

Product Features

8 independent, isolated channels for laser and TEC control

Wide variety of laser controller modules (current and temperature) with up to 3A available per channel

Dual channel laser current or temperature control modules for control of up to 16 laser diodes with one mainframe

Laser current sources feature low noise and high stability and operate in constant current or constant power operating modes with direct modulation up to 1MHz

Temperature controllers operate in constant temperature or constant resistance mode with expanded gain setting from 1 to 127

GPIB / IEEE488 or RS-232 remote control interface

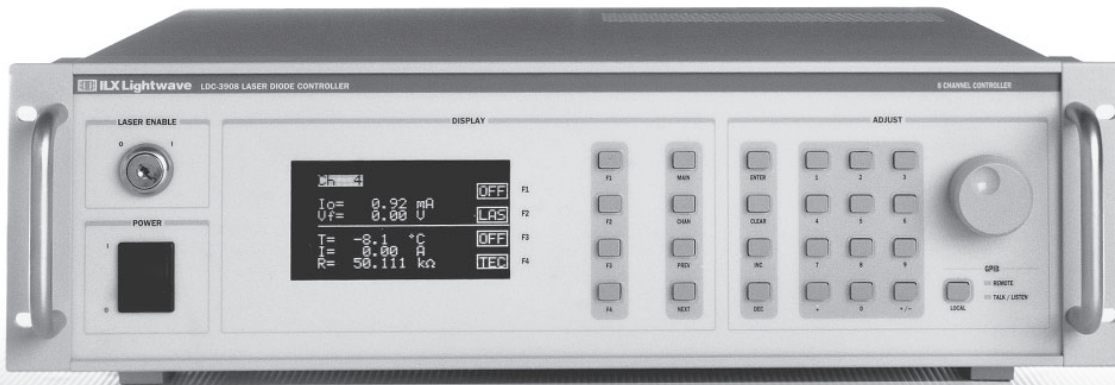
The LDC-3908 8-Channel Laser Diode Controller has all of the same great features as the popular LDC-3916 16-Channel Laser Diode Controller, with interchangeable modules between the two instruments. The smaller size and lighter weight of the LDC-3908 makes it an ideal instrument for smaller channel count applications such as R&D or production test of EDFAs and Raman amplifiers.

Handles on the front panel and flip-up feet on the bottom facilitate bench-top use, while flanges allow for installation into standard 19" instrument racks. "Smart" modules include controller modules with up to 1.5A of laser current source and 9W of TEC control, dual current source modules with two isolated currents of up to 1A, a dual 9W TEC modula, a 3A laser current module, and a 3A 24W TEC module.

Remote operation for independent control of all 8 channels is provided through the IEEE488 GPIB port or RS-232 serial interface.

LDC 3908

8-Channel Laser Diode Controller



8 Channels of Laser Diode Control

LDC 3908

8-Channel Laser Diode Controller

FRONT PANEL INTERFACE PROVIDES SIMPLE OPERATION

The front panel interface features a bright vacuum fluorescent display, making the information readable from almost any angle. The operations can be easily monitored for up to four channels at a time. Simple and intuitive menus, supported by screen-specific soft-keys, allow for quick configuration and operation of each channel. Menu depths have been intentionally limited to keep the front panel operation concise, while more sophisticated operations are available using the GPIB interface. Setpoints and other values can be entered through a choice of numeric keypad entry, up/down arrow keys, or a rotary adjustment knob.

POWERFUL GPIB INTERFACE OFFERS ROBUST, AUTOMATED CONTROL

A powerful processor platform drives the LDC-3908 8-Channel Laser Diode Controller. When coupled with GPIB technology from National Instruments HS488 TNT chipset, you get all the processing capability needed for mission-critical production testing. With microprocessors on each module, the mainframe engine manages eight independent control channels quickly and reliably. Free LabVIEW® instrument drivers are available upon request or by downloading them from www.newport.com/ilxlightwave.

