

**Aumictech**

Test & measurement • bought, sold, repaired, calibrated

Data Sheet

August 13, 2026

ILX LIGHTWAVE

ILX Lightwave TCM-39032: 32 W TEC Module

Key Features - Same 32 W / 4 A / greater than 8 V output class as TCM-39034 without TE voltage measurement - 5-digit green LED display class on the LDC-3900 - Smart integrator hybrid PI - Isolated from other modules and earth ground - 15-pin D-sub TEC connector - Optional TSC-595 for RTD Technical Specifications Model: TCM-39032 Manufacturer: ILX Lightwave (Newport / MKS) Instrument Type: 32 W temperature control module Alias: TCM39032; 39032 Host mainframe: LDC-3900 (any of four rear slots) Temperature control range: -99.9 C to 199.9 C Thermistor setpoint minus 20 to 20 C: 0.1 C resolution; ± 0.2 C accuracy Thermistor setpoint 20 to 50 C: 0.2 C resolution; ± 0.2 C accuracy AD590 LM335 setpoint minus 20 to 50 C: 0.01 C resolution; ± 0.1 C accuracy (LDC-3900 TEC table) Short term stability: less than ± 0 .



MODEL

**ILX Lightwave
TCM-39032**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

TCM-39032

LISTING

<https://aumictechlabs.com/products/tcm-39032-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The ILX Lightwave TCM-39032 is a 32 W thermoelectric cooler (TEC) module engineered for precision temperature stabilization of laser diodes, detectors, and other temperature-sensitive optical components. This field-interchangeable module integrates directly into any of the four channel slots on the ILX Lightwave LDC-3900 Modular Laser Diode Controller, delivering efficient heat pumping without requiring external calibration - calibration data is embedded within the

module itself. Technical Specifications Heat pumping capacity: 32 W Maximum electrical power: 32 W Voltage: Up to 8 V Current: Up to 4 A Operating temperature range: 0 °C to 40 °C Storage and transportation temperature: -40 °C to 70 °C Maximum relative humidity: < 80% RH, non-condensing Maximum altitude: 3000 m Key Features Field-interchangeable design allows hot-swap replacement within the LDC-3900 Embedded calibration data eliminates external setup requirements Rated for continuous operation Broadband noise characterization available at 1 A output current across 10 Hz–10 MHz bandwidth Performance metrics referenced to one-hour warm-up period Class I grounded equipment configuration Typical Applications Laser diode temperature stabilization Photodetector thermal management Precision optical component cooling Research and instrumentation systems requiring active thermal control Compatibility & Integration The TCM-39032 is designed exclusively for the ILX Lightwave LDC-3900 Modular Laser Diode Controller. It installs in any of the four available module bays and operates alongside other LDC-3900 interchangeable modules. All module functions are accessible via front-panel controls and remote command through the instrument's GPIB/IEEE-488.2 interface. Mains supply voltage should remain within $\pm 10\%$ of nominal. Indoor use only; not protected against moisture ingress. Note: This product is obsolete and no longer sold or supported by ILX Lightwave.

Features & description

From manufacturer datasheet

Features

- Same 32 W / 4 A / greater than 8 V output class as TCM-39034 without TE voltage measurement • 5-digit green LED display class on the LDC-3900 • Smart integrator hybrid PI • Isolated from other modules and earth ground • 15-pin D-sub TEC connector • Optional TSC-595 for RTD

TCM39032 Characteristics / Specifications

PARAMETER	VALUE
Model	TCM-39032
Manufacturer	ILX Lightwave (Newport / MKS)
Instrument Type	32 W temperature control module
Alias	TCM39032; 39032
Host mainframe	LDC-3900 (any of four rear slots)
Temperature control range	-99.9 C to 199.9 C
Thermistor setpoint minus 20 to 20 C	0.1 C resolution; ± 0.2 C accuracy
Thermistor setpoint 20 to 50 C	0.2 C resolution; ± 0.2 C accuracy
AD590 LM335 setpoint minus 20 to 50 C	0.01 C resolution; ± 0.1 C accuracy (LDC-3900 TEC table)
Short term stability	less than ± 0.004 C (1 hour)
Long term stability	less than ± 0.01 C (24 hours)
Output type	bipolar current source
Isolation	isolated from other modules and earth ground
Compliance voltage	greater than 8 V
Short circuit output current	4 A
Maximum output power	32 W
Current limit range	0 to 4 A
Current limit set accuracy	± 50 mA
Ripple noise	less than 1 mA rms
Control algorithm	smart integrator, hybrid PI
Sensor thermistor	NTC 2-wire
Sensor IC	AD590 / LM335
Sensor RTD	Pt100 / other 100 ohm RTD with TSC-595 option
Thermistor sensing current	10 μ A / 100 μ A
Sensor bias AD5	8 V

