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Data Sheet

August 14, 2026

ILX LIGHTWAVE

ILX Lightwave LDX-36125-24 " Laser Diode Driver, High Power CW/QCW

The ILX Lightwave LDX-36125-24 is a high-power laser diode driver designed for both continuous wave (CW) and quasi-continuous wave (QCW) operation. It provides precise control and stable current delivery to laser diodes, ensuring optimal performance and longevity. Ideal for demanding applications requiring high power and accuracy.



MODEL

**ILX Lightwave
LDX-36125-24**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

LDX-36125-24

LISTING

<https://aumictechlabs.com/products/ldx-36125-24-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The ILX Lightwave LDX-36125-24 is a high-power laser diode driver for precision current delivery in continuous wave (CW) and quasi-continuous wave (QCW) applications. It delivers up to 125 A in CW mode and 220 A in QCW mode with 24 V compliance, meeting the demands of research, development, and production environments requiring stable, accurate laser control. Technical Specifications Output Current CW mode: 125 A QCW mode: 220 A Compliance voltage: 24 V Resolution: 10 mA Accuracy: $\pm(0.1\% \text{ of FS} + 120 \text{ mA})$ 1 h stability: $< 100 \text{ ppm FS}$ Temperature coefficient: $< 50 \text{ ppm FS}/^\circ\text{C}$ Noise/ripple: $< 60 \text{ mA rms}$ QCW Pulse Performance Pulse width: 40 μs to 2 s Repetition rate: 0.1 to 1000 Hz Duty cycle: 0.5 to 10% Rise/fall time: $< 20 \mu\text{s}$ Hard pulse capability supported Monitoring & Measurement Forward voltage resolution: 10 mV Forward

voltage accuracy: +0.05% of 20 mV Monitor current range: 3 to 10000 μ A Monitor current accuracy: +0.1% of FS Photodiode measurement supported (0 to 15 V reverse bias) Thermistor input supported Protection & Control Adjustable current limit: 0 to full scale Adjustable voltage limit: 0 to full scale Current limit response: < 2 μ s Open circuit response: < 50 μ s Output shorting relay (normally closed) Transient protection: Output On/Off, Power Up/Down, EFT/Surge Programmable temperature limit TTL trigger input/output with adjustable delay Key Features GPIB computer interface for remote control and monitoring 5-digit green LED display Setpoint accuracy: +0.1% Slow turn-on/off circuits for diode protection Fast error detection circuits Typical Applications High-power laser diode systems in R&D and production requiring precise current regulation, pulsed operation, and integrated photodiode monitoring. Compatibility & Integration LabVIEW instrument drivers available for virtual instrument programming. Physical Specifications Dimensions: 5.25" H $\times$ 19" W $\times$ 17.75" D (146 mm $\times$ 483 mm $\times$ 451 mm) Weight: 18.9 kg (41 lbs) Power: 200-240 VAC

LDX36125 Characteristics / Specifications

PARAMETER	VALUE
Output Current CW	125 A
Output Current QCW Pulse	220 A
Output Current Hard Pulse	125 A
Compliance Voltage	24 V
Maximum CW Power	3000 W
Setpoint Resolution	10 mA
Setpoint Accuracy	plus or minus (0.1% + 120 mA)
CW Settling Time	20 us
Pulse Settling Time	80 us
Hard Pulse Settling Time	550 us
Temperature Coefficient	plus or minus 50 ppm/C
Stability	plus or minus 100 ppm
Noise and Ripple	less than 60 mA rms
Operational Transients	less than 40 mA
Pulse Mode Width Range	40 us to 1 ms
Hard Pulse Width Range	1 ms to 2 s
Pulse Width Resolution Pulse Mode	2 us
Pulse Frequency Range	0.1 to 1000 Hz
Pulse Frequency Resolution	0.1 Hz
Pulse Frequency Accuracy	plus or minus 0.1%
Pulse Mode Duty Cycle	0.5 to 10%
Hard Pulse Duty Cycle	10 to 90%
Pulse Mode Rise Fall Time	less than 20 us
Hard Pulse Rise Fall Time	200 us
Overshoot	less than 2%