HIGH PERFORMANCE MODULES SUPPORT FUTURE SYSTEM EXPANSION

Designed to provide the cleanest, safest power available for laser diode control, each module control function is handled locally and communicated quickly to the host processor. On-board intelligence simplifies future addition of modules, since all operation and calibration data is stored in the module. Simply plug in the new module and power up the system. The mainframe never needs to leave the rack. This simplicity, coupled with low noise, high stability outputs, and state-of-the-art laser diode protection yields ultimate performance.

STATE-OF-THE-ART CURRENT SOURCE DESIGN BRINGS NEW LEVELS OF PERFORMANCE

The LDC-3908 current source topology uses an innovative, proprietary control loop and incorporates the latest techniques for signal filtering and circuit board shielding. These advancements provide unbeatable stability and unparalleled noise performance, ideal for the most demanding production test applications. This design also incorporates adjustable compliance voltage and faster shutoff, helping prevent dangerous reconnect transients that can occur from intermittent connections between the controller and your laser diode. This level of protection adds to our proven list of reliable features: independent current limits, output shorting circuits, and a slow start turn-on feature.

Operational modes including constant current, constant current high-bandwidth, or constant optical power are selectable from the front panel or via the GPIB interface. Measurement of your laser diode's forward voltage is possible with 4-wire accuracy, which can be helpful in production environments where longer cable runs are common. A single, rear panel modulation port can individually enable direct modulation of each channel's laser current. This current source design supports modulation bandwidths of up to 1.2MHz (small signal) and also includes reverse photodiode bias capabilities, especially important for telecom wavelength devices.

HIGH STABILITY TEC CONTROL KEEPS YOUR DEVICE TEMPERATURE IN CHECK

Equipped with a smart integrator control loop and an expanded gain setting range, the temperature control circuits optimize settling times. These modules also provide voltage measurement of your TEC and allow internal selection of thermistor current ranges via front panel or GPIB. Achieve unparalleled temperature stabilities with ultra-stable design topology and low noise bipolar output stages.

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With the optional rack mount kits, the LDC-3908 can be expanded on standard 19" cabinet racks to fit any scaling production requirements. The full system offers intuitive front panel control and remote operation via our complimentary LabVIEW® instrument drivers.

FLEXIBLE CONTROL OVER A WIDE RANGE OF APPLICATIONS

By combining true modularity with high channel density, the LDC-3908 easily grows with your applications. For even higher channel counts, add another controller to your rack. If your device driver specifications change, look to ILX Lightwave for new modules that can be easily added to your system in the future.

PROTECT YOUR INVESTMENT WITH THE LEADER IN LASER DIODE PROTECTION

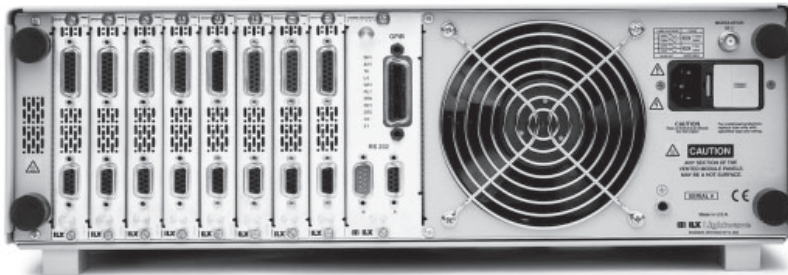
The LDC-3908 8-Channel Laser Diode Controller provides all of ILX Lightwave's proven laser protection features like independent current limits, slow-start

turn-on circuits, and isolated power supplies. The adjustable compliance voltage capability brings even greater levels of protection to your devices. Designed for time-critical production test needs, the LDC-3908 will satisfy your test requirements with fast, reliable, and secure laser diode control.

PUT OUR EXPERTISE TO WORK

ILX Lightwave is a recognized world leader in Laser Diode Instrumentation and Test Systems. Our products are not only renowned for their reliability, quality, and value; they're backed by industry leading after sales support.

For more information about the LDC-3908 8-Channel Laser Diode Controller, call us today or visit us online at www.newport.com/ilxlightwave.



The back panel of the LDC-3908 instrument, with 8-channel full capacity module loading. Offering secure and flexible module population, customized to fit your testing needs. Standard 1 MHz modulation port and GPIB / RS232 remote terminals expand upon its application and control.

