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Data Sheet

August 1, 2026

ILX LIGHTWAVE

ILX Lightwave LDP-3840/03 – Precision Pulsed Current Source, 3A

ILX Lightwave DC Power Supplies. Current: 3 A, Resolution: 100 ns, Accuracy: -35 to 10 ns.



MODEL

**ILX Lightwave
LDP-3840/03**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

LDP-3840/03

LISTING

<https://aumictechlabs.com/products/ldp-3840-03-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The ILX Lightwave LDP-3840/03 is a precision pulsed current source delivering up to 3 A of peak pulse current for testing higher power laser diodes and sensitive optoelectronic devices. The instrument combines nanosecond-scale pulse control with advanced laser safety interlocks and CDRH compliance, making it suitable for R&D and manufacturing environments where device protection and measurement repeatability are critical.

Technical Specifications

- Maximum Peak Pulse Current: 3 A
- Pulse Width Range: 100 ns to 10 μ s
- Pulse Width Resolution: 100 ns
- Pulse Width Accuracy: -35 to 10 ns
- Rise/Fall Time: < 40 ns (typical)
- Overshoot: Less than 5%
- Pulse Polarity: User-selectable (positive or negative)
- Output Accuracy (at setpoints < 10% of full range): 20 mA $\pm$ 4% of setpoint
- Operating Temperature: 10°C to 40°C
- Storage Temperature: -40°C to 70°C
- Humidity: 300 mA ensure practical accuracy across operating range

Redundant output shorting circuits and transient suppression protect against load faults. Closed-case calibration with non-volatile memory storage eliminates downtime. Microprocessor-controlled architecture reduces

maintenance overhead Meets CDRH US 21 CFR 1040.10 laser safety regulations Typical Applications Optical component testing, laser diode characterization, pulsed semiconductor device validation, and automated manufacturing test systems requiring software control and fast pulse sequencing. Compatibility & Integration GPIB Interface: IEEE-488 for remote instrument control Trigger Functions: Standard Trigger-In and Trigger-Out connectors Mounting Boards: Compatible with LPB-382P (case +) and LPB-382N (case -); LPB-380 recommended for optimized pulse response Software Support: LabVIEW® 3.0 instrument driver available Dimensions: 88 mm H × 185 mm W × 304 mm D Weight: 3.6 kg

Features & description

From manufacturer datasheet

Features

- Peak pulsed current to 3 A (LDP-3840/03 / LDP-3840B class) • Pulse width 100 ns to 10 ms • Rise/fall time less than 50 ns; overshoot less than 5% • Maximum duty cycle 10% • Constant duty-cycle or constant-frequency control modes • Selectable positive or negative pulse polarity • Programmable current limit and laser diode protection • Trigger in/out (TTL BNC) • Analog output proportional to current setpoint • GPIB / IEEE-488 remote interface; LabVIEW drivers available for B-series

LDP384003 Characteristics / Specifications

PARAMETER	VALUE
Model	LDP-3840/03 (3 A configuration); successor LDP-3840B
Manufacturer	ILX Lightwave (Newport / MKS)
Instrument Type	Precision pulsed laser diode current source
Output Current Range	0 to 3000 mA
Setpoint Resolution	1000 uA (1 mA)
Setpoint Accuracy	+/-2.5% of full scale
Compliance Voltage	10 V maximum
Overshoot	less than 5%
Noise and Ripple	500 uA rms
Pulse Width	100 ns to 10 ms; resolution 100 ns
Rise/Fall Time	less than 50 ns
Pulse Repetition Interval (Internal)	1 us to 100 ms
Duty Cycle	10% maximum
Polarity	Positive or negative
Trigger Output	TTL BNC; jitter about +/-5 ns
Trigger Input	TTL BNC
Remote Interface	GPIB
Size	approximately 88 × 185 × 304 mm (3.5 × 7.3 × 12 in)
Weight	approximately 3.6 kg (8 lb)
AC Power	100-120 / 220-240 V, 50/60 Hz
Operating Temperature	10 C to 40 C Accessories (family) LPB-380 laser pulse board; CC-380 strip-line output cable; mounts with 50 ohm monitor taps for LIV work Standard Operating Conditions Observe maximum duty cycle and compliance voltage. Use recommended low-inductance cabling for nanosecond edges. Warm-up per manual before critical measurements.

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	10 C to 40 C
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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

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Accessories (family)

LPB-380 laser pulse board; CC-380 strip-line output cable; mounts with 50 ohm monitor taps for LIV work

Standard Operating Conditions

Observe maximum duty cycle and compliance voltage. Use recommended low-inductance cabling for nanosecond edges. Warm-up per manual before critical measurements.

Operational Notes

The /03 designation indicates the 3 A peak option. Confirm faceplate marking LDP-3840 vs LDP-3840B. Related pulsed drivers include LDP-3811 (lower current) and LDP-3830 (5 A, shorter pulses).

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>

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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.