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Data Sheet

August 13, 2026

ILX LIGHTWAVE

ILX Lightwave LDC-3744 Laser Diode Controller

Key Features - Dual ranges 2 A / 4 A versus LDC-3724C at 200/500 mA - Same 32 W TEC as LDC-3724C (4 A / 8 V) - Analog modulation - Thermistor, IC, and RTD sensors; hybrid P-I TEC loop - USB and GPIB with LabVIEW drivers - Do not confuse with LDC-3736 (4 A / 18 V / 128 W TEC) Technical Specifications Model: LDC-3744C Manufacturer: ILX Lightwave (Newport / MKS) Instrument Type: Laser diode current source with integrated TEC controller Family: LDC-3700C Alias: LDC-3744; LDC3744C; LDC 3744C Laser Current Ranges: 0 to 2 A; 0 to 4 A Setpoint Accuracy: plus/minus 0.



MODEL

**ILX Lightwave
LDC3744**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

LDC3744

LISTING

<https://aumictechlabs.com/products/ldc3744-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The ILX Lightwave LDC-3744 is a precision laser diode controller. It integrates a low-noise current source with a stable temperature controller, ensuring precise and reliable operation of laser diode modules. This instrument is well-suited for research and development, as well as production testing of laser diodes where stability and accuracy are critical.

Features & description

From manufacturer datasheet

Features

- Dual ranges 2 A / 4 A versus LDC-3724C at 200/500 mA • Same 32 W TEC as LDC-3724C (4 A / 8 V)
- Analog modulation • Thermistor, IC, and RTD sensors; hybrid P-I TEC loop • USB and GPIB with LabVIEW drivers • Do not confuse with LDC-3736 (4 A / 18 V / 128 W TEC)

LDC3744 Characteristics / Specifications

PARAMETER	VALUE
Model	LDC-3744C
Manufacturer	ILX Lightwave (Newport / MKS)
Instrument Type	Laser diode current source with integrated TEC controller
Family	LDC-3700C
Alias	LDC-3744; LDC3744C; LDC 3744C
Laser Current Ranges	0 to 2 A; 0 to 4 A
Setpoint Accuracy	plus/minus 0.05 percent
Setpoint Resolution	40 uA / 80 uA (2 A / 4 A)
Noise And Ripple	less than 10 uA / 10 uA
Short Term Stability	less than 20 ppm
Laser Compliance Voltage	10 V
Analog Modulation	yes
Laser Protection	slow start; normally closed shorting relay and semiconductor switch; floating output; adjustable current limit; adjustable voltage limit; line surge and EFT; intermittent contact
TEC Output Power	32 W
TEC Output Current	4 A
TEC Output Voltage	8 V
Temperature Stability	less than plus 0.01 C
Temperature Control Range	-100 C to 199 C (sensor dependent)
Thermistor Sensor	yes
IC Sensor	yes
RTD Sensor	yes
TEC Measurements	temperature, current, resistance, voltage
TEC Control Loop	hybrid P-I
Remote Interface	USB and GPIB

PARAMETER	VALUE
Related LDC 3724C Current	200 mA / 500 mA
Related LDC 3724C Resolution	4 uA / 10 uA
Related LDC 3724C Noise	less than 2 uA / 2 uA
Related LDC 3736 Compliance	18 V with 128 W TEC
Photodiode Feedback	constant optical power mode on 3700C family
Display Class	5-digit LED class on 3700C family

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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PARAMETER	VALUE
TEC Output Power	32 W
TEC Output Current	4 A
TEC Output Voltage	8 V
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Temperature Control Range	-100 C to 199 C (sensor dependent)
Thermistor Sensor	yes
IC Sensor	yes
RTD Sensor	yes
TEC Measurements	temperature, current, resistance, voltage
TEC Control Loop	hybrid P-I

PARAMETER	VALUE
Remote Interface	USB and GPIB
Related LDC 3724C Current	200 mA / 500 mA
Related LDC 3724C Resolution	4 uA / 10 uA
Related LDC 3724C Noise	less than 2 uA / 2 uA
Related LDC 3736 Compliance	18 V with 128 W TEC
Photodiode Feedback	constant optical power mode on 3700C family
Display Class	5-digit LED class on 3700C family

Notes

Rows from the ILX Instruments 2019 selection guide LDC-3744C column versus LDC-3724C. Confirm C-series USB versus earlier B-series GPIB-only hardware. Pair with ILX mounts and observe the 10 V compliance (not the 18 V LDC-3736).

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.