LDC 3908

8-Channel Laser Diode Controller

Specifications

GENERAL

Chassis Ground:	4 mm Banana jack
GPIB Connector:	24-pin IEEE-488
RS-232 Connector:	9-pin D-sub
Power Requirements:	Selectable voltage 110 - 130 VAC; 60 Hz / 210 - 240 VAC; 50 - 60 Hz
Size (HxWxD):	133 mm x 482 mm x 389 mm; 5.25" x 18.98" x 15.3"
Weight (typical)	
Mainframe only:	20 kg; 44 lbs.
With 8 modules:	24 kg; 52 lbs.
Operating Temperature:	0°C to 40°C
Storage Temperature:	-40°C to +70°C
Humidity: ¹	20-85%, non-condensing
Laser Safety Features:	Keypad, Interlock, Output Delay (Meets 21CFR1040.10)
Display:	Vacuum fluorescent, 64 x 128 pixels; 83 mm x 41 mm

3908

MAINFRAME NOTES

1. Based on the vacuum fluorescent display specification.

ORDERING INFORMATION

LDC-3908	8-Channel Laser Diode Controller Mainframe
LDC-3916	16-Channel Laser Diode Controller Mainframe
LDC-3916372	500mA/9W Controller Module
LDC-3916374	1A/9W Controller Module
LDC-3916376	1.5A/9W Controller Module
LDC-3916332	500mA/500mA Dual Current Source Module
LDC-3916334	1A/1A Dual Current Source Module
LDC-3916338	3A Current Source Module
LDC-3916550	9W/9W Dual Temperature (TEC) Controller Module
LDC-3915558	3A (24W) Temperature (TEC) Controller Module
RM-137	Rack Mount Kit, 20.5" hole spacing
RM-138	Rack Mount Kit, 25" hole spacing
CC-305S	Current Source/Laser Diode Mount Interconnect Cable
CC-306S	Current Source/Unterminated Interconnect Cable
CC-316M	Laser Current Cables (Bundle of 8)
CC-501S	TE Controller/Laser Diode Mount Interconnect Cable
CC-505S	TE Controller/Laser Diode Mount Interconnect Cable
CC-516M	TE Controller Cables (Bundle of 8)
LNF-320	Low Noise Filter
UCA-350	Unipolar Heater Control Adapter

LabVIEW® Instrument Driver; LabVIEW® is a registered trademark of National Instruments.

This product has passed all CE requirements and bears the CE mark.

In keeping with our commitment to continuous improvement, ILX Lightwave reserves the right to change specifications without notice and without liability for such changes.



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Rev06.071019

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8-Channel Laser Diode Controller

