

**Aumictech**

Test & measurement • bought, sold, repaired, calibrated

Data Sheet

August 13, 2026

ILX LIGHTWAVE

ILX Lightwave LDX-3220 Laser Diode Driver, Precision

The ILX Lightwave LDX-3220 is a precision laser diode driver designed for demanding laser control applications. It provides stable and accurate current and temperature control for laser diodes, ensuring optimal performance and reliability. This driver features a low-noise current source, comprehensive laser protection features, and a user-friendly interface for easy operation and monitoring.



MODEL

**ILX Lightwave
LDX-3220**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

LDX-3220

LISTING

<https://aumictechlabs.com/products/ldx-3220-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The ILX Lightwave LDX-3220 is a microprocessor-based laser diode driver engineered for precision current control in research, development, and production environments. It delivers dual output ranges (0–200 mA and 0–500 mA) with exceptional stability and low noise performance, supporting both constant current and constant power operating modes. The driver operates in three distinct modes: CW (Constant Current) optimized for DC operation with external modulation to 15 kHz and enhanced noise performance; High Bandwidth mode supporting 1 MHz modulation for dithering applications; and Constant Power mode via rear-facet or external photodiode feedback. Current output accuracy reaches $\pm 0.05\%$ FS with 1-hour stability better than 10 ppm FS.

and 24-hour stability under 20 ppm FS. Temperature coefficient is held to less than 50 ppm FS/°C. Noise and ripple performance is exceptionally low at less than 2 μ A (rms). Measurement capabilities include four-wire forward voltage sensing with $\pm 2.5\%$ accuracy and 50 mV resolution, monitor current measurement (5–5000 μ A range, ± 2 μ A accuracy), and photodiode current monitoring (0–5000 μ A, $\pm 0.04\%$ FS accuracy) with adjustable reverse bias to 5 V. The 10 V laser compliance voltage accommodates standard laser diode packages. Integrated protection circuitry includes adjustable current and voltage limits, output shorting relays, clamping current limits under modulation, intermittent contact protection, and slow-start power-up sequencing. A 5-digit green LED display provides real-time setpoint and measurement readout with fine/coarse control adjustment.

Technical Specifications

Maximum output current: 0.5 A (dual ranges: 0–200 mA, 0–500 mA) Setpoint and output accuracy: $\pm 0.05\%$ FS 1-hour stability: <10 ppm FS; 24-hour stability: <20 ppm FS Temperature coefficient: <50 ppm FS/°C Noise and ripple: <2 μ A (rms) Laser compliance voltage: 10 V External modulation bandwidth: DC to 15 kHz (CW); DC to 1 MHz (High Bandwidth) Forward voltage measurement: $\pm 2.5\%$ accuracy, 50 mV resolution Photodiode current range: 0–5000 μ A ($\pm 0.04\%$ FS accuracy) Monitor current range: 5–5000 μ A (± 2 μ A accuracy) Photodiode reverse bias: 0–5 V adjustable

Key Features

Constant Current and Constant Power operating modes Four-wire forward voltage measurement Adjustable current and voltage limiting Output shorting relays with clamping protection Slow-start routine for safe power-up transitions

Typical Applications

Laser diode characterization and burn-in testing Wavelength and power tuning via current dithering Photonics research and component development Production laser module assembly and verification

Compatibility & Integration

GPIB/IEEE-488 instrument control LabVIEW instrument drivers available 120 VAC power input

Features & description

From manufacturer datasheet

Features

- Dual ranges 0-200 mA and 0-500 mA
- Constant current and constant power modes
- Compliance voltage 0-10 V adjustable
- Noise less than 2 uA rms (low BW) / less than 4 uA rms (high BW) on 200/500 mA ranges
- External modulation DC-1 MHz (high BW) or DC-15 kHz (low BW)
- Photodiode feedback 5-5000 uA differential
- Four-wire forward voltage measurement
- GPIB/IEEE-488 remote interface

