LED Power Driver ATS

Model 8491

USB RS-232 GPIB CE PFC

The Chroma 8491 ATS is equipped with optimized standard test items for LED power driver testing. The user is only required to define the test conditions and specifications for the standard test items to perform the test.

Chroma 8491 ATS software runs under the user friendly Windows 98/2000/NT/XP/7 operating environment, providing the test engineer a dedicated LED Power Driver testing system with easy access to Windows resources.

OPTIMIZED TEST ITEMS
OUTPUT PERFORMANCES
1. Output Voltage
2. Output Current
3. Ripple Current (RMS & p-p)
4. Dimming Current
5. Dimming Frequency
6. Dimming Duty
7. Efficiency
8. In-test adjustment
9. Turn ON Overshoot Current

INPUT CHARACTERISTICS
10. Input Inrush Current
11. Input RMS Current
12. Input Peak Current
13. Input Power
14. Current Harmonics
15. Input Power Factor
16. Input Voltage Ramp
17. Input Freq. Ramp
18. AC Cycle Drop Out
19. PLD Simulation

REGULATION TESTS
20. Current Regulation
21. Voltage Regulation
22. Total Regulation

TIMING & TRANSIENT
23. Turn ON Time
24. Hold Up Time
25. Rise Time
26. Fall Time

PROTECTION TESTS
27. Short Circuit
28. OV Protection
29. OL Protection *
30. OP Protection *

SPECIAL TESTS
31. GPIB Read/Write
32. RS-232 Read/Write

* If UUT is constant voltage output

KEY FEATURES
■ For LED Power Driver testing
■ Capable to test Multi-UUT/Multi-output concurrently that improve productivity
■ Provide optimized standard test items for the Unit Under Test (LED Power Driver) to deliver excellent test performance
■ Open architecture software
  - Expandable hardware support
  - Support instrument with GPIB/RS-232/RS-485/I²C interface
  - User editable test library
  - User editable test programs
  - User editable reports
  - Statistical report
  - On-line Softpanel
  - User authority control
  - Release control
  - Activity log
  - Support bar code reader
■ Windows 98/2000/NT/XP/7 based software

Chroma 8491 LED Power Driver ATS is the ultimate test system for LED Power Driver. It is able to test Multi-UUT/Multi-output concurrently improving productivity significantly. The hardware devices available for selection include AC/DC Power Supply, Power Meter, PCI interface function card, Transducer Unit and the industries first LED Load simulator for simulating LED loading with 6330A series Electronic Loads.

The PCI interface function card - LED Power Driver Measurement Card & Control Card, they measure Dimming Current / Frequency / Duty & provide BL control signal(DC level, PWM, SM BUS), and Enable ON/OFF signal. Furthermore the Timing / Noise Card is using in Ripple Current measurement at 20MHz bandwidth.

8491 : LED Power Driver ATS
A800068 : Digital Measurement Card
A849008 : Control Unit
84911 : LED Power Driver Measurement Card
84903 : Control Card
A849101 : Transducer Unit
A849102 : Transducer Module 400mA/500V
A849103 : Transducer Module 1600mA/500V
A849104 : Transducer Module 20A/500V
6011 / 80611 / 80614 : Timing / Noise Analyzer
6011N / 80611N : Timing / Noise Module
6012 / 80612 : Short Circuit/OVP Tester
6013 / 80613 : ON / OFF Controller
DC Load Module : Refer to Model 6310A, 6330A, 63600 Series
Digital Power Meter : Refer to Model 66200 Series
AC Source : Refer to Model 6500, 61500, 61600 Series
DC Source : Refer to Model 62000P Series

* Please refer to Model 8000's specifications for detail instruments
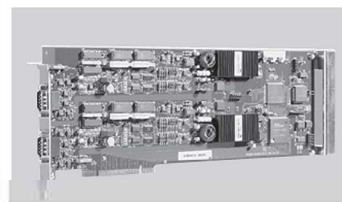
84911 : LED Power Driver Measurement Card

A849101 : Transducer Unit

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All specifications are subject to change without notice.

