LCD-7400C

High Accuracy 4CH LD/PD Controller

OVER VIEW

LD/PD controller LCD-7400C is a digital LD controller of 4CH that controls up to 4 LD modules independently and can be measured with high accuracy.
Furthermore, LD current, PD reverse bias voltage or EA voltage of each channel executes sweep by any step width with interlocking an external measuring instrument, and it can save measured values of current and voltage of each terminal to embedded memory.
As interface, GPIB and RS-232C is equipped and can perform various setting, monitoring of measurement value and the acquisition of sweep data by remote command.

FEATURE

1. LCD-7400C controls 4CH of LD, TEC, PD, EA (Electro-absorption modulator) independently and can be measured each terminal of current and voltage with high accuracy.
2. LD performs high precision control using ACC(Auto Current Control) or APC(Auto Power Control).
3. ATC(Temperature Control) provide high stability control using PID with auto-tuning function.
4. Each control circuit is insulated and can be equivalent to the LD module that any terminal was connected to common.
5. GPIB and RS-232C is equipped, so performs remote control flexible.
6. LCD-7400C can perform I-L measurement that 4CH synchronized in conjunction with the external measuring instruments such as optical power meter speedily.
7. Because it is compact size that is 19 inches of rack half 3U size, the system construction with space-saving is possible.

APPLICATION

This is the most suitable for the characteristic inspection and evaluation of the various modulation modules, for example TOSA (Transmitter Optical Sub-Assembly), ROSA (Receiver Optical Sub-Assembly), VOA (Variable Optical Attenuator).

SPECIFICATIONS

1. ACC/APC Control Unit

Control Channel	4ch
Control Method	Digital PI Control（ACC: Auto Current Control /APC: Auto Power Control）
Control Range	0～300mA
Control Accuracy	±100uA
Setting Ability	10uA
Control Cycle	50msec (min)

2. ATC Control Unit

Control Channel	4ch	
Control Method	Digital PID Control	※Changeable PID parameter
Applicable Temperature Sensor	Thermistor	※Changeable R25/B constant
Temperature Control Range	-15.0～+120.0℃	
Control Accuracy	±0.03℃ (except sensor accuracy	
Setting Ability	0.01℃	
Control Cycle	50msec (min)	
Auto-tuning Function		

3. Driving Unit

	Driving Method	Driving Voltage Range	Driving Current Range
LD Forward Current	Sink constant current	0～5V	0～300mA
TEC Current	Bipolar constant current	±5V	±1.9A
EA Voltage	Bipolar constant voltage	±5V	±250mA
PD Reverse Bias Voltage	Unipolar constant voltage	0～5.9V	－ ※superimposed voltage only

4. Measurement Unit

	Measurement Range	Resolution Power	±Accuracy
LD Forward Current	0～310mA	1uA	100uA
LD Forward Voltage	0～6V	10uV	1mV
PD Current（Range1）	0～1.2uA	10pA	1nA
PD Current（Range2）	0～120uA	1nA	10nA
PD Current（Range3）	0～11mA	10nA	1uA
PD Reverse Bias Voltage	0～6.5V	10uV	1mV
EA Current	±255mA	1uA	100uA
EA Voltage	±6V	10uV	1mV
TEC Current	±2.0A	10u A	1mA
TEC Voltage	±6V	10u V	1mV
Thermistor Temperature	-25～125℃	0.001℃	0.03℃
Thermistor Resistance	50～400kΩ	0.01Ω	0.3Ω

5. Display・ Setting

Display	6 digit 2 line segment LED
Setting Switch	Illuminated tactile switch

6. Behavioral Specification

	Panel setting・Display	Remote Command	
Voltage・Current Measurement	Segment Display	RD Command	
Change Various Setting	Switch setting	R/W Command	
Control Start/Stop	Switch setting	R/W Command	※Individual/Interlock selectable
Sweep Start/Stop	Switch setting	R/W Command	※Trigger interlock with outside measuring instrument
Read out sweep data	－	RD Command	※Maximum 7000 points x 4CH

※As for the control parameter of sweep function, one of that LD forward current, PD reverse bias voltage, EA voltage or external trigger input synchronization is selectable.

※Saved measurement data by sweep function is 9 items as LD forward current, LD forward voltage, PD current, PD reverse bias voltage, EA current, EA voltage, TEC current, TEC voltage and temperature.

7. Interface

GPIB	1 port IEEE488
RS-232C	1 port DSUB 9pin male、cross connection ※Communication speed can be switched from bps of 19.2K/38.4K/115.2K

8. Input and Output Terminal

Input and Output Of The Module	4 port DSUB 15pin Female	※Attached DSUB Shield cable x4（2m single cut）
Input and Output Of PD	4 port Triaxial Female	※Attached triaxial cable x4（2m single cut）
Input and Output Of Trigger	2 port BNC (TTL Input/Output)	※Not attached BNC cable
Interlock	1 port DSUB 9pin Female (contact input)	※Attached interlock release connector x1

9. Protect Function

Warning	LD･TEC･EA Current limit、PD･EA Voltage limit	※Continue the control (clip limit value)
Alarm	Upper and Lower Limit Temperatures、Sensor non connection、Abnormal of Driver ※Stop the control (stop only alarm factor)	

10. General Specification

Operating Temperature Range	0～40℃
Power Input	AC85V～250V 50/60Hz 300VA and under (Fuse T5A)
Dimensions	210（W）×125（H）×420（D）mm （Except Protrusion） ※19inches half rack、3U

＊Specifications and design are subject to change without notice.

Manufacturer

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2016.06.29