Specifications¹

LASER DIODE CONTROLLER MODULE

	3916372 500mA/9W	3916374 1A/9W	3916376 1.5A/9W
LASER CURRENT OUTPUT			
Output Current Range:	0-500 mA	0-1000 mA	0-1500 mA
Setpoint Resolution:	10 μ A	20 μ A	40 μ A
Setpoint Accuracy:	\pm 0.1% of FS	\pm 0.1% of FS	\pm 0.1% of FS
Compliance Voltage:	6V (adjustable voltage limit)	6V (adjustable voltage limit)	4.75V (adjustable voltage limit)
Temperature Coefficient:	\leq 50ppm/ $^{\circ}$ C	\leq 50ppm/ $^{\circ}$ C	\leq 50ppm/ $^{\circ}$ C
Short Term Stability (1 hr.): ²	\leq 20ppm	\leq 20ppm	\leq 20ppm
Long Term Stability (24 hrs.): ³	\leq 50ppm	\leq 50ppm	\leq 50ppm
Noise and Ripple ⁴			
High Bandwidth:	<10 μ A rms	<10 μ A rms	<12 μ A rms
Low Bandwidth:	<5 μ A rms	<5 μ A rms	<8 μ A rms
Transients			
Operational: ⁵	<3 mA	<3 mA	<3 mA
1kV EFT: ⁶	<4 mA	<5 mA	<5 mA
Surge:	<8 mA	<10 mA	<10 mA
LASER DRIVE LIMIT SETTINGS			
Current Limit Range:	0-500 mA	0-1000 mA	0 to 1500 mA
Current Limit Resolution:	0.2 mA	0.4 mA	0.6 mA
Current Limit Accuracy:	\pm 0.7 mA	\pm 1.4 mA	\pm 4.5 mA
Voltage Limit Range:	0-7.5V	0-7.5V	0-7.5V
Voltage Limit Resolution:	0.1V	0.1V	0.1V
Voltage Limit Accuracy:	\pm 0.2V	\pm 0.2V	\pm 0.2V
PHOTODIODE FEEDBACK			
Type:	Differential 10 Ω input, Selectable Zero Bias, or 5V Reverse Bias	Differential 10 Ω input, Selectable Zero Bias, or 5V Reverse Bias	Differential 10 Ω input, Selectable Zero Bias, or 5V Reverse Bias
Photodiode Current Range:	0-5000 μ A	0-5000 μ A	0-5000 μ A
Output Stability: ⁷	0.01%	0.01%	0.01%
Setpoint Accuracy:	\pm 0.1% of FS	\pm 0.1% of FS	\pm 0.1% of FS
EXTERNAL ANALOG MODULATION			
Input: ⁸	0-10V, 50 Ω	0-10V, 50 Ω	0-7.5V, 50 Ω
Transfer Function:	50 mA/V	100 mA/V	200 mA/V
High Bandwidth Mode			
Small Signal Bandwidth: ⁹	DC to 1.2MHz	DC to 1.0MHz	DC to 0.9MHz
Large Signal Bandwidth: ¹⁰	DC to 1.0MHz	DC to 1.0MHz	DC to 0.9MHz
Low Bandwidth Mode:	DC to 30kHz	DC to 30kHz	DC to 30kHz
LASER CURRENT MEASUREMENT (DISPLAY)			
Output Current Range:	0-500.0 mA	0-1000.0 mA	0-1500.0 mA
Output Resolution:	0.01 mA	0.01 mA	0.01 mA
Output Current Accuracy:	\pm 0.05% of FS (@ 25 $^{\circ}$ C)	\pm 0.05% of FS (@ 25 $^{\circ}$ C)	\pm 0.07% of FS (@ 25 $^{\circ}$ C)
Photodiode Current			
Range:	0-5000 μ A	0-5000 μ A	0-5000 μ A
Resolution:	0.1 μ A	0.1 μ A	0.1 μ A
Accuracy:	\pm 2 μ A (@ 25 $^{\circ}$ C)	\pm 2 μ A (@ 25 $^{\circ}$ C)	\pm 2 μ A (@ 25 $^{\circ}$ C)
Photodiode Responsivity			
Range: ¹¹	0.00-1000.00 μ A/mW	0.00-1000.00 μ A/mW	0.00-1000.00 μ A/mW
Resolution:	0.01 μ A/mW	0.01 μ A/mW	0.01 μ A/mW
Optical Power Range:	0.0-5000.00mW	0.0-5000.00mW	0.0-5000.00mW
Optical Power Resolution:	100 μ W	100 μ W	100 μ W
Forward Voltage Range:	0.00-7.5V	0.00-7.5V	0.00-7.5V
Forward Voltage Resolution: ¹²	10mV (1mV through GPIB)	10mV (1mV through GPIB)	10mV (1mV through GPIB)
Forward Voltage Accuracy: ¹³	\pm 7mV (\pm 2mV through GPIB)	\pm 7mV (\pm 2mV through GPIB)	\pm 7mV (\pm 2mV through GPIB)