Video & Color
Flat Panel Display
LEU/ Lighting
Optical Devices
Photovoltaic Test & Automation
Automated Optical Inspection
Power Electronics
Battery Test & Automation
Passive Component
Electrical Safety
Semiconductor, IC
PXI Test & Measurement
General Purpose
Manufacturing Execution System
Turnkey Test & Automation

SPECIFICATIONS-1

Transducer Unit		A849101
No. of slot		8
Input Voltage Range		95~240 Vac @ 50 / 60Hz
Dimension (HxWxD)		221.5 x 450 x 500 mm / 8.72 x 17.72 x 19.69 inch

Transducer Module 400mA/500V		A849102
Input		
Vrms	Range	0~80V / 0~500V
	Bandwidth	200 KHz @ -3dB
	Accuracy	0.3%+0.2%F.S.
Irms	Range	0~100mA / 0~200mA / 0~400mA
	Bandwidth	200KHz @ -3dB
	Accuracy	0.5%+0.5%F.S.
Ripple Current(rms & p-p)	Range	0~50mAp-p / 0~100mAp-p / 0~150mAp-p
	Bandwidth	20MHz @ -3dB
	Accuracy	0.5%+0.5%F.S.
Voltage Ripple/Noise (rms & p-p)	Range	2.5Vp-p / 20Vp-p
	Bandwidth	20MHz @ -3dB
	Accuracy	1% F.S.
-3dB Tolerance		±1dB
Output		
9 Pin D-sub(to 84911 M card)	Range	4Vpk
BNC(to 80611N card)	Range	2Vp-p

Transducer Module 1600mA/500V		A849103
Input		
Vrms	Range	0~80V / 0~500V
	Bandwidth	200KHz @ -3dB
	Accuracy	0.3%+0.2%F.S.
Irms	Range	0~400mA / 0~800mA / 0~1600mA
	Bandwidth	200KHz @ -3dB
	Accuracy	0.5%+0.5%F.S.
Ripple Current (rms & p-p)	Range	0~100mAp-p / 0~400mAp-p / 0~800mAp-p
	Bandwidth	20MHz @ -3dB
	Accuracy	0.5%+0.5%F.S.
Voltage Ripple/Noise (rms & p-p)	Range	2.5Vp-p / 20Vp-p
	Bandwidth	20MHz @ -3dB
	Accuracy	1% F.S.
-3dB Tolerance		±1dB
Output		
9 Pin D-sub(to 84911 M card)	Range	4Vpk
BNC(to 80611N card)	Range	2Vp-p

A849104 Transducer Module 20A/500V		A849104
Input		
Vrms	Range	0~80V / 0~500V
	Bandwidth	200KHz @ -3dB
	Accuracy	0.3%+0.2%F.S.
Irms	Range	0~5A / 0~10A / 0~20A
	Bandwidth	200KHz @ -3dB
	Accuracy	0.5%+0.5%F.S.
Ripple Current(rms & p-p)	Range	0~1.25Ap-p / 0~5Ap-p / 0~10Ap-p
	Bandwidth	20MHz @ -3dB
	Accuracy	0.5%+30mA@5A, 0.5%+60mA@10A/20A
Voltage Ripple/Noise(rms & p-p)	Range	2.5Vp-p / 20Vp-p
	Bandwidth	20MHz @ -3dB
	Accuracy	1%F.S.
-3dB Tolerance		±1dB
Output		
9 Pin D-sub(to 84911 M card)	Range	4Vpk
BNC(to 80611N card)	Range	2Vp-p

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SPECIFICATIONS-2

LED Driver Measurement Card	84911
Vac measurement	
Input Voltage	4Vpk max.
Vpk+ / Vpk- / Vpp measurement	
Range	4Vpk
Bandwidth	10k-200kHz
Resolution	14bits
Accuracy	0.5%+0.5%F.S.(100-100kHz) 1%+0.5%F.S.(100K-200kHz)
Vrms measurement	
Range	4Vrms~2Vrms / 2Vrms~1Vrms / 1Vrms~0.5Vrms
Bandwidth	10k-200kHz
Resolution	14bits
Accuracy	1%+0.2%F.S.(100-100kHz) 1.5%+0.2%F.S.(100K-200kHz)
Iac measurement	
Input Voltage	4Vpk max.
Ipk+ / Ipk- / Ipp measurement	
Range	4Vpk
Bandwidth	10k-200kHz
Resolution	14bits
Accuracy	0.5%+0.5%F.S.(100-100kHz) 1%+0.5%F.S.(100K-200kHz)
Irms measurement	
Range	4Vrms~2Vrms / 2Vrms~1Vrms / 1Vrms~0.5Vrms 0.5Vrms~0.25Vrms / 0.25Vrms~0.125Vrms / 0.125Vrms~0.06Vrms
Bandwidth	10K-200KHz
Resolution	14bits
Accuracy	1%+0.2%F.S.(10K-100kHz) 1.5%+0.2%F.S.(100K-200kHz)
Pac measurement	
Range	V range x I range
Bandwidth	10K-200KHz
Resolution	14bit
Accuracy	1%+0.2%F.S.(10K-100kHz) 2%+0.3%F.S.(100K-200kHz)
Frequency measