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Data Sheet

August 14, 2026

ILX LIGHTWAVE

ILX Lightwave LDC3724C Laser Diode Controller

The ILX Lightwave LDC-3724C is a high-precision laser diode controller designed for demanding laser control applications. It offers precise current and temperature control, ensuring stable and reliable laser operation. Ideal for research, development, and manufacturing environments requiring accurate laser control.



MODEL

**ILX Lightwave
LDC3724C**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

LDC3724C

LISTING

<https://aumictechlabs.com/products/ldc3724c-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The ILX Lightwave LDC3724C is a precision laser diode controller integrating low-noise current regulation with a 32 W thermoelectric cooler (TEC) controller. It delivers stable, accurate laser diode bias and temperature management across research, development, and manufacturing environments. Technical Specifications Laser Diode Current Output Dual-range selectable: 0–200 mA and 0–500 mA Setpoint resolution: 4 μ A (200 mA range); 10 μ A (500 mA range) Setpoint accuracy: $\pm 0.05\%$ of full scale Compliance voltage: 0–10 V adjustable Temperature coefficient: < 50 ppm/ $^{\circ}$ C Short-term stability (1-hour): < 20 ppm FS Long-term stability (24-hour): < 40 ppm FS Output noise and ripple: 8 V DC Maximum TEC current: 4.0 A Key Features Slow-start turn-on and adjustable current limiting Multiple protection layers: intermittent contact protection, output shorting relays, overcurrent protection, reverse voltage protection, power surge and brown-out protection, fast output shut-off USB and GPIB/IEEE-488 interfaces for system integration LabVIEW

driver support for automated control and data acquisition Typical Applications Laser diode characterization, optical module testing, wavelength stabilization via optical feedback, modulated laser control up to 1 MHz, and thermal management in precision photonics systems. Compatibility & Integration USB and GPIB/IEEE-488 connectivity enable integration into automated test benches. LabVIEW drivers streamline instrument programming and data logging.

LDC3724C Characteristics / Specifications

PARAMETER	VALUE
Laser Output Current Ranges	0 to 200 mA and 0 to 500 mA
Laser Compliance Voltage	0 to 10 V adjustable
Laser Current Accuracy Setpoint	plus or minus 0.05% of FS
Laser Current Resolution High Range	10 uA
Laser Current Resolution Low Range	4 uA (selection guide)
Noise Ripple Low Bandwidth	less than 2 uA rms
Noise Ripple High Bandwidth	4 uA rms
Short Term Stability 1 hour	less than 20 ppm
Long Term Stability 24 hours	less than 40 ppm
Temperature Coefficient	less than 50 ppm FS/C
Modulation High Bandwidth	DC to 1 MHz
Modulation Low Bandwidth	DC to 15 kHz
Modulation Transfer Function High Range	50 mA/V
Modulation Input	0 to 10 V, 1 kOhm
Forward Voltage Range	0.000 to 10.000 V
Forward Voltage Resolution	1 mV
Forward Voltage Accuracy	plus or minus 2.5%
Photodiode Current Range	0 to 5000 uA
Photodiode Current Resolution	1 uA
Photodiode Current Accuracy	plus or minus 2 uA
Photodiode Reverse Bias	0 to 5 V
Optical Power Display Range	0.00 to 500.00 mW
TE Current Range	-4.00 to +4.00 A
TE Voltage Range	-8.0 to +8.0 V
TE Output Power	32 W

PARAMETER	VALUE
TE Current Noise Ripple	less than 1 mA rms
Temperature Control Range	-100.0 C to +199.9 C
Thermistor Setpoint Resolution Neg20 to Pos20 C	0.1 C
Temperature Short Term Stability 1 hour	less than 0.004 C
Temperature Long Term Stability 24 hours	less than 0.01 C
TEC Current Limit Accuracy	plus or minus 0.05 A
Display Type	5-digit green LED (LASER and TEC)
Computer Interfaces	GPIB and USB
Power Requirements	100-115 VAC or 220-240 VAC, 48-66 Hz
Weight	approx. 22.5 lbs (10.2 kg)
Operating Temperature	0 C to +40 C
Storage Temperature	-40 C to +70 C
Humidity	less than 90% RH non-condensing
Laser Safety Features	key switch, interlock, and output delay (CDRH US21 1040.10)
Bandwidth	less than 2 uA rms

