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**Data Sheet**

August 13, 2026

ILX LIGHTWAVE

# ILX Lightwave LDC-3722: 200/500 mA Laser Diode Controller, LDC-3700 Series

Key Features - Dual ranges 200 mA / 500 mA - Constant current and constant optical power modes - Analog modulation to about 1 MHz class (3700B literature) - 4-wire forward voltage measurement; adjustable limits - GPIB; confirm TEC presence vs LDC-3724 Technical Specifications Model: LDC-3722 / LDC-3722B Manufacturer: ILX Lightwave (Newport / MKS) Instrument Type: Laser diode controller Family: LDC-3700 / LDC-3700B Laser Current Ranges: 0 to 200 mA; 0 to 500 mA Related LDC 3724 Ranges: 200/500 mA with integrated 32 W TEC Laser Compliance Voltage Class: 10 V family Setpoint Accuracy Class: plus/minus 0.



MODEL

**ILX Lightwave  
LDC-3722**

CALIBRATION

**Available on  
request**

CONDITION

**Used**

STATUS

**In stock**

RFQ / SKU

**LDC-3722**

LISTING

<https://aumictechlabs.com/products/ldc-3722-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

## This unit

The ILX Lightwave LDC-3722 is a precision laser diode controller combining current source and thermoelectric cooler (TEC) drive circuits in a single instrument. Operating in dual-range modes (200 mA or 500 mA), it delivers  $\pm 0.05\%$  output current accuracy with  $< 40$  ppm/ $^{\circ}\text{C}$  stability over 24 hours and  $< 2$   $\mu\text{A}$  setpoint resolution. Three operating modes Constant Current, High Bandwidth (DC to 1 MHz), and Constant Optical Power - accommodate diverse experimental configurations. The instrument integrates comprehensive laser protection including fully

redundant current limiting, adjustable compliance voltage (max 10 V), slow-start current ramping, and output shorting relays. Technical Specifications Laser Diode Current Source Dual-range operation: 200 mA or 500 mA Output current accuracy:  $\pm 0.05\%$  Output current stability:  $< 40$  ppm/ $^{\circ}\text{C}$  (24-hour window) Current setpoint resolution:  $< 2\text{ }\mu\text{A}$  Voltage measurement accuracy:  $\pm 2.5\%$  Compliance voltage (max): 10 V Bandwidth (3 dB): DC to 1 MHz Analog modulation capability: To 1 MHz Temperature Controller (TEC) TEC output current range:  $-4\text{ A}$  to  $+4\text{ A}$  Maximum TEC output power: 32 W Temperature stability:  $\pm 0.004^{\circ}\text{C}$  Temperature control range:  $-100^{\circ}\text{C}$  to  $199.9^{\circ}\text{C}$  Temperature setpoint resolution:  $0.1^{\circ}\text{C}$  Temperature measurement accuracy:  $0.05^{\circ}\text{C}$  (calibrated sensor) Supported sensors: Thermistor, IC (AD590LH, LM335AH), RTD TEC current limit range: 0 to 4 A Photodiode Measurement Measurement range: 5 to 5000  $\mu\text{A}$  Setpoint accuracy:  $\pm 0.05\%$  Key Features Three independent control modes optimize performance across constant current, high-bandwidth modulation, and optical power feedback applications Fully redundant current limiting with adjustable limits and slow-start ramping Multiple laser protection circuits including intermittent contact protection, output shorting relays, and surge protection Integrated TEC control supports constant temperature, constant sensor, or constant TE current modes Digital display and optional GPIB (IEEE-488/IEEE-488.2) interface for remote automation Typical Applications Lab and industrial laser diode characterization, fiber-coupled laser modules, optical communication testing, and temperature-stabilized diode operation. Compatibility & Integration Power requirements: 100–120 VAC ( $\pm 10\%$ ) or 220–240 VAC ( $\pm 10\%$ ), 50–60 Hz. Analog modulation input: 0 to 10 V, 10 k $\Omega$  input impedance. Optional GPIB interface enables automated measurement sequences and instrument control.

## Features & description

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From manufacturer datasheet

### Features

- Dual ranges 200 mA / 500 mA
- Constant current and constant optical power modes
- Analog modulation to about 1 MHz class (3700B literature)
- 4-wire forward voltage measurement; adjustable limits
- GPIB; confirm TEC presence vs LDC-3724

## LDC3722 Characteristics / Specifications

| PARAMETER                                   | VALUE                                                    |
|---------------------------------------------|----------------------------------------------------------|
| Model                                       | LDC-3722 / LDC-3722B                                     |
| Manufacturer                                | ILX Lightwave (Newport / MKS)                            |
| Instrument Type                             | Laser diode controller                                   |
| Family                                      | LDC-3700 / LDC-3700B                                     |
| Laser Current Ranges                        | 0 to 200 mA; 0 to 500 mA                                 |
| Related LDC 3724 Ranges                     | 200/500 mA with integrated 32 W TEC                      |
| Laser Compliance Voltage Class              | 10 V family                                              |
| Setpoint Accuracy Class                     | plus/minus 0.05 percent FS family                        |
| Noise Ripple Class Low BW                   | about 2 uA class (3724C table guidance)                  |
| Short Term Stability Class                  | less than 20 ppm family                                  |
| Operating Modes                             | constant current; high bandwidth; constant optical power |
| Analog Modulation Bandwidth Class           | DC to 1 MHz high BW; DC to 15 kHz low BW                 |
| Photodiode Current Range Class              | 5 to 5000 uA family                                      |
| Forward Voltage Measurement                 | 4 wire                                                   |
| Adjustable Voltage Limit                    | yes                                                      |
| Adjustable Current Limit                    | yes                                                      |
| Laser Protection                            | slow start; shorting relay; floating output class        |
| Remote Interface                            | GPIO                                                     |
| Temperature Stability Class If TEC Equipped | plus/minus 0.004 C family                                |
| TEC Power If 3724 Sibling                   | 32 W; plus/minus 4 A; plus/minus 8 V                     |
| Related Low Current                         | LDC-3712 50/100 mA                                       |
| Related High Current                        | LDC-3742 2/4 A; LDC-3752 6 A                             |
| Alias                                       | LDC-3722; LDC3722B; ILX LDC-3722                         |
| Bandwidth                                   | Class: DC to 1 MHz high BW; DC to 15 kHz low BW          |

# LDC3722 Specifications

| PARAMETER                | VALUE                                                                                                                          |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Applications             | Medium-current laser diode drive; constant optical power with photodiode feedback; modulated characterization; automated test. |
| Key Features             | - Dual ranges 200 mA / 500 mA                                                                                                  |
| Technical Specifications | Model: LDC-3722 / LDC-3722B                                                                                                    |

# 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                                                                                                                                                 | LDC-3722 / LDC-3722B                                     |
| Manufacturer                                                                                                                                          | ILX Lightwave (Newport / MKS)                            |
| Instrument Type                                                                                                                                       | Laser diode controller                                   |
| Family                                                                                                                                                | LDC-3700 / LDC-3700B                                     |
| Laser Current Ranges                                                                                                                                  | 0 to 200 mA; 0 to 500 mA                                 |
| Related LDC 3724 Ranges                                                                                                                               | 200/500 mA with integrated 32 W TEC                      |
| Laser Compliance Voltage Class                                                                                                                        | 10 V family                                              |
| Setpoint Accuracy Class                                                                                                                               | plus/minus 0.05 percent FS family                        |
| Noise Ripple Class Low BW                                                                                                                             | about 2 uA class (3724C table guidance)                  |
| Short Term Stability Class                                                                                                                            | less than 20 ppm family                                  |
| Operating Modes                                                                                                                                       | constant current; high bandwidth; constant optical power |
| Analog Modulation Bandwidth Class                                                                                                                     | DC to 1 MHz high BW; DC to 15 kHz low BW                 |
| Photodiode Current Range Class                                                                                                                        | 5 to 5000 uA family                                      |
| Forward Voltage Measurement                                                                                                                           | 4 wire                                                   |
| Adjustable Voltage Limit                                                                                                                              | yes                                                      |
| Adjustable Current Limit                                                                                                                              | yes                                                      |
| Laser Protection                                                                                                                                      | slow start; shorting relay; floating output class        |
| Remote Interface                                                                                                                                      | GPIB                                                     |
| Temperature Stability Class If TEC Equipped                                                                                                           | plus/minus 0.004 C family                                |
| TEC Power If 3724 Sibling                                                                                                                             | 32 W; plus/minus 4 A; plus/minus 8 V                     |
| Related Low Current                                                                                                                                   | LDC-3712 50/100 mA                                       |
| Related High Current                                                                                                                                  | LDC-3742 2/4 A; LDC-3752 6 A                             |
| Alias                                                                                                                                                 | LDC-3722; LDC3722B; ILX LDC-3722                         |
| Notes                                                                                                                                                 |                                                          |
| Current ranges from ILX LDC-3700/3700B family tables distinguishing 3722 vs 3724. Verify TEC hardware on the faceplate before applying 32 W TEC rows. |                                                          |

### Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: [sales@aumictech.com](mailto: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.