LDX3220 Characteristics / Specifications

PARAMETER	VALUE
Model	LDX-3220
Manufacturer	ILX Lightwave / Newport / MKS
Instrument Type	Precision laser diode current source
Current Range Low	0 to 200 mA
Current Range High	0 to 500 mA
Setpoint Resolution 200 mA Range	4 uA
Setpoint Resolution 500 mA Range	10 uA
Setpoint Accuracy	+/-0.05% of full scale
Temperature Coefficient	less than 50 ppm/C
Noise High Bandwidth 200/500 mA	less than 4 uA rms
Noise Low Bandwidth 200/500 mA	less than 2 uA rms
Compliance Voltage Range	0 to 10 V
Compliance Resolution	50 mV
Compliance Accuracy	+/-2.5%
Current Limit 200 mA Range	1 to 202 mA (1 mA steps; +/-2 mA accuracy)
Current Limit 500 mA Range	1 to 505 mA (2.5 mA steps; +/-5 mA accuracy)
Photodiode Current Range	5 to 5000 uA
PD Reverse Bias	0 to 5 V adjustable
External Modulation Transfer 500 mA	50 mA/V
External Modulation High BW	DC to 1 MHz
External Modulation Low BW	DC to 15 kHz
Forward Voltage Display	0.000 to 10.000 V; 1 mV resolution; +/-2 mV accuracy
Size	4 in x 8.5 in x 13.4 in (10.2 × 21.6 × 34.0 cm)
Weight	about 12 lb (5.5 kg)
AC Input	100/120/220/230-240 VAC +/-10%, 50-60 Hz

PARAMETER	VALUE
Operating Temperature	0 to 40 C
Interface	GPIB/IEEE-488
Bandwidth	200/500 mA: less than 4 uA rms

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	0 to 40 C
Operating Temperature	0 to 40 C
Interface	GPIB/IEEE-488 Notes Specs from ILX Lightwave LDX-3200 series manual / Newport LDX-3220 listings. Confirm AC line voltage configuration and GPIB address on the unit.

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
Model	LDX-3220
Manufacturer	ILX Lightwave / Newport / MKS
Instrument Type	Precision laser diode current source
Current Range Low	0 to 200 mA
Current Range High	0 to 500 mA
Setpoint Resolution 200 mA Range	4 uA
Setpoint Resolution 500 mA Range	10 uA
Setpoint Accuracy	+/-0.05% of full scale
Temperature Coefficient	less than 50 ppm/C
Short-Term Stability 1 hr: less than 10 ppm	
Long-Term Stability 24 hr: less than 20 ppm	
Specifications	
PARAMETER	VALUE
Noise High Bandwidth 200/500 mA	less than 4 uA rms
Noise Low Bandwidth 200/500 mA	less than 2 uA rms
Compliance Voltage Range	0 to 10 V
Compliance Resolution	50 mV
Compliance Accuracy	+/-2.5%
Current Limit 200 mA Range	1 to 202 mA (1 mA steps; +/-2 mA accuracy)
Current Limit 500 mA Range	1 to 505 mA (2.5 mA steps; +/-5 mA accuracy)
Photodiode Current Range	5 to 5000 uA
PD Reverse Bias	0 to 5 V adjustable
External Modulation Transfer 500 mA	50 mA/V
External Modulation High BW	DC to 1 MHz
External Modulation Low BW	DC to 15 kHz
Forward Voltage Display	0.000 to 10.000 V; 1 mV resolution; +/-2 mV accuracy

PARAMETER	VALUE
Size	4 in x 8.5 in x 13.4 in (10.2 x 21.6 x 34.0 cm)
Weight	about 12 lb (5.5 kg)
AC Input	100/120/220/230-240 VAC +/-10%, 50-60 Hz
Operating Temperature	0 to 40 C
Interface	GPIB/IEEE-488

Notes
Specs from ILX Lightwave LDX-3200 series manual / Newport LDX-3220 listings. Confirm AC line voltage configuration and GPIB address on the unit.

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 13, 2026

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