Specifications¹

CURRENT SOURCE MODULES

	3916332* DUAL 500mA	3916334* DUAL 1A	3916338 SINGLE 3A
LASER CURRENT OUTPUT			
Output Current Range:	0-500 mA	0-1000mA	0-3000mA
Setpoint Resolution:	10 μ A	20 μ A	80 μ A
Setpoint Accuracy:	\pm 0.1% of FS	\pm 0.1% of FS	\pm 0.1% of FS ¹⁴
Compliance Voltage:	6V (adjustable voltage limit)	6V (adjustable voltage limit)	4.5V (adjustable voltage limit)
Temperature Coefficient:	\leq 50ppm/ $^{\circ}$ C	\leq 50ppm/ $^{\circ}$ C	\leq 100ppm/ $^{\circ}$ C
Short Term Stability (1 hr.): ²	\leq 20ppm	\leq 20ppm	\leq 50ppm/ $^{\circ}$ C
Long Term Stability (24 hrs.): ³	\leq 50ppm	\leq 50ppm	\leq 75ppm/ $^{\circ}$ C
Noise and Ripple ⁴			
High Bandwidth:	<10 μ A rms	<12 μ A rms	<36 μ A rms
Low Bandwidth:	<5 μ A rms	<8 μ A rms	<24 μ A rms
Transients			
Operational: ⁵	<3mA	<3mA	<5mA
1kV EFT: ⁶	<4mA	<5mA	<10mA
Surge:	<8mA	<10mA	<8mA

LASER DRIVE LIMIT SETTINGS

Current Limit Range:	0-500 mA	0-1000 mA	0-3000mA
Current Limit Resolution:	0.2mA	0.4mA	1.025mA
Current Limit Accuracy:	\pm 0.7mA	\pm 1.4mA	\pm 9mA
Voltage Limit Range:	0-7.5V	0-7.5V	0-7.5V
Voltage Limit Resolution:	0.1V	0.1V	0.2V
Voltage Limit Accuracy:	\pm 200mV	\pm 200mV	\pm 200mV

PHOTODIODE FEEDBACK

Type:	Differential 10 Ω input, Selectable Zero Bias, or 5V Reverse Bias		
Photodiode Current Range:	0-5000 μ A	0-5000 μ A	0-5000 μ A
Output Stability: ⁷	0.01%	0.01%	\pm 0.01%
Setpoint Accuracy:	\pm 0.1% of FS	\pm 0.1% of FS	\pm 0.1% of FS

EXTERNAL ANALOG MODULATION

Input: ⁸	0-10V, 50 Ω	0-10V, 50 Ω	0-8.0V, 50 Ω
Transfer Function:	50mA/V	100mA/V	375mA/V \pm 10%
High Bandwidth Mode			
Small Signal Bandwidth: ⁹	DC to 1.2MHz	DC to 1.0MHz	DC to 0.6MHz
Large Signal Bandwidth: ¹⁰	DC to 1.0MHz	DC to 1.0MHz	DC to 0.6MHz
Low Bandwidth Mode:	DC to 30kHz	DC to 30kHz	DC to 30kHz

LASER CURRENT MEASUREMENT (DISPLAY)

Output Current Range:	0-500.0mA	0-1000.0mA	0-3000.0mA
Output Resolution:	0.01mA	0.01mA	0.01mA
Output Current Accuracy:	\pm 0.05% of FS (@ 25 $^{\circ}$ C)	\pm 0.05% of FS (@ 25 $^{\circ}$ C)	\pm 0.07% of FS (@ 25 $^{\circ}$ C)
Photodiode Current			
Range:	0-5000 μ A	0-5000 μ A	0-5000 μ A
Resolution:	0.1 μ A	0.1 μ A	0.1 μ A
Accuracy:	\pm 2 μ A (@ 25 $^{\circ}$ C)	\pm 2 μ A (@ 25 $^{\circ}$ C)	\pm 2 μ A (@ 25 $^{\circ}$ C)
Photodiode Responsivity			
Range: ¹¹	0.00-1000.00 μ A/mW	0.00-1000.00 μ A/mW	0.00-1000.00 μ A/mW
Resolution:	0.01 μ A/mW	0.01 μ A/mW	0.01 μ A/mW
Optical Power Range:	0.0-5000.00mW	0.0-5000.00mW	0.0-5000.00mW
Optical Power Resolution:	100 μ W	100 μ W	100 μ W
Forward Voltage Range:	0.00-7.5V	0.0-7.5V	0.0-7.5V
Forward Voltage Resolution: ¹²	10mV	10mV	10mV
Forward Voltage Accuracy: ¹³	\pm 7mW	\pm 7mW	\pm 7mW

