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Data Sheet
August 13, 2026

ILX LIGHTWAVE

ILX Lightwave LDX3220 – Precision Laser Diode Driver

The ILX Lightwave LDX-3220 is a precision laser diode driver designed for demanding laser control applications. It offers low noise, high stability, and comprehensive laser protection features. Ideal for researchers and engineers requiring precise control of laser diodes in various scientific and industrial applications.

MODEL	CALIBRATION
ILX Lightwave LDX3220	Available on request
CONDITION	**STATUS**
Used	In stock
RFQ / SKU	**LISTING**
LDX3220	https://aumictechlabs.com/products/ldx3220-2/

NIST-traceable cal · SAM registered · 30-day returns

NAICS 423690 · 811210 · 541380

This unit

The ILX Lightwave LDX3220 is a microprocessor-controlled laser diode driver engineered for precision current regulation and laser protection in scientific and industrial applications. It delivers stable, low-noise output across dual current ranges with integrated protection circuitry, four-wire forward voltage monitoring, and constant current or constant power operating modes. The instrument supports external modulation up to 1 MHz and includes GPIB/IEEE-488 remote control with LabVIEW driver support.Technical Specifications Laser Current Control Output current ranges: 0–200 mA and 0–500 mA Current resolution: 4 µA (0–200 mA) and 10 µA (0–500 mA) Current accuracy: ±0.05% of full scale Short-term stability (1 hour): <10 ppm FS Long-term stability (24 hours): <20 ppm FS Output noise/ripple: 2 µA (rms, low bandwidth) and 4 µA (rms,

high bandwidth) Transfer function: 50 mA/V Laser Diode Protection Adjustable compliance voltage: 0–10 V (0–200 mA range) and 0 to –10 V (0–500 mA range) Clamping current limits for modulated operation Intermittent contact protection included Output shorting relays for safe switching Slow start routine to suppress turn-on transients Adjustable current and voltage limits Forward Voltage Measurement Four-wire measurement configuration Accuracy: ±2.5% (forward voltage), ±2 mV (measurement) Resolution: 50 mV Photodiode Monitoring Current range: 0–5000 µA Current accuracy: ±2 µA Reverse bias: 0–5 V Differential feedback topology Modulation Capability External modulation: DC to 1 MHz (high bandwidth) and DC to 15 kHz (low bandwidth)Key Features Dual current ranges with independent resolution and accuracy Constant current and constant power modes with rear-facet photodiode feedback 5-digit green LED display readable with laser safety eyewear GPIB/IEEE-488 interface for remote instrument control LabVIEW driver support for virtual instrument developmentTypical Applications Precision laser diode control in laboratory research, optical testing, wavelength-stabilized systems, and modulation-intensive industrial processes.Compatibility & Integration GPIB/IEEE-488 connectivity enables integration into automated test systems. LabVIEW drivers streamline software development. Available in 120 VAC and 220 VAC configurations.

Features & description

From manufacturer datasheet

Features

- Dual ranges 0-200 mA and 0-500 mA

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 Notes Specs from ILX Lightwave LDX-3200 series manual / Newport LDX-3220 listings. Confirm AC line voltage configuration and GPIB address on the unit.
Bandwidth	200/500 mA: less than 4 uA rms

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	0 to 40 C
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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

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Model	LDX-3220
Manufacturer	ILX Lightwave / Newport / MKS
Instrument Type	Precision laser diode current source

Specifications

PARAMETER	VALUE
Current Range Low	0 to 200 mA
Current Range High	0 to 500 mA
Setpoint Resolution 200 mA Range	4 uA

Specifications

PARAMETER	VALUE
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

Specifications

PARAMETER	VALUE
Compliance Resolution	50 mV
Compliance Accuracy	+/-2.5%

PARAMETER	VALUE
Current Limit 200 mA Range	1 to 202 mA (1 mA steps; +/-2 mA accuracy)

Specifications

PARAMETER	VALUE
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

Specifications

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External Modulation Transfer 500 mA	50 mA/V
External Modulation High BW	DC to 1 MHz
External Modulation Low BW	DC to 15 kHz

Specifications

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Forward Voltage Display	0.000 to 10.000 V; 1 mV resolution; +/-2 mV accuracy
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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

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