PARAMETER	VALUE
Forward Voltage Range	0 to 24 V class (measurement to compliance family)
Forward Voltage Resolution	10 mV
Forward Voltage Accuracy	plus or minus 0.05% + 20 mV
Photodiode Current Range	3 to 10000 uA
Photodiode Current Resolution	3 uA
Photodiode Current Accuracy	plus or minus 0.1%
Photodiode Reverse Bias Range	0 to -15 V
Photodiode Reverse Bias Resolution	100 mV
Temperature Sensor	10 kOhm thermistor
Temperature Range	-99 C to +199.9 C
Thermistor Current	100 uA
Temperature Accuracy	plus or minus 0.1 C
Current Limit Resolution	10 mA
Hardware Fault Current Limit Response	less than 2 us
Open Circuit Fault Response	less than 50 us
Interlock Fault Response Time	less than 6 ms
GPIB Interface	IEEE-488
Onboard Memory Storage	1000 points
Size	146 mm x 483 mm x 451 mm (5.25 in x 19 in x 17.75 in)
Weight	18.9 kg (Newport listing); series table lists 15.2 kg/34 lbs for related 36125-12 class
Power Requirements	200-240 VAC plus or minus 10% (model dependent)
Operating Temperature	0 C to 40 C
Storage Temperature	-40 C to 70 C
Humidity	20 to 85% non-condensing

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	40 C to 70 C
Operating temperature	0 C to 40 C
Operating Temperature	0 C to 40 C
Humidity	20 to 85% non-condensing

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 rate continuous-wave output to 125 A, quasi-CW pulse output to 220 A, and 24 V compliance, with CW/QCW/hard-pulse modes, GPIB control, 4-wire forward voltage measurement, photodiode measurement, and multilayer laser diode protection.

Applications

The LDX-36125-24 is used for high-power laser diode bar and stack testing, CW and pulsed characterization, automated LIV work with trigger synchronization, and production/R&D drive of multi-diode series strings requiring high current and 24 V compliance.

Key Features

CW, QCW pulse, and hard-pulse operating modes

Adjustable voltage and current limits with redundant hardware limits

Output shorting relay and slow turn-on protection

Dual independent interlocks

Thermistor temperature monitor with programmable temperature limit

Trigger in/out with programmable delays

IEEE-488/GPIB remote interface

Save/recall of multiple test configurations

Technical Specifications

Technical Specifications

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Output Current CW	125 A
Output Current QCW Pulse	220 A
Output Current Hard Pulse	125 A
Compliance Voltage	24 V
Maximum CW Power	3000 W
Setpoint Resolution	10 mA
Setpoint Accuracy	plus or minus (0.1% + 120 mA)
CW Settling Time	20 us
Pulse Settling Time	80 us
Hard Pulse Settling Time	550 us
Temperature Coefficient	plus or minus 50 ppm/C
Stability	plus or minus 100 ppm
Noise and Ripple	less than 60 mA rms
Operational Transients	less than 40 mA
Pulse Mode Width Range	40 us to 1 ms
Hard Pulse Width Range	1 ms to 2 s
Pulse Width Resolution Pulse Mode	2 us

PARAMETER	VALUE
Pulse Frequency Range	0.1 to 1000 Hz
Pulse Frequency Resolution	0.1 Hz
Pulse Frequency Accuracy	plus or minus 0.1%
Pulse Mode Duty Cycle	0.5 to 10%
Hard Pulse Duty Cycle	10 to 90%
Pulse Mode Rise Fall Time	less than 20 us
Hard Pulse Rise Fall Time	200 us
Overshoot	less than 2%
Forward Voltage Range	0 to 24 V class (measurement to compliance family)
Forward Voltage Resolution	10 mV
Forward Voltage Accuracy	plus or minus 0.05% + 20 mV
Photodiode Current Range	3 to 10000 uA
Photodiode Current Resolution	3 uA
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Photodiode Reverse Bias Range	0 to -15 V
Photodiode Reverse Bias Resolution	100 mV
Temperature Sensor	10 kOhm thermistor
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Power Requirements	200-240 VAC plus or minus 10% (model dependent)
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Storage Temperature	-40 C to 70 C
Humidity	20 to 85% non-condensing

Notes

Model-specific CW/QCW/compliance/power values are from Newport LDX-36125-24 product specs and ILX LDX-36000 Series user manual Table 1.2 (36125-24 column). Weight may differ slightly between listing and series table; use faceplate and packing data for the physical 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

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NIST-traceable calibration · SAM registered ·
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.