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Data Sheet

August 13, 2026

ILX LIGHTWAVE

ILX Lightwave LDT-5412 Temperature Controller

Manufacturer: ILX Lightwave (Newport / MKS) Instrument Type: Thermoelectric temperature controller Alias: LDT5412; LDX-5412 (ordering typo on some brochures) ActualRmonitor 10 uA: 100 kohm per V, +5% Instrument Type: Thermoelectric temperature controller Alias: LDT5412; LDX-5412 (ordering typo on some brochures) ActualRmonitor 10 uA: 100 kohm per V, +5% ActualRmonitor 100 uA: 10 kohm per V, +5%



MODEL

**ILX Lightwave
LDT5412**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

LDT5412

LISTING

**[https://aumictechlabs.c
om/products/ldt5412-2/](https://aumictechlabs.com/products/ldt5412-2/)**

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The ILX Lightwave LDT-5412 is a precision laser diode temperature controller. Designed for demanding laser diode control applications, It has high stability and low noise performance, ensuring accurate temperature control for laser diodes and other temperature-sensitive devices. This controller is ideal for laboratory and research environments where precise temperature management is critical for optimal laser diode operation.

Features & description

From manufacturer datasheet

Features

- Three display modes: set resistance, actual resistance, TE current • Rear-panel GAIN for slew/settling
- External reference-resistor BNC to bypass the front-panel setpoint • Analog actual-R monitor output
- OPEN THERM auto shutoff and LIMIT indicator • Ships with TS-510 10 kohm calibrated thermistor (ordering)

LDT5412 Characteristics / Specifications

PARAMETER	VALUE
Model	LDT-5412
Manufacturer	ILX Lightwave (Newport / MKS)
Instrument Type	Thermoelectric temperature controller
Alias	LDT5412; LDX-5412 (ordering typo on some brochures)
Output type	bipolar current source
Current range	−2 A to 2 A, floating
Compliance voltage	greater than 2 V DC
Rated power class	4 W
Display type	3.5 digit green LED
Display max 10 uA	199.9 kohm
Display max 100 uA	19.99 kohm
Display max TE current	1.99 A
Resolution 10 uA	0.1 kohm
Resolution 100 uA	0.01 kohm
Resolution TE current	0.01 A
Accuracy 10 uA	+0.5 kohm at 25 C
Accuracy 100 uA	+0.05 kohm at 25 C
Accuracy TE current	+0.05 A at 25 C
ActualRmonitor 10 uA	100 kohm per V, +5%
ActualRmonitor 100 uA	10 kohm per V, +5%
Thermistor source currents	10 uA and 100 uA, user selectable
Thermistor control range	10 ohm to 200 kohm
Typical 10 kohm span	−20 C to 50 C
Typical stability	0.01 C class; brochure 4 h drift within 0.01 C
Tech note 24 h stability	better than ±0.005 C at 15 C setpoint in a controlled environment (TN-5412-2)

PARAMETER	VALUE
Current limit	0 to 2 A via recessed LIMIT control
AC power	100–120, 220–240 VAC, 50/60 Hz
Size	267 mm x 140 mm x 66 mm (10.5 × 5.5 × 2.6 in)
Weight	1.8 kg (4.0 lb)
Operating temperature	0 C to 50 C (brochure); 0 C to 40 C (2011 user manual)
Storage temperature	–40 C to 70 C
Warm up	1 hour to rated accuracy
Output connector	15-pin D-sub
Reference input	BNC

General Specifications & Supplementary Characteristics

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Storage temperature	–40 C to 70 C
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Warm up	1 hour to rated accuracy
Output connector	15-pin D-sub
Reference input	BNC Notes Specs from ILX Lightwave LDT-5412 brochure (REV04.042909) and LDT-5412 user manual (70003603, May 2011). Ignore third-party calibration pages that quote 4 A / 16 V / thermocouple USB figures; those are not this instrument. Confirm 10 uA versus 100 uA sensor current for the thermistor in use.

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

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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.