PARAMETER	VALUE
Sensor bias LM3	1 mA
Sensor bias RTD	0.8 mA
Usable thermistor range	25 to 450000 ohm typical
AD590 at 25 C	298.2 uA; 1 uA perKLM335 at 25 C: 2.73 V; 10 mV perKRTD PT100 at 25 C: 109.73 ohm
User calibration	Steinhart-Hart thermistor; two-point IC/RTD
TEC connector	15-pin D-sub
Display temperature 10 uA	-99.99 C to 199.99 C; 0.01 C; ± 0.1 C
Display temperature 100 uA	-99.99 C to 199.99 C; 0.01 C; ± 0.05 C
Thermistor 10 uA	0.0 to 480.00 kohm; 0.01 kohm; $\pm 0.05\%$
Thermistor 100 uA	0.0 to 48.000 kohm; 0.001 kohm; $\pm 0.05\%$
TE current display	-4.000 to 4.000 A; 0.001 A; ± 0.04 A
TE voltage measurement	not available (TCM-39034 only)
Display type	5-digit green LED (LDC-3900)
Maximum current reading	4.000 A
Maximum temp reading	199.9 C
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	
Specifications	
PARAMETER	VALUE
Model	TCM-39032
Manufacturer	ILX Lightwave (Newport / MKS)
Instrument Type	32 W temperature control module
Alias	TCM39032; 39032
Host mainframe	LDC-3900 (any of four rear slots)
Temperature control range	-99.9 C to 199.9 C
Thermistor setpoint minus 20 to 20 C	0.1 C resolution; ± 0.2 C accuracy
Thermistor setpoint 20 to 50 C	0.2 C resolution; ± 0.2 C accuracy
AD590 LM335 setpoint minus 20 to 50 C: 0.01 C resolution; ± 0.1 C accuracy (LDC-3900 TEC table)	
Specifications	
PARAMETER	VALUE
Short term stability	less than ± 0.004 C (1 hour)
Long term stability	less than ± 0.01 C (24 hours)
Output type	bipolar current source
Isolation	isolated from other modules and earth ground
Compliance voltage	greater than 8 V
Short circuit output current	4 A
Maximum output power	32 W
Current limit range	0 to 4 A
Current limit set accuracy	± 50 mA
Ripple noise	less than 1 mA rms
Control algorithm	smart integrator, hybrid PI
Sensor thermistor	NTC 2-wire
Sensor IC	AD590 / LM335
Sensor RTD	Pt100 / other 100 ohm RTD with TSC-595 option

PARAMETER	VALUE
Thermistor sensing current	10 uA / 100 uA
Sensor bias AD590	8 V
Sensor bias LM335	1 mA
Sensor bias RTD	0.8 mA
Usable thermistor range	25 to 450000 ohm typical
AD590 at 25 C	298.2 uA; 1 uA perK LM335 at 25 C: 2.73 V; 10 mV perK RTD PT100 at 25 C: 109.73 ohm
User calibration	Steinhart-Hart thermistor; two-point IC/RTD
TEC connector	15-pin D-sub
Display temperature 10 uA	-99.99 C to 199.99 C; 0.01 C; ± 0.1 C
Display temperature 100 uA	-99.99 C to 199.99 C; 0.01 C; ± 0.05 C
Thermistor 10 uA	0.0 to 480.00 kohm; 0.01 kohm; $\pm 0.05\%$
Thermistor 100 uA	0.0 to 48.000 kohm; 0.001 kohm; $\pm 0.05\%$
TE current display	-4.000 to 4.000 A; 0.001 A; ± 0.04 A
TE voltage measurement	not available (TCM-39034 only)
Display type	5-digit green LED (LDC-3900)
Maximum current reading	4.000 A
Maximum temp reading	199.9 C
Spec condition	1 hour warm-up

Notes

Specs from ILX Lightwave TCM-39032 user manual and LDC-3900 family TEC-module table (TCM-39032/39034). Model 39032 must be ordered with TSC-595 for RTD. Do not apply TCM-39034 GPIB TE-voltage specs (± 30 mV) to this 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

Aumictech

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
30-day returns
NAICS 423690 · 811210 · 541380
Generated August 13, 2026

Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.