

# ACCESSORIES

## COLLIMATING LENSES

Many applications require collimation of the high divergence light from laser diodes. We currently offer a choice of five laser diode collimating lenses for this purpose. Our lenses feature multiple glass elements and are corrected for low wavefront distortion at wavelengths between 514 nm and 1550 nm. The lenses vary primarily in their numerical aperture and working distance. All lenses have a barrel diameter of 14.25 mm and length of 15.0 mm.

Model	FL	NA	Working Distance	Optical Correction	Optical Quality (rms)	Window Thickness Correction	Field of View Dia.	Collimated Beam Dia.
LDM-4014	5.0 mm	0.50	2.47 mm	514–830 nm	$\lambda/20$	0.30 mm	0.14 mm	5.0 mm
LDM-4015	5.0 mm	0.50	2.47 mm	600–1020 nm	$\lambda/20$	0.30 mm	0.14 mm	5.0 mm
LDM-4017	7.5 mm	0.30	4.35 mm	780–890 nm	$\lambda/22$	0.17 mm	0.12 mm	4.5 mm
LDM-4018	5.0 mm	0.50	2.42 mm	1300–1550 nm	$\lambda/20$	0.30 mm	0.13 mm	5.0 mm
LDM-4019	9.0 mm	0.25	4.35 mm	780–860 nm	$\lambda/22$	0.17 mm	0.20 mm	4.5 mm



## CONNECTING CABLES

CC-305S	Current Source/Laser Diode Mount Interconnect Cable
CC-305S (5m)	Current Source/Laser Diode Mount Interconnect Cable (5 meters)
CC-306S	Current Source/Unterminated Interconnect Cable
CC-306H	Low-R High Current LD Cable
CC-316M	Current Source/Laser Diode Mount Cables (3916/4616 bundle of 8 cables)
CC-350	3100/5100 Power Supply Cable
CC-390	125A LD Current Source Interconnect Cable (6 feet)
CC-501S	TE Controller/Unterminated Interconnect Cable
CC-501H	Low R High Current TEC Interconnect Cable
CC-505S (5m)	TE Controller/Laser Diode Mount Interconnect Cable (5 meters)
CC-505S (5m)	TE Controller/Laser Diode Mount Interconnect Cable
CC-516M	TE Controller/Laser Diode Mount Cables (3916/4616 bundle of 8 cables)
CC-591H	59xx 10A TE Controller/Unterminated Interconnect Cable (6 feet)
CC-595H	10A TE/LDM Interconnect Cable, Terminated
CC-595S	59xx 5A TE/LDM Interconnect Cable



## UCA-350 UNIPOLAR HEATER CONTROL ADAPTER

The UCA-350 Unipolar Control Adapter is an accessory that allows you to convert your ILX Lightwave Thermoelectric Temperature Controller or Module into a heater controller. The UCA-350 allows temperature control current to flow in the heat direction only, so you can safely control current to drive resistive heaters. Maximum current is 4 A.



## TEMPERATURE SENSORS

TS-510	Calibrated 10 k $\Omega$ Thermistor ( $\pm 0.2^\circ\text{C}$ ) (-20°C to +50°C)	TS-525	Uncalibrated 100 k $\Omega$ Thermistor ( $\pm 1.5^\circ\text{C}$ ) (-10°C to +110°C)
TS-520	Uncalibrated 10 k $\Omega$ Thermistor ( $\pm 1.5^\circ\text{C}$ ) (-20°C to +50°C)	TS-530	Uncalibrated AD590LH Temperature Sensor (-50°C to +150°C)
TS-521	Uncalibrated 5 k $\Omega$ Thermistor ( $\pm 1.5^\circ\text{C}$ ) (-45°C to +30°C)	TS-540	Uncalibrated LM335AH Temperature Sensor (-40°C to +100°C)
TS-523	Uncalibrated 20 k $\Omega$ Thermistor ( $\pm 1.5^\circ\text{C}$ ) (-10°C to +70°C)		

## LNF-320 LOW NOISE FILTER

The LNF-320 is a common mode filter designed to reduce noise on laser diodes driven from ILX Lightwave current sources using the standard 9-pin D-sub connector. The filter is designed to be used in line on the laser cable. A current source is naturally a high output impedance device, resulting in an increased susceptibility to noise pickup. The use of a filter will reduce the AC impedance and therefore reduce the radiated noise pickup at the output of the current source. This will not affect the DC performance of the current source. A common mode structure is used to isolate the laser (load) ground from the current source ground to reduce noise induced from system ground loops.

