### laser controllers, modular chassis... page 1 of 2



High Level Macro Functions for Fast Acquisition of P/I Curves.

### Introduction - PRO8000 Series Laser Controllers

The modular design of the PRO8000 series provides a flexible solution to meet many laser diode control requirements. By choosing the appropriate single or multi-channel current and temperature control modules, suitable multi-channel laser diode controllers can be configured to meet the demands of almost any application.

Whether operating a Vertical-Cavity Surface-Emitting Laser (VCSEL) which requires just a few

milliamps, or a high power laser diode requiring 8A, the PRO8000 can be configured to meet the needs.

Polarimeter

PMD/PDI

Laser/TEC

Controllers

Laser Mounts

WDM

Sources &

Switches

Optical

Sources &

Detectors &

Laser Lab

Instruments

**TXP Systems** 

Measurement

& Control

Power Meters

Switches

In addition, if an application requires powering just one laser, or hundreds of lasers, the PRO-Series is an appropriate choice. Thorlabs offers the PRO800 that supports two plug-in modules. Or, for the large scale users, we offer single modules that can simultaneously drive eight (8) laser diodes. Populate a PRO8000 with eight (8) of these modules to build a high density 64 channel laser control system, all in a single 19" chassis.

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The standard PRO8000 can supply up to

16A; for applications requiring more than 16A, we offer the PRO8000-4, which can supply up to 32A. A wide variety of modules are available for the PRO8000 series, see the insert below for a summary of the compatible modules.

PRO8000 Compatible Modules	
Laser Diode Controllers	100mA to 8A
Temperature Controllers	2A to 8A
Combination LD & TEC Controllers	1A Laser / 2A TEC
Multi-Channel Laser Diode Controllers	5mA to 200mA
Optical Switches	1x2, 2x2, 1x4, & 1x8
Photodiode Amplifier	10nA to 10mA
DFB Laser Sources CWDM/WDM	ITU Precision Sources

### **User-Friendly Controls**

The PRO8000 series chassis offer a user-friendly menu driven

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PRO8000 Series Laser Diode Controllers A **Blueline**<sup>™</sup> instrument, engineered for performance by Thorlabs GmbH Munich, Germany.

platform from which a selection of various modules can be driven. For the research laboratory, a 2-slot chassis is available. For optical-telecom as well as other industrial applications, we offer an 8-slot system. Configuring a system is as simple as plugging in the modules; each of the plug-ins are automatically identified upon power-up of the chassis. A brightly lit 4 x 20 fluorescence display allows the user to scroll through and select any of the installed modules. When selected on the display, all control parameters of the individual module are accessible. The controls for a particular module can be set and enabled before scrolling to the next module.

### PRO8000 Series Highlights

- Modular controllers with a bright 4 x 20 characters vacuum-fluorescence display.
- Universal platform, interchangeable modules include Laser Diode Controllers, TEC Controllers, WDM Sources and Optical Switches.
- Current modules from 100mA up to 8A (16 bit), temperature modules up to 8A/64W (16 bit), "combi" modules up to 1A current plus 2A/16W temperature.
- Control 8 Lasers from one module, VCSEL, Fabry-Perot, or DFB. Combine 8 modules in one chassis for 64 lasers from a single chassis.
- Ideal Burn-In, and Test Station.
- Macro functions for extremely fast acquisition of P/I curves.
- ► Fast IEEE 488.2 & RS-232C interfaces.
- Instrument drivers for LabVIEW<sup>™</sup> & LabWindows<sup>™</sup> CVI free of charge.

### Module Interchangeability

All modules can be driven in the compact PRO800 as well as the PRO8000, and PRO8000-4 full size 19" units. Aside from the size difference on the PRO800, and the heavy duty power supply of the PRO8000-4, all the chassis utilize the same operating system and protocols. All chassis models can power any of the plug-in modules that are found in this section as well as our extensive selection of DFB laser modules found on pages 474-475.

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### PRO800 Bench Top Chassis

The smaller PRO800 chassis offers a menu driven, flexible platform, that supports a multitude of electrical and optical modules to address a wide variety of applications. This chassis is a bench top system that supports two (2) modules. It is ideal for the lab environment or as a bench top system in crowded manufacturing environments.

# This bench top chassis has all the same features as the larger eight slot chassis.

All PRO8000 series controllers are equipped with IEEE 488.2 and RS-232C interfaces as standard features. Each system is delivered with LabVIEW<sup>™</sup> and LabWindows<sup>™</sup>/CVI drivers to support the individual modules, as well as their integration into a comprehensive test and measurement system.

### **Easy operation**

All modules are self-identifying and are operated via menudriven softkeys, the analog values are set with a rotary knob on the front panel. All values are shown on a 4 x 20 character alphanumeric vacuum fluorescence display. The functions of the softkeys change in accordance with the activated module. A key-operated power switch protects the PRO8000 series against unauthorized use.

## PRO8000 Series



# Additional Light Source Modules for the PRO8000 series:

- FP & DFB laser sources, page 396.
- DWDM laser sources in the S, C & L-band, page 394.
- Optical switch modules, page 398.



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#### Specifications **PRO800** PRO8000 PRO8000-4 Slots 2 8 8 Maximum Output Current for all modules 8A 16A 32A Maximum Power Consumption 220VA 500VA 640VA Display Alphanumeric Display with 4 x 20 Characters Operation Menu-Driven Function Keys and Rotary Knob Setting Protection features Key-Operated Power Switch TTL Modulation Frequency range<sup>1</sup> DC to 10kHz Selectable TTL Duty cycle<sup>1</sup> BNC **TTL Modulation Input** BNC **TTL Trigger Output** IEEE 488.2 Interface 24-pin IEEE Jack (Rear Panel) **RS-232C** Interface 9-pin D-sub Plug (Rear Panel) Chassis Ground 4mm Banana (Rear Panel) 100V, 115V and 230V AC Line Voltage 50 to 60Hz Line frequency Operating temperature 0 to + 40°C $-40^{\circ}$ C to $+70^{\circ}$ C Storage temperature **Relative Humidity** < 90% Dimensions (Chassis Only) 232 x 133 x 386mm3 449 x 133 x 386mm3 449 x 177 x 456mm<sup>3</sup> Weight (Chassis Only) 7kg 12kg 16kg

external synchronous current modulation for all cards in the chassis

ITEM#	\$	£	€	¥	DESCRIPTION
PRO800	\$2,587.50	£1,575.00	€2.250,00	¥360,000	2 slot modular bench top chassis
PRO8000	\$2,875.00	£1,750.00	€2.500,00	¥400,000	8 slot modular rack chassis
PRO8000-4	\$3,737.50	£2,275.00	€3.250,00	¥520,000	8 slot high power modular rack chassis
PRO8000-R32	\$ 103.50	£ 63.00	€ 90,00	¥ 14,400	19 inch mounting kit for PRO8000, PAT9000B
PRO8000-R42	\$ 138.00	£ 84.00	€ 120,00	¥ 19,200	19 inch mounting kit for PRO8000-4
PRO8000-C	\$ 23.00	£ 14.00	€ 20,00	¥ 3,200	PRO8000 front cover plate

Sales: 973-579-7227

