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Data Sheet
August 13, 2026

ILX LIGHTWAVE

ILX Lightwave LDC-3916550 Laser Module

Key Features - Two independent 9 W TEC channels per module - T, R, andIcontrol modes - Steinhart-Hart 3-constant calibration - Software-selectable 10 uA / 100 uA thermistor current - Separate 15-pin D-sub outputs (TEC1 top, TEC2 bottom) - Ships with 15-pin D-connectors and hoods Technical Specifications Model: LDC-3916550 (3916550) Manufacturer: ILX Lightwave (Newport / MKS) Instrument Type: Dual temperature TEC control module Alias: LDC3916550; 3916550 Compatible mainframes: LDC-3908, LDC-3916, LDC-3926 Channels: 2 (TEC1 top, TEC2 bottom) Temperature control range: −99 C to +150 C (software limits) Setpoint −20 to 20 C: 0.1 C resolution; +0.2 C accuracy (typical 10 kohm, 100 uA) Setpoint 20 to 50 C: 0.2 C resolution; +0.2 C accuracy Short term stability: less than +0.

MODEL **ILX Lightwave LDC3916550**	CALIBRATION **Available on request**
CONDITION **Used**	STATUS **In stock**
RFQ / SKU **LDC3916550**	LISTING **https://aumictechlabs.com/products/ldc3916550-2/**

NIST-traceable cal · SAM registered · 30-day returns

NAICS 423690 · 811210 · 541380

This unit

The ILX Lightwave LDC-3916550 is a laser diode controller that provides precise control of laser diode current and temperature. It features a low-noise current source, a stable temperature controller, and comprehensive laser protection features. This controller is ideal for demanding applications such as laser diode characterization, laser diode burn-in, and laser diode testing.

Features & description

From manufacturer datasheet

Features

• Two independent 9 W TEC channels per module • T, R, andIcontrol modes • Steinhart-Hart 3-constant calibration • Software-selectable 10 uA / 100 uA thermistor current • Separate 15-pin D-sub outputs (TEC1 top, TEC2 bottom) • Ships with 15-pin D-connectors and hoods

LDC3916550 Characteristics / Specifications

PARAMETER	VALUE
Model	LDC-3916550 (3916550)
Manufacturer	ILX Lightwave (Newport / MKS)
Instrument Type	Dual temperature TEC control module
Alias	LDC3916550; 3916550
Compatible mainframes	LDC-3908, LDC-3916, LDC-3926
Channels	2 (TEC1 top, TEC2 bottom)
Temperature control range	−99 C to +150 C (software limits)
Setpoint 20 to 50 C	0.2 C resolution; +0.2 C accuracy
Short term stability	less than +0.007 C (1 h, LDM-4412 at 25 C, 10 kohm, 100 uA)
Long term stability	less than +0.01 C (24 h, same conditions)
Output type	bipolar current source
Compliance voltage	greater than 6 V DC
Maximum output current	1.5 A
Maximum output power	9 W
Current noise ripple	less than 1 mA rms (1 A, 10 Hz to 10 MHz)
Current limit range	0.1 to 1.6 A
Current limit accuracy	+0.05 A
Control algorithm	gain adjustable from 1 to 127
Sensor type	thermistor, 2-wire NTC
Thermistor sensing current	10 uA / 100 uA, software selectable
Useable thermistor range	25 to 450000 ohm typical
User calibration	Steinhart-Hart, 3 constants
Display temperature range	−99.9 C to 199.9 C
Display temperature accuracy	+0.5 C
Thermistor 10 uA range	0.01 to 450.00 kohm

PARAMETER	VALUE
Thermistor 10 uA accuracy	+0.05 kohm (100 kohm thermistor, LDM-4412 −30 C to 25 C)
Thermistor 100 uA range	0.001 to 45.000 kohm
Thermistor 100 uA accuracy	+0.005 kohm (10 kohm thermistor, LDM-4412 0 C to 90 C)
TE current range	−1.50 to +1.50 A
TE current accuracy	+0.04 A
TE current resolution	0.01 A
TE voltage range	−9.999 to +9.999 V class
TE voltage resolution	10 mV (1 mV GPIB)
TE voltage accuracy	70 mV (+20 mV GPIB)
Connector	15-pin D-sub per channel
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-3916550 (3916550)
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Instrument Type	Dual temperature TEC control module
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Channels	2 (TEC1 top, TEC2 bottom)
Temperature control range	−99 C to +150 C (software limits)

Setpoint −20 to 20 C: 0.1 C resolution; +0.2 C accuracy (typical 10 kohm, 100 uA)

Specifications

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Setpoint 20 to 50 C	0.2 C resolution; +0.2 C accuracy
Short term stability	less than +0.007 C (1 h, LDM-4412 at 25 C, 10 kohm, 100 uA)
Long term stability	less than +0.01 C (24 h, same conditions)
Output type	bipolar current source
Compliance voltage	greater than 6 V DC
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Display temperature accuracy	+0.5 C
Thermistor 10 uA range	0.01 to 450.00 kohm
Thermistor 10 uA accuracy	+0.05 kohm (100 kohm thermistor, LDM-4412 −30 C to 25 C)
Thermistor 100 uA range	0.001 to 45.000 kohm
Thermistor 100 uA accuracy	+0.005 kohm (10 kohm thermistor, LDM-4412 0 C to 90 C)
TE current range	−1.50 to +1.50 A
TE current accuracy	+0.04 A
TE current resolution	0.01 A
TE voltage range	−9.999 to +9.999 V class
TE voltage resolution	10 mV (1 mV GPIB)
TE voltage accuracy	70 mV (+20 mV GPIB)
Connector	15-pin D-sub per channel
Spec condition	1 hour warm-up

Notes
Specs from ILX Lightwave LDC-3916550 Dual Temperature Control Module User Manual (70028405). Related 3916558 is a 3 A / 24 W single TEC module. Both TEC1 and TEC2 must be calibrated separately. Actual temperature range depends on load, thermistor, and TEC module.

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

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