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	less than 90% RH non-condensing
Laser Safety Features	key switch, interlock, and output delay (CDRH US21 1040.10) Notes Values are from Newport LDC-3724C product specs, ILX LDC-37×4C user manual, and ILX instrumentation selection guide. Faceplate and calibration certificate remain authoritative foraspecific 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 provide 200 mA / 500 mA current ranges, 10 V adjustable compliance, USB and GPIB interfaces, and typical TEC stability of 0.004 C (1 hour).

Applications

The LDC-3724C is used for precision laser diode characterization with simultaneous temperature control, constant current or constant power operation, modulated laser experiments, and automated R&D or production test via USB/GPIB.

Key Features

- Dual laser current ranges 200 mA / 500 mA with adjustable compliance to 10 V
- Integrated bipolar 32 W TEC controller
- Slow start, adjustable current and voltage limits, intermittent contact protection, output shorting relays
- Constant current low/high bandwidth and constant power modes
- External analog modulation
- 5-digit green LED LASER and TEC displays
- USB and GPIB remote interfaces with LabVIEW drivers

Technical Specifications

Technical Specifications

PARAMETER	VALUE
Laser Output Current Ranges	0 to 200 mA and 0 to 500 mA
Laser Compliance Voltage	0 to 10 V adjustable
Laser Current Accuracy Setpoint	plus or minus 0.05% of FS
Laser Current Resolution High Range	10 uA
Laser Current Resolution Low Range	4 uA (selection guide)
Noise Ripple Low Bandwidth	less than 2 uA rms
Noise Ripple High Bandwidth	4 uA rms
Short Term Stability 1 hour	less than 20 ppm
Long Term Stability 24 hours	less than 40 ppm
Temperature Coefficient	less than 50 ppm FS/C
Modulation High Bandwidth	DC to 1 MHz
Modulation Low Bandwidth	DC to 15 kHz
Modulation Transfer Function High Range	50 mA/V
Modulation Input	0 to 10 V, 1 kOhm
Forward Voltage Range	0.000 to 10.000 V
Forward Voltage Resolution	1 mV
Forward Voltage Accuracy	plus or minus 2.5%
Photodiode Current Range	0 to 5000 uA

PARAMETER	VALUE
Photodiode Current Resolution	1 μ A
Photodiode Current Accuracy	plus or minus 2 μ A
Photodiode Reverse Bias	0 to 5 V
Optical Power Display Range	0.00 to 500.00 mW
TE Current Range	-4.00 to +4.00 A
TE Voltage Range	-8.0 to +8.0 V
TE Output Power	32 W
TE Current Noise Ripple	less than 1 mA rms
Temperature Control Range	-100.0 C to +199.9 C
Thermistor Setpoint Resolution Neg20 to Pos20 C	0.1 C
Temperature Short Term Stability 1 hour	less than 0.004 C
Temperature Long Term Stability 24 hours	less than 0.01 C
TEC Current Limit Accuracy	plus or minus 0.05 A
Display Type	5-digit green LED (LASER and TEC)
Computer Interfaces	GPIB and USB
Power Requirements	100-115 VAC or 220-240 VAC, 48-66 Hz
Weight	approx. 22.5 lbs (10.2 kg)
Operating Temperature	0 C to +40 C
Storage Temperature	-40 C to +70 C
Humidity	less than 90% RH non-condensing
Laser Safety Features	key switch, interlock, and output delay (CDRH US21 1040.10)

Notes

Values are from Newport LDC-3724C product specs, ILX LDC-37x4C user manual, and ILX instrumentation selection guide. Faceplate and calibration certificate remain authoritative for a specific unit.

Laser Safety

Laser Safety Features: key switch, interlock, and output delay (CDRH US21 1040.10) Notes Values are from Newport LDC-3724C product specs, ILX LDC-37×4C user manual, and ILX instrumentation selection guide. Faceplate and calibration certificate remain authoritative for a specific 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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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.