (close to enable); Interlock 2 TTL (low disables)
Remote Interface	GPIB IEEE-488; USB 2.0
AC Power	100-120 VAC +/-10% or 220-240 VAC +/-10%; about 1.5 A / 0.7 A max draw
Size (HxWxD)	4 in x 8.5 in x 13.4 in (102 × 216 × 340 mm)
Weight	12.2 lb (5.5 kg)
Operating Temperature	0 C to 40 C
Storage Temperature	-40 C to 70 C
Humidity	less than 80% non-condensing
Regulatory	CE (EN 61326-1, EN 55011, EN 61010-1, EN 60950 class listings in manual)

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	40 C to 70 C
Operating temperature	0 C to 40 C
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Humidity	less than 80% non-condensing
Regulatory	CE (EN 61326-1, EN 55011, EN 61010-1, EN 60950 class listings in manual) Identity Clarification Catalog phrasing "LDX-36000 Series" on some listings is incorrect for this model number. Use LDX-32420 documentation for service and calibration. The LDX-36000 family addresses much higher CW/QCW currents (for example up to about 125 A CW / 220 A QCW class) and isadifferent product line.

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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Manufacturer	ILX Lightwave (Newport / MKS)
Instrument Type	High-power precision laser diode current source
Output Current Ranges	0 to 10 A; 0 to 20 A
Setpoint Resolution	1 mA (both ranges)
Setpoint Accuracy	+/-0.1% of reading + 10 mA
Compliance Voltage	4 V
Compliance Voltage Adjust	0 to 4 V; 100 mV resolution; +/-2.5% of FS accuracy
Temperature Coefficient	less than 50 ppm/C
Stability (1 hour, half-scale): less than 100 ppm	
Noise and Ripple (rms, 0.5 ohm load, 1 MHz BW): less than 5 mA (high or low bandwidth mode)	
Specifications	
PARAMETER	VALUE
Current Limit	0.1 to 10.1 A (10 A range); 0.2 to 20.2 A (20 A range); 100 mA resolution; +/-1% of FS
Modulation Input	0 to 10 V, 1 kohm; transfer 1 A/V (10 A range) or 2 A/V (20 A range)
Modulation Bandwidth (3 dB)	DC to 100 kHz (high BW); DC to 20 kHz (low BW)
Photodiode Current Range	0 to 5000 uA; resolution 1 uA; accuracy +/-2 uA
Forward Voltage Range	0 to 4.000 V; resolution 1 mV; accuracy +/-5 mV
Interlocks	Interlock 1 normally open (close to enable); Interlock 2 TTL (low disables)
Remote Interface	GPIO IEEE-488; USB 2.0
AC Power	100-120 VAC +/-10% or 220-240 VAC +/-10%; about 1.5 A / 0.7 A max draw
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Identity Clarification

Catalog phrasing "LDX-36000 Series" on some listings is incorrect for this model number. Use LDX-32420 documentation for service and calibration. The LDX-36000 family addresses much higher CW/QCW currents (for example up to about 125 A CW / 220 A QCW class) and is a different product line.

Standard Operating Conditions

Specifications after approximately one hour warm-up. Use appropriate high-current interconnect cables (for example CC-320, CC-325). Observe laser safety and interlock wiring.

Operational Notes

Change ranges only with laser output off. Confirm AC mains option (120 V vs 240 V) from the rear-panel marking. Floating output allows flexible load grounding within manufacturer guidelines.

Laser Safety

laser safety practice - GPIB (IEEE-488) and USB 2.0 remote interfaces - Save/recall configurations; LabVIEW drivers available historically Technical Specifications Model: LDX-32420 (variants such as LDX-32420-120V for 120 VAC line) Manufacturer: ILX Lightwave (Newport / MKS) Instrument Type: High-power precision laser diode current source Output Current Ranges: 0 to 10 A; 0 to 20 A Setpoint Resolution: 1 mA

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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30-day returns
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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.