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8-Channel Laser Diode Controller

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3916372 500mA/9W
3916374 1A/9W
3916376 1.5A/9W

TEMPERATURE CONTROL OUTPUT

Temperature Control Range: ²	-99°C to 150°C
Temperature Setpoint	
Resolution (-20°C to 20°C):	0.1°C
Accuracy (-20°C to 20°C): ³	±0.2°C
Resolution (20°C to 50°C):	0.2°C
Accuracy (20°C to 50°C): ³	±0.2°C
Short Term Stability (1 hr.): ⁴	<±0.007°C
Long Term Stability (24 hrs.): ⁵	±0.01°C
Output Type:	Bipolar current source
Compliance Voltage:	>7V DC
Maximum Output Current:	1.5A
Maximum Output Power:	9W
Current Noise and Ripple: ⁶	<1mA rms
Current Limit Range:	0-1.5A
Current Limit Accuracy:	±0.05A
Control Algorithm:	Smart Integrator, Hybrid PI, Gain adjustable from 1-127

TEMPERATURE SENSOR

Types:	Thermistor (2-wire NTC)
Thermistor Sensing Current: ⁷	10/100µA
Usable Thermistor Range:	25-450,000Ω, typical
User Calibration:	Steinhart-Hart, 3 constants

TEC MEASUREMENT (DISPLAY)

Temperature Range: ⁸	-99.9°C to 199.9°C
Temperature Accuracy: ³	±0.5°C
Thermistor Resistance	
Range (10µA setting):	0.01-450.00kΩ
Accuracy (10µA setting): ⁹	±0.05kΩ
Range (100µA setting):	0.001-45.000kΩ
Accuracy (100µA setting): ¹⁰	±0.005kΩ
TEC Current Range:	-1.50 to 1.50A
TEC Current Accuracy:	±0.04A
TEC Current Resolution:	±0.01A
Voltage Range:	-9.999 to 9.999V
Voltage Resolution: ¹¹	100mV (1mV in GPIB)
Voltage Accuracy: ¹²	±70mW (±20mV in GPIB)

TEMPERATURE CONTROL MODULES

3916550 DUAL 9W

3916558 SINGLE 24W (3A)

TEMPERATURE CONTROL OUTPUT

Temperature Control Range: ²	-99.9°C to 150°C	-99.9°C to 150°C
Temperature Setpoint		
Resolution (-20°C to 20°C):	0.1°C	0.1°C
Accuracy (-20°C to 20°C): ³	±0.2°C	±0.2°C
Resolution (20°C to 50°C):	0.2°C	0.2°C
Accuracy (0°C to 50°C): ³	±0.2°C	±0.2°C
Short-Term Stability (1 hr.): ⁴	<±0.007°C	<±0.007°C
Long-Term Stability (24 hrs.): ⁵	<±0.01°C	<±0.01°C
Output Type:	Bipolar current source	Bipolar current source
Compliance Voltage:	>6V DC	>8V DC
Maximum Output Current:	1.5A	3A
Maximum Output Power:	9W	24W
Current Noise and Ripple: ⁶	<1mA rms	<2mA rms
Current Limit Range:	0.1-1.6A	0.1-3.10A
Current Limit Set Accuracy:	±0.05A	±0.05A
Control Algorithm:	Smart integrator, Hybrid PI, Gain adjustable from 1-127	

LDC 3908

8-Channel Laser Diode Controller

Specifications¹

TEMPERATURE CONTROL MODULES (CONTINUED)

