

CASCADE LASER CORPORATION

Ultima LabMaster™ Laser Power & Energy Analyzer System

Product Information



Figure 1: Coherent's Ultima LabMaster

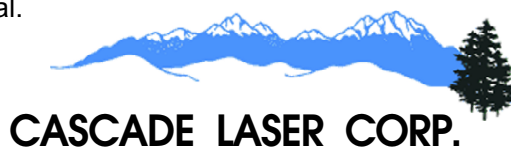
Notable Features:

- Single or dual channels with choice of 30 power and energy SmartSensors™
- Ratio/difference, RMS noise, and beam position measurement
- CW power measurements from 10nW-5kW
- Pulse energy measurements from 100μJ-95J
- Sensors for wavelengths from 190nm-20μm

Coherent's Ultima LabMaster is a comprehensive power and energy measuring and analyzing system for CW, single pulse and repetitive pulse laser measurements. LabMaster supports thermopile, pyroelectric and semiconductor photodiode sensor technologies and operates with a choice of over 30 Coherent SmartSensor detector heads. CW beam powers can be measured with thermopile and semiconductor sensors. The energies of pulsed beams can be measured for single shot events (pyroelectric and thermal sensors) and for repetition rates up to 400 Hz (pyroelectric sensors) with a display update rate of 3 Hz. The average power of repetitively pulsed beams can be measured and displayed as Watts with thermopile sensors (>10 Hz), and pyroelectric sensors (1-400 Hz). Data can be displayed on the large screen with digital, strip chart and analog-bar presentations and logged to memory, a printer, or the RS-232 and IEEE 488 ports. LabMaster features a complete statistics package for power and energy analysis, including minimum, maximum, median, standard deviation, two sigma, trending, histogram and RMS noise.

SmartSensors are pre-programmed with linearity, wavelength and sensitivity factors during factory calibration so that they can be interchanged quickly and easily. Any two power or energy SmartSensors can be used at the same time with the two channel Ultima LabMaster. The readings of the two sensors can be displayed together, separately, added, subtracted or as a ratio. The position of the beam on the sensor can be displayed (thermal sensors only) and alarms can be set to monitor the power/energy and beam position. Signal offsets can be set to eliminate background signal or allow the monitoring of small fluctuations of a larger signal.

Ultima LabMaster is CE certified and has been developed with low EMI noise sensitivity for use in real laser environments. The unit is built in Coherent's ISO 9002 certified plant in the United States and is supplied complete with NIST-traceable Certificate of Calibration, internal rechargeable battery pack (4 hours operation), AC power adapter and user manual.



Part #	Description	Channels	Analog Output	Computer Connections
33-0647	Ultima LabMaster 1 Channel*	1	Standard	RS-232
33-0621	Ultima LabMaster 1 Channel Enhanced*	1	Standard & Fast	RS-232, Printer, IEEE-488
33-0613	LabMaster 2 Channel Enhanced*	2	Standard & Fast	RS-232, Printer, IEEE-488
33-0670	Ultima/Windows Connection Kit	-	-	-

* Supplied with battery, AC adapter, user manual, certificate of calibration and one year warranty.

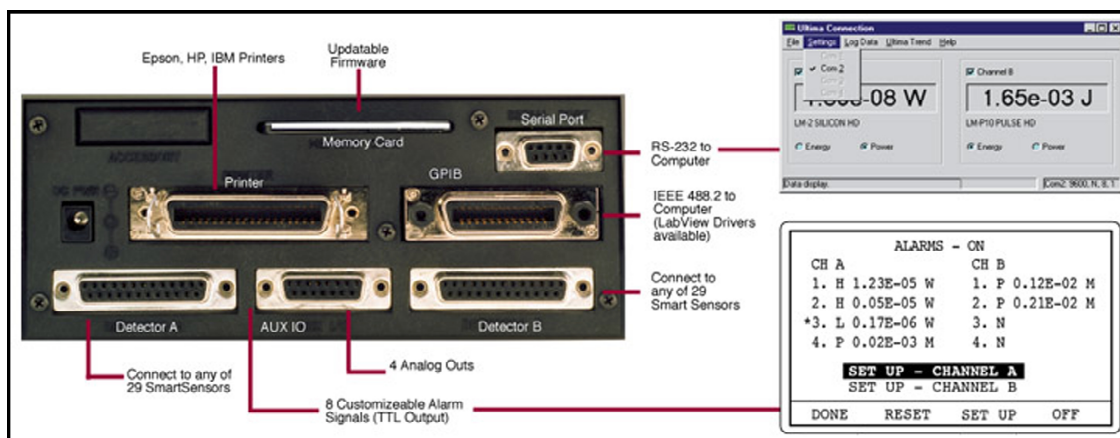


Figure 2: *Coherent's Ultima LabMaster Details*

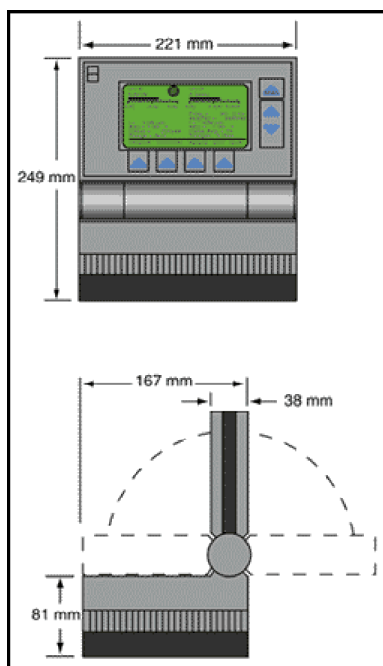


Figure 3: *Coherent's Labmaster Dims.*

Thermal SmartSensors™



Figure 4: *Coherent's Thermal SmartSensors*

Cascade Laser also distributes Coherent's Thermal SmartSensors (shown above) to be used with the Ultima LabMaster. For more information see the Thermal SmartSensors product information sheet.

Contact Cascade Laser Corporation for ordering information or to request a quotation on any of these products.

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Ultima LabMaster
May 2002
Info Source: Coherent Inc. website