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Data Sheet

August 13, 2026

ILX LIGHTWAVE

ILX Lightwave LDC-3916376 Laser Module

Key Features - Highest LD current in the 3916370 combination family (1.5 A) - 4.75 V compliance (lower than the 6 V 500 mA / 1 A cards) - Integrated 9 W TEC with T/R/I modes - Laser modes llbw, lhbw, P, lpd - Analog modulation 200 mA/V - Shared TEC specification with 3916372 and 3916374 Technical Specifications Model: LDC-3916376 (3916376) Manufacturer: ILX Lightwave (Newport / MKS) Instrument Type: Laser diode current source with 9 W TEC module Alias: LDC3916376; 3916376 Compatible mainframes: LDC-3908, LDC-3916, LDC-3926 Laser current range: 0 to 1500 mA Laser setpoint resolution: 40 uA Laser setpoint accuracy: $\pm 0.1\%$ of full scale Laser compliance: 4.



MODEL

**ILX Lightwave
LDC3916376**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

LDC3916376

LISTING

<https://aumictechlabs.com/products/ldc3916376-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The ILX Lightwave LDC-3916376 is a laser diode controller that provides accurate and stable current and temperature control for laser diodes. It features a user-friendly interface, comprehensive protection features, and versatile modulation capabilities. This controller is well-suited for a wide range of laser diode control applications.

Features & description

From manufacturer datasheet

Features

- Highest LD current in the 3916370 combination family (1.5 A) • 4.75 V compliance (lower than the 6 V 500 mA / 1 A cards) • Integrated 9 W TEC with T/R/I modes • Laser modes llbw, lhbw, P, lpd • Analog modulation 200 mA/V • Shared TEC specification with 3916372 and 3916374

LDC3916376 Characteristics / Specifications

PARAMETER	VALUE
Model	LDC-3916376 (3916376)
Manufacturer	ILX Lightwave (Newport / MKS)
Instrument Type	Laser diode current source with 9 W TEC module
Alias	LDC3916376; 3916376
Compatible mainframes	LDC-3908, LDC-3916, LDC-3926
Laser current range	0 to 1500 mA
Laser setpoint resolution	40 uA
Laser setpoint accuracy	±0.1% of full scale
Laser compliance	4.75 V (adjustable voltage limit)
Laser temperature coefficient	50 ppm perCor less
Laser short term stability	20 ppm or less (1 h, half scale)
Laser long term stability	50 ppm or less (24 h, half scale)
Laser noise high BW	less than 12 uA rms
Laser noise low BW	less than 8.0 uA rms
Laser operational transients	less than 3 mA
Laser EFT surge	less than 5 mA / less than 10 mA (1 kV)
Laser current limit range	0 to 1500 mA
Laser current limit resolution	0.6 mA
Laser current limit accuracy	±4.5 mA
Laser voltage limit range	0 to 7.5 V
Laser voltage limit resolution	0.1 V
Laser voltage limit accuracy	±0.2 V
PD type	differential 10 ohm; zero or 5 V reverse bias
PD current range	0 to 5000 uA
PD stability	±0.01%

PARAMETER	VALUE
PD setpoint accuracy	±0.1% of FS
Modulation input	0 to 7.5 V, 50 ohm
Transfer function	200 mA perVHigh BW small signal: DC to 0.9 MHz
High BW large signal	DC to 0.9 MHz
Low BW modulation	DC to 30 kHz
Display laser current	0 to 1500.0 mA; resolution 0.01 mA; accuracy ±0.07% FS at 25 C
Display PD	0 to 5000 uA; resolution 0.1 uA; accuracy ±2 uA at 25 C
PD responsivity range	0.00 to 1000.00 uA/mW; resolution 0.01 uA/mW
Optical power range	0.00 to 500.00 mW; resolution 100 uW
Forward voltage range	0.000 to 7.5 V; resolution 10 mV (1 mV GPIB); accuracy ±7 mV (±2 mV GPIB)
TEC temperature range	−99 C to +150 C (software limits)
TEC setpoint 20 to 50 C	0.2 C resolution; ±0.2 C accuracy
TEC short term stability	less than ±0.007 C (1 h, LDM-4412 at 25 C)
TEC long term stability	less than ±0.01 C (24 h, same conditions)
TEC output type	bipolar current source
TEC compliance	greater than 7 V DC
TEC short circuit current	1.5 A
TEC max power	9 W
TEC current noise	less than 1 mA rms (1 A, 10 Hz to 10 MHz)
TEC current limit	0 to 1.5 A; set accuracy ±0.05 A
TEC control	smart integrator hybrid PI; gain 1 to 127
TEC sensor	2-wire NTC thermistor; 10 uA / 100 uA; 25 to 450000 ohm typical; Steinhart-Hart 3 constants
TEC display temperature	−99.9 C to +199.9 C; accuracy ±0.5 C
Thermistor 10 uA range	0.01 to 450.00 kohm; accuracy ±0.05 kohm
Thermistor 100 uA range	0.001 to 45.000 kohm; accuracy ±0.005 kohm
TEC current display	−1.500 to +1.500 A; accuracy ±0.04 A; resolution 0.01 A