	3916550 DUAL 9W	3916558 SINGLE 24W (3A)
TEMPERATURE SENSOR		
Types:	Thermistor (2-wire NTC)	Thermistor (2-wire NTC)
Thermistor Sensing Current: ⁷	10 μ A/100 μ A	10 μ A/100 μ A
Usable Thermistor Range:	25-450,000 Ω , typical	25-450,000 Ω , typical
User Calibration:	Steinhart-Hart, 3 constants	Steinhart-Hart, 3 constants
TEC MEASUREMENT (DISPLAY)		
Temperature Range: ⁸	-99.9°C to 199.9°C	-99.9°C to 199.9°C
Temperature Accuracy: ⁹	\pm 0.5°C	\pm 0.5°C
Thermistor Resistance		
Range (10 μ A setting):	0.01-450.00k Ω	0.01-450.00k Ω
Accuracy (10 μ A setting): ⁹	\pm 0.05k Ω	\pm 0.05k Ω
Range (100 μ A setting):	0.001-45.000k Ω	0.001-45.000k Ω
Accuracy (100 μ A setting): ¹⁰	\pm 0.005k Ω	\pm 0.005k Ω
TEC Current Range:	-1.50 to 1.50A	-3.00 to 3.00A
TEC Current Accuracy:	\pm 0.04A	\pm 0.04A
Voltage Range:	-9.999 to 9.999V	-10.75 to 10.75V
Voltage Resolution: ¹¹	100mV (1mV in GPIB)	100mV (1mV in GPIB)
Voltage Accuracy: ¹²	\pm 70mV (\pm 20mV in GPIB)	\pm 70mV (\pm 20mV in GPIB)

CURRENT SOURCE NOTES

* Two isolated laser sources in each module

- All values after a one-hour warm-up period.
- Over any one-hour period, half-scale output.
- Over any 24-hour period, half-scale output.
- Measured optically, evaluating noise intensity of a 1480nm laser diode into a photodetector with 160kHz bandwidth.
- Maximum output current transient resulting from normal operational situations (e.g. power on/off, current on/off), as well as accidental situations (e.g. power line plug removal).
- Maximum output current transient resulting from a 1000V power line transient spike. Tested to ILX Lightwave Technical Standard #LDC-00196. Request ILX Application Note #3 "Protecting Your Laser Diode".
- Maximum monitor photodiode current drift over any 30-minute period. Assumes zero drift in responsivity of photodiode.
- Modulation input is 50 Ω terminated inside the mainframe.
- 250mA setpoint, 50mA modulation current, 1 Ω load.
- 50% modulation at mid-scale output, 1 Ω load, high bandwidth mode.
- Responsivity value is user-defined and is used to calculate the optical power.
- 1mV through GPIB.
- Four-wire voltage measurement while driving calibration load. Specifications are valid for values above 10mV. Accuracy is \pm 2mV through GPIB.
- Accuracy is 0.15% above 2.5A after a one-hour warm-up period.

TEMPERATURE CONTROL NOTES

- All values after a one-hour warm-up period.
- Software limits of range. Actual range possible depends on the physical load, thermistor type, and TEC module.
- Accuracy figures are quoted for a typical 10k Ω thermistor and 100 μ A current setting for -5°C to 50°C and typical 10k Ω thermistor and 10 μ A current setting for -20°C to -5°C. Accuracy figures are relative to the calibration standard. Both resolution and accuracy are dependent upon the user-defined configuration of the instrument.
- Over any one-hour period, half-scale output, controlling an LDM-4412 mount at 25°C with 10k Ω thermistor on a 100 μ A setting.
- Over any 24-hour period, half-scale output, controlling an LDM-4412 mount at 25°C with 10k Ω thermistor on a 100 μ A setting.
- Measured at 1A output over a bandwidth of 10Hz to 10MHz. 3916558 module noise measured at 2A output over a bandwidth of DC to 25MHz.
- Thermistor current range software selectable by front panel or GPIB.
- Software limits of display range.
- Using a 10k Ω thermistor, controlling an LDM-4412 mount over -30°C to 65°C (~200-2k Ω) or a 100k Ω thermistor controlling an LDM-4412 mount over 10°C - 85°C (~200-10k Ω).
- Using a 10k Ω thermistor, controlling an LDM-4412 mount over -5°C to 90°C (45-1k Ω).
- 1mV through GPIB.
- Voltage measurement accuracy while driving calibration load. Accuracy is dependent upon load used. Accuracy of \pm 20mW through GPIB.



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