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Data Sheet

August 14, 2026

ILX LIGHTWAVE

ILX Lightwave LDC-3714: 50/100 mA Laser Diode Controller, LDC-3700 Series

The ILX Lightwave LDC-3714 is a precision laser diode controller from the LDC-3700 Series, offering selectable current ranges of 50 mA and 100 mA. It ensures stable and accurate control for laser diode applications, featuring low noise and high resolution for demanding research and development or production testing environments.



MODEL

**ILX Lightwave
LDC-3714**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

LDC-3714

LISTING

<https://aumictechlabs.com/products/ldc-3714-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The ILX Lightwave LDC-3714 is a precision laser diode controller delivering selectable 50 mA and 100 mA output ranges with sub-microamp resolution and sub-percent accuracy. Built for research, development, and production test environments, it combines low-noise drive electronics with an integrated 32 W temperature controller and comprehensive laser protection. Dual modulation modes support DC operation and high-bandwidth external modulation up to 1 MHz, while photodiode feedback monitoring enables closed-loop optical power stabilization. Technical Specifications Drive Current Output ranges: 0–50 mA and 0–100 mA (selectable) Setpoint resolution: 1 μ A (50 mA range); < 2 μ A (100 mA range) Setpoint accuracy: $\pm 0.05\%$ of full scale Output noise and ripple: < 1.5 μ A (both ranges) Compliance voltage: 0–10 V (adjustable) Current

limit: 1–50.5 mA (50 mA range, ± 0.5 mA accuracy); 1–101 mA (100 mA range, ± 1 mA accuracy)
Short-term stability (1 hour): < 20 ppm Long-term stability (24 hour): < 40 ppm Temperature
coefficient: 8 V DC Sensor types: Thermistor, IC, RTD Control modes: Constant temperature,
constant sensor, constant TE current Photodiode Feedback Reverse bias: 0–5 V (adjustable)
Current range: 5–5000 μ A Modulation Analog modulation: Up to 1 MHz (Mode 2); up to 15 kHz
(Mode 1) Input: Differential Key Features Dual-range current architecture optimizes precision
across low and mid-level diode currents Laser diode protection strategies integrated throughout
design Multiple temperature sensor compatibility for diverse thermal management configurations
Two modulation modes support both DC-optimized low-noise operation and high-frequency
external control Typical Applications Laser diode characterization in R&D environments Automated
production testing of single and multi-emitter arrays Wavelength stabilization via integrated
temperature feedback Optical power control through photodiode-based closed loops
Compatibility & Integration Accepts industry-standard thermistor, IC, and RTD temperature
sensors. TEC interface supports bipolar constant-current architecture with user-defined
compliance. Photodiode reverse-bias control enables wide dynamic range optical feedback
monitoring.

LDC3714 Characteristics / Specifications

PARAMETER	VALUE
Laser Current Low Range	0 to 50 mA
Laser Current High Range	0 to 100 mA
Current Source Dual Range	50 mA / 100 mA
Instrument Family	LDC-3700 series
TEC Output Power Class	32 W on TEC-equipped 3714 variants
TEC Output Current Class	4 A class on 32 W TEC
TEC Output Voltage Class	8 V class on 32 W TEC
Temperature Stability Class	less than plus or minus 0.01 C class on series sheets
Temperature Control Range Class	minus 100 C to +199.9 C software limits on C-series manuals
Setpoint Resolution Low Range Class	2 uA class on C-series 50 mA range
Setpoint Resolution High Range Class	4 uA class on C-series 100 mA range
Operating Modes	constant current, high bandwidth, constant optical power
Remote Interface	GPIB IEEE-488
Laser Protection Features	slow start, shorting relay, adjustable limits
Sensor Types	thermistor, AD590/LM335 IC, RTD
Display Type Class	dual 5-digit LED laser and TEC displays on C-series
Power Requirements Class	100-115 VAC or 220-240 VAC 48-66 Hz
Weight Class Related	about 22.5 lb (10.2 kg) on LDC-3714C
Intended Current Class	low power laser diodes to 100 mA
Form Factor	benchtop laser diode controller
Manufacturer	ILX Lightwave / Newport lineage
Modulation Support	external modulation on series

LDC3714 Specifications

PARAMETER	VALUE
Applications	Precision control of low-power laser diodes to 100 mA, TEC-stabilized laser sources, and automated photonic device characterization.
Key Features	Dual range 50 mA / 100 mA current source
Technical Specifications	Laser Current Low Range: 0 to 50 mA

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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Notes	
Ranges from ILX LDC-3700 series tables for LDC-3714. Fine accuracy, noise, and TEC figures cited from LDC-37x4C series manuals where the 3714 row is published; confirm A/B versus Crevision on the faceplate.	

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.