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Data Sheet
August 13, 2026

ILX LIGHTWAVE

ILX Lightwave LDX-36070-30 â€“ Laser Diode Driver, High Power CW/QCW

Key Features - CW, Pulse, and HPulse modes - Independent current and voltage limits (firmware and hardware) - Output shorting, 2 s turn-on delay (21CFR 1040.10), intermittent-contact and EFT/surge protection - Dual interlocks (normally open, close to enable) - Bus-bar current output on this current class - Do not operate from a 120 VAC 20 A outlet at full power Technical Specifications Model: LDX-36070-30 Manufacturer: ILX Lightwave (Newport / MKS) Instrument Type: High-power CW/QCW laser diode current source Alias: LDX36070-30; 36070-30 CW output current: 70 A Pulse output current: 160 A HPulse output current: 70 A Setpoint resolution: 10 mA Setpoint accuracy: ±(0.

MODEL ILX Lightwave LDX-36070-30	CALIBRATION Available on request
CONDITION Used	STATUS In stock
RFQ / SKU LDX-36070-30	LISTING https://aumictechlabs.com/products/ldx-36070-30-2/

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

NAICS 423690 · 811210 · 541380

This unit

The ILX Lightwave LDX-36070-30 is a high-power laser diode driver delivering 70 A in continuous wave (CW) mode and 160 A in quasi-continuous wave (QCW) mode. Designed for demanding scientific and industrial laser systems, this instrument provides precision current control with ± (0.1% of setting + 70 mA) accuracy and sub-100 ppm full-scale stability over one hour. The driver outputs 30 V compliance voltage and supports hard pulse operation from 40 µs to 2 s pulse

widths at repetition rates up to 1000 Hz. Technical Specifications Laser Diode Current Control Output current (CW): 70 A Output current (QCW): 160 A Minimum drive requirement: > 10 A Setpoint resolution: 10 mA Setpoint accuracy: ±(0.1% of setting + 70 mA), ±(0.1% of FS + 80 mA) 1-hour current stability: ±(0.01% of setting + 7 mA) per hour, < 100 ppm FS Output noise/ripple: < 70 mA RMS Temperature coefficient: < 50 ppm FS/°C Output Characteristics Laser compliance voltage: 30 V Pulse width range: 40 µs to 2 s Duty cycle: 0.5% to 20% Pulse repetition rate: 0.1 to 1000 Hz Rise/fall time: < 20 µs Measurements and Monitoring Forward voltage resolution: 10 mV Forward voltage accuracy: +0.05% of 20 mV Photodiode monitor current range: 3 µA to 10000 µA Photodiode monitor accuracy: +0.1% of FS Photodiode reverse bias: 0 to 15 V Thermistor input with programmable temperature limit and output disable Key Features Overcurrent, overvoltage, and thermal protection Adjustable voltage and current limits with output shorting relays Slow turn-on/off circuits and fast error detection Transient protection during power-up and operation 5-digit green LED display Temperature coefficient stability: < 50 ppm FS/°C Typical Applications High-power CW and QCW laser diode systems Pulsed laser research and development Industrial cutting and marking systems Advanced scientific instrumentation Compatibility & Integration Computer interfaces: USB, RS-232, GPIB/IEEE-488 TTL trigger input and output with adjustable delay Power requirement: 200–240 VAC, 50/60 Hz Dimensions: 146 mm (H) × 483 mm (W) × 451 mm (D) Weight: 16.3 kg

Features & description

From manufacturer datasheet

Features

• CW, Pulse, and HPulse modes • Independent current and voltage limits (firmware and hardware) • Output shorting, 2 s turn-on delay (21CFR 1040.10), intermittent-contact and EFT/surge protection • Dual interlocks (normally open, close to enable) • Bus-bar current output on this current class • Do not operate from a 120 VAC 20 A outlet at full power

LDX36070 Characteristics / Specifications

PARAMETER	VALUE
Model	LDX-36070-30
Manufacturer	ILX Lightwave (Newport / MKS)
Instrument Type	High-power CW/QCW laser diode current source
Alias	LDX36070-30; 36070-30
CW output current	70 A
Pulse output current	160 A
HPulse output current	70 A
Setpoint resolution	10 mA
Setpoint accuracy	±(0.1% + 80 mA)
CW settling time	20 us
Pulse settling time	80 us
HPulse settling time	550 us
Maximum CW power	2100 W
Compliance voltage	30 V (end of CC-390 cable, CW; 10% derating in QCW)
Temperature coefficient	±50 ppm perCStability: ±100 ppm of FS over 1 hour, all modes
Noise and ripple	less than 40 mA rms (300 kHz BW, resistive load)
Operational transients	less than 40 mA
EFT surge 1 kV	less than 320 mA
Pulse width Pulse mode	40 us to 1 ms
Pulse width HPulse	1 ms to 2 s
Pulse width resolution Pulse	2 us
Pulse width accuracy Pulse	±10 us
Pulse width accuracy HPulse	±20 us
Pulse frequency	0.1 to 1000 Hz; 0.1 Hz resolution; ±0.1% of reading
Duty cycle Pulse	0.5 to 20%