PARAMETER	VALUE
TEC voltage display	–9.999 to +9.999 V; resolution 100 mV (1 mV GPIB); accuracy ± 70 mV (± 20 mV GPIB)
Firmware class	v2.03 or greater
Spec condition	1 hour warm-up

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
Model	LDC-3916376 (3916376)
Manufacturer	ILX Lightwave (Newport / MKS)
Instrument Type	Laser diode current source with 9 W TEC module
Alias	LDC3916376; 3916376
Compatible mainframes	LDC-3908, LDC-3916, LDC-3926
Laser current range	0 to 1500 mA
Laser setpoint resolution	40 uA
Laser setpoint accuracy	±0.1% of full scale
Laser compliance	4.75 V (adjustable voltage limit)
Laser temperature coefficient	50 ppm perCor less
Laser short term stability	20 ppm or less (1 h, half scale)
Laser long term stability	50 ppm or less (24 h, half scale)
Laser noise high BW	less than 12 uA rms
Laser noise low BW	less than 8.0 uA rms
Laser operational transients	less than 3 mA
Laser EFT surge	less than 5 mA / less than 10 mA (1 kV)
Laser current limit range	0 to 1500 mA
Laser current limit resolution	0.6 mA
Laser current limit accuracy	±4.5 mA
Laser voltage limit range	0 to 7.5 V
Laser voltage limit resolution	0.1 V
Laser voltage limit accuracy	±0.2 V
PD type	differential 10 ohm; zero or 5 V reverse bias
PD current range	0 to 5000 uA
PD stability	±0.01%
PD setpoint accuracy	±0.1% of FS

PARAMETER	VALUE
Modulation input	0 to 7.5 V, 50 ohm
Transfer function	200 mA perVHigh BW small signal: DC to 0.9 MHz
High BW large signal	DC to 0.9 MHz
Low BW modulation	DC to 30 kHz
Display laser current	0 to 1500.0 mA; resolution 0.01 mA; accuracy $\pm 0.07\%$ FS at 25 C
Display PD	0 to 5000 uA; resolution 0.1 uA; accuracy ± 2 uA at 25 C
PD responsivity range	0.00 to 1000.00 uA/mW; resolution 0.01 uA/mW
Optical power range	0.00 to 500.00 mW; resolution 100 uW
Forward voltage range	0.000 to 7.5 V; resolution 10 mV (1 mV GPIB); accuracy ± 7 mV (± 2 mV GPIB)
TEC temperature range	-99 C to +150 C (software limits)

TEC setpoint -20 to 20 C: 0.1 C resolution; ± 0.2 C accuracy (typical 10 kohm, 100 uA)

Specifications

PARAMETER	VALUE
TEC setpoint 20 to 50 C	0.2 C resolution; ± 0.2 C accuracy
TEC short term stability	less than ± 0.007 C (1 h, LDM-4412 at 25 C)
TEC long term stability	less than ± 0.01 C (24 h, same conditions)
TEC output type	bipolar current source
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TEC sensor	2-wire NTC thermistor; 10 uA / 100 uA; 25 to 450000 ohm typical; Steinhart-Hart 3 constants
TEC display temperature	-99.9 C to +199.9 C; accuracy ± 0.5 C
Thermistor 10 uA range	0.01 to 450.00 kohm; accuracy ± 0.05 kohm
Thermistor 100 uA range	0.001 to 45.000 kohm; accuracy ± 0.005 kohm
TEC current display	-1.500 to +1.500 A; accuracy ± 0.04 A; resolution 0.01 A
TEC voltage display	-9.999 to +9.999 V; resolution 100 mV (1 mV GPIB); accuracy ± 70 mV (± 20 mV GPIB)
Firmware class	v2.03 or greater

PARAMETER	VALUE
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Spec condition	1 hour warm-up
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Notes

Specs from ILX Lightwave LDC-3916370 Series User Manual, 1.5 A / 9 W column (3916376). Compliance is 4.75 V versus 6 V on 3916372/3916374. Install with mainframe power off.

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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NIST-traceable calibration · SAM registered ·
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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.