### SPECIFICATIONS

Rated Voltage:	10 V		<b>50<math>\Omega</math> Load</b>	<b>3<math>\Omega</math> Load</b>
Rated current:	4 A	10 Hz	-3.35 dB	-0.035 dB
Leakage current:	1 $\mu\text{A}$ max.	60 Hz	-16.14 dB	-2.8 dB
DC series resistance:	0.05 $\Omega$ max.	120 Hz	-21.94 dB	-5.95 dB
		1 KHz	-38.13 dB	-20.18 dB

### NOISE REDUCTION VS. FREQUENCY



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# ACCESSORIES

## RACK MOUNT ACCESSORIES

- RM-102 3.5" Flange Pair
- RM-103 5.25" Flange Pair for mounting one 5.25" high, full width instrument (LDC-3900).
- RM-112 Enclosure Interlocking Kit
- RM-122 Dual Rack Mounting Kit for mounting two 3.5" high, 1/2 width instruments. (includes a 102 and 112 option)(LDP-3811, FPM-8200, FPM-8210, MPS-8033)
- RM-123 Dual Rack Mounting Kit for the OMM-6810B.
- RM-124 Single Rack Mounting Kit for mounting one 3.5" high, 1/2 width instrument. (LDP-3811, FPM-8200, FPM-8210, MPS-8033, MPS-8035)
- RM-125 Single Rack Mounting Kit for mounting OMM-6810
- RM-132 Single Rack Mounting Kit for mounting one 5.25" high, 3/4 width instrument. (LDX-3620)
- RM-134 Single Rack Mounting Kit for mounting LDX-3500 Series and LDT-5525.
- RM-135 Dual Rack Mounting Kit for mounting LDX-3500 Series, and LDT-5525.



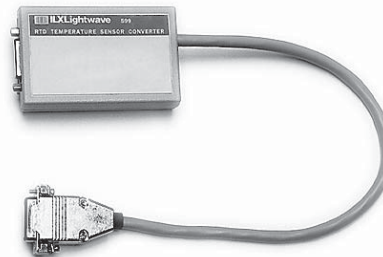
- RM-136 Single Rack Mounting Kit for LDC-3700B and LPA-9080 Series.
- RM-137 Rack Mounting Kit for 24" deep racks with 20.5" hole spacing (LDC-3908 and LDC-3916)
- RM-138 Rack Mounting Kit for 30" and 36" deep racks with 25" hole spacing (LDC-3908)
- RM-139 Single Rack Mounting Kit for the LDX-3200 and LDT-5900 Series Controllers
- RM-140 Dual Rack Mounting Kit for the LDX-3200 and LDT-5900 Series Controllers
- RM-141 Slide Rail 20.5" Rack Mount Kit (LDM-4616)
- RM-142 Slide Rail 25" Rack Mount Kit (LDM-4616)

## TSC-599 RTD TEMPERATURE SENSOR CONVERTER

The RTD Temperature Sensor Converter allows an RTD or resistance temperature detector to be used as a temperature sensor with ILX Laser Diode Controllers and Temperature Controllers such as the LDC-3700B Series, or the LDT-5910B. The TSC-599 is designed to be used with 100  $\Omega$ , 500  $\Omega$  and 1 k $\Omega$  two lead RTDs.

### SPECIFICATIONS

Size:	22.9 mm x 61 mm x 96.5 mm 0.9" x 4.4" x 3.7"
Weight:	6.75 oz. (191 grams)
Operating Temperature:	0°C - 50°C
Temperature Readout Accuracy:	$\pm 0.2^\circ\text{C}$
Short-Term Stability (10 min):	$< \pm 0.007^\circ\text{C}$
Long-Term Stability (24 hr.):	$< \pm 0.015^\circ\text{C}$
Sensor Type:	2-wire RTD 100 $\Omega$ , 500 $\Omega$ or 1 k $\Omega$
Responsivity Calibration:	American Standard, $\alpha = 0.00392$



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