PARAMETER	VALUE
Duty cycle HPulse	20 to 90%
Duty cycle resolution	0.1%
Rise fall Pulse	less than 20 us (10% to 90%, half scale, CC-390, non-inductive)
Rise fall HPulse	200 us
Overshoot	less than 2%
Voltage limit range	0 to 33 V
Voltage limit resolution	100 mV
Voltage limit accuracy	±(1% + 200 mV)
Current limit CW	0 to 73.5 A
Current limit QCW	0 to 169.0 A
Current limit resolution	10 mA
Firmware current limit accuracy	±(0.1% + 80 mA)
Hardware current limit accuracy	±(1% + 80 mA)
Forward voltage range	0 to 30.00 V
Forward voltage resolution	10 mV
Forward voltage accuracy	±(0.05% + 20 mV)
Photodiode current range	3 to 10000 uA
Photodiode resolution	3 uA
Photodiode accuracy	±0.1%
PD reverse bias	0 to -15 V; 100 mV; ±2.5% FS
PD responsivity	0.001 to 10.000 mA/W; 0.001 mA/W
Power control range	0 to 2500 W; 1 W resolution
P1 slope range	0.00 to 100.0 W/A; 0.01 W/A
P2 threshold range	0.00 to 68.00 W/A; 0.1 W/A
Thermistor sensor	10 k; -99 to +199.9 C; 100 uA; ±0.1 C
Trigger output	TTL active high; 10 us pulse; delay 0 us to 1 s
Trigger input	TTL rising edge; single shot to 1 kHz; delay 20 us to 1 s

PARAMETER	VALUE
GPIB	IEEE-488
Onboard memory	1000 points; 30 ms per point upload
AC power	220/240 VAC +10% (required for full output)
Maximum current draw	13 A
Size HxWxD	146 mm x 483 mm x 451 mm (5.25 in x 19 in x 17.75 in)
Weight	16.3 kg (36 lb)
Operating temperature	0 C to 40 C
Storage temperature	-40 C to 70 C
Current output connector	bus bar
Spec condition	1 hour warm-up at 25 C

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
Current output connector	bus bar
Spec condition	1 hour warm-up at 25 C Notes Specs from ILX Lightwave LDX-36000 Series user manual Table 1.2, 36070-30 column, and TN#36000-1 facility power note. Related 36040-30 is 40 A / 30 V / 1200 W; do not mix those current/noise/limit rows. Pulse performance is stated with the ILX CC-390 cable.

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-36070-30
Manufacturer	ILX Lightwave (Newport / MKS)
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Setpoint resolution	10 mA
Setpoint accuracy	±(0.1% + 80 mA)
CW settling time	20 us
Pulse settling time	80 us
HPulse settling time	550 us
Maximum CW power	2100 W
Compliance voltage	30 V (end of CC-390 cable, CW; 10% derating in QCW)
Temperature coefficient	±50 ppm perCStability: ±100 ppm of FS over 1 hour, all modes
Noise and ripple	less than 40 mA rms (300 kHz BW, resistive load)
Operational transients	less than 40 mA
EFT surge 1 kV	less than 320 mA
Pulse width Pulse mode	40 us to 1 ms
Pulse width HPulse	1 ms to 2 s
Pulse width resolution Pulse	2 us
Pulse width accuracy Pulse	±10 us
Pulse width accuracy HPulse	±20 us
Pulse frequency	0.1 to 1000 Hz; 0.1 Hz resolution; ±0.1% of reading
Duty cycle Pulse	0.5 to 20%
Duty cycle HPulse	20 to 90%

PARAMETER	VALUE
Duty cycle resolution	0.1%
Rise fall Pulse	less than 20 us (10% to 90%, half scale, CC-390, non-inductive)
Rise fall HPulse	200 us
Overshoot	less than 2%
Voltage limit range	0 to 33 V
Voltage limit resolution	100 mV
Voltage limit accuracy	±(1% + 200 mV)
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Current limit QCW	0 to 169.0 A
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PD responsivity	0.001 to 10.000 mA/W; 0.001 mA/W
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P1 slope range	0.00 to 100.0 W/A; 0.01 W/A
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Thermistor sensor	10 k; -99 to +199.9 C; 100 uA; ±0.1 C
Trigger output	TTL active high; 10 us pulse; delay 0 us to 1 s
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GPIB	IEEE-488
Onboard memory	1000 points; 30 ms per point upload
AC power	220/240 VAC +10% (required for full output)
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Size HxWxD	146 mm x 483 mm x 451 mm (5.25 in x 19 in x 17.75 in)
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Notes
Specs from ILX Lightwave LDX-36000 Series user manual Table 1.2, 36070-30 column, and TN#36000-1 facility power note. Related 36040-30 is 40 A / 30 V / 1200 W; do not mix those current/noise/limit rows. Pulse performance is stated with the ILX CC-390 cable.

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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