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Data Sheet
August 14, 2026

ILX LIGHTWAVE

ILX Lightwave LDX-36018-35 â€“ Laser Diode Driver, High Power CW/QCW

The ILX Lightwave LDX-36018-35 is a high-power laser diode driver designed for both CW (Continuous Wave) and QCW (Quasi-Continuous Wave) operation. It provides precise current and voltage control for a variety of laser diode applications. Featuring a solid design and comprehensive protection features, it ensures stable and reliable operation for demanding laser applications.

MODEL ILX Lightwave LDX-36018-35	CALIBRATION Available on request
CONDITION Used	STATUS In stock
RFQ / SKU LDX-36018-35	LISTING https://aumictechlabs.com/products/ldx-36018-35-2/

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

NAICS 423690 · 811210 · 541380

This unit

The ILX Lightwave LDX-36018-35 is a high-power laser diode driver delivering precise current and voltage control for Continuous Wave (CW) and Quasi-Continuous Wave (QCW) applications. Built for demanding test environments, it combines 18 A CW output with 40 A QCW/pulsed capability, 35 V compliance voltage, and sub-microsecond fault response. The driver integrates current and voltage limiting, photodiode measurement, temperature monitoring, and multiple transient protection mechanisms. GPIB control, programmable trigger functions, and save/recall capability enable rapid characterization and automated testing workflows. Technical Specifications Current Output CW output: 18 A QCW/hard pulse output: 40 A Current resolution:

10 mA Current accuracy: ±(0.1% FS + 10 mA) or ±0.1% 1-hour stability: <100 ppm FS Adjustable current limit: 0 to full scale Voltage Output Compliance voltage: 35 V Adjustable voltage limit: 0 to full scale Pulse Operation Pulse width: 40 µs to 2 s Repetition rate: 0.1 Hz to 1 kHz Duty cycle: 0.5% to 20% or 0.5% to 90% Rise/fall time: <10 µs Monitoring & Measurement Forward voltage accuracy: ±0.05% of 20 mV Forward voltage resolution: 10 mV Monitor current range: 3 to 10,000 µA Monitor current accuracy: ±0.1% FS Photodiode reverse bias: 0 to 5 V Temperature monitoring: Thermistor input supported Protection & Response Output shorting relay: Normally closed Current limit response: <2 µs Open circuit response: <50 µs Interlock response: <6 ms Output enable delay: 2 s Transient protection: Output On/Off, power up/down, EFT/surge Interfaces & Control GPIB (IEEE 488) Programmable trigger input/output with adjustable delays Configuration save/recall Power & Environmental Input: 100-120 VAC or 200-240 VAC Operating temperature: 0 °C to 40 °C Maximum humidity: <80% RH, non-condensing Maximum altitude: 3000 m Weight: 11.9 kg Dimensions: 146 × 483 × 451 mm Display: 5-digit or dual 5-digit green LED Key Features Dual-mode operation supports both steady-state and pulsed laser characterization <2 µs current limiting protects devices during fault conditions Integrated photodiode measurement (3 to 10,000 µA range) eliminates external instrumentation Thermistor input enables real-time junction temperature monitoring Programmable trigger I/O with delays supports synchronization to external test sequences GPIB remote control and save/recall streamline multi-device production test Typical Applications High-power diode laser characterization (reliability, L-I curves, thermal analysis) Pulsed laser testing (fiber-coupled pump sources, free-space systems) Automated production test with configuration recall Long-term stability monitoring and burn-in Compatibility & Integration GPIB connectivity enables integration into ATE and laboratory automation frameworks. Trigger I/O supports synchronized operation with optical measurement instruments and data acquisition systems. Dual-supply design (100-120/200-240 VAC) accommodates global lab installations.

LDX36018 Characteristics / Specifications

PARAMETER	VALUE
Output Current CW	18 A
Output Current QCW Pulse	40 A
Output Current Hard Pulse	18 A
Compliance Voltage	35 V
Maximum CW Power	630 W
Setpoint Resolution	10 mA
Setpoint Accuracy	plus or minus (0.1% + 10 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 10 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 20%
Hard Pulse Duty Cycle	20 to 90%
Pulse Mode Rise Fall Time	less than 10 us
Hard Pulse Rise Fall Time	200 us
Overshoot	less than 2%

PARAMETER	VALUE
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 (series table); Newport listing also notes 0 to 5 V configuration class
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
Size	146 mm x 483 mm x 451 mm (5.25 in x 19 in x 17.75 in)
Weight	11.9 kg
Power Requirements	100-120 VAC and 200-240 VAC plus or minus 10%
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 18 A, quasi-CW pulse output to 40 A, and 35 V compliance, with CW/QCW/hard-pulse modes, GPIB control, forward voltage and photodiode measurement, and multilayer laser diode protection.

Applications
The LDX-36018-35 is used for high-compliance laser diode and series-string testing, CW and pulsed characterization, trigger-synchronized automated test, and R&D/production drive where 35 V headroom and mid-ampere currents are required.

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
4-wire forward voltage and photodiode measurement

Technical Specifications

Technical Specifications

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Output Current CW	18 A
Output Current QCW Pulse	40 A
Output Current Hard Pulse	18 A
Compliance Voltage	35 V
Maximum CW Power	630 W
Setpoint Resolution	10 mA
Setpoint Accuracy	plus or minus (0.1% + 10 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 10 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 20%
Hard Pulse Duty Cycle	20 to 90%
Pulse Mode Rise Fall Time	less than 10 us
Hard Pulse Rise Fall Time	200 us
Overshoot	less than 2%
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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Hardware Fault Current Limit Response	less than 2 us
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Power Requirements	100-120 VAC and 200-240 VAC plus or minus 10%
Operating Temperature	0 C to 40 C
Storage Temperature	-40 C to 70 C
Humidity	20 to 85% non-condensing

Notes
Model-specific values are from Newport LDX-36018-35 product specs and ILX LDX-36000 Series user manual Table

1.2 (36018-35 column). Photodiode bias range wording differs slightly between listing and series table; verify on the installed firmware/hardware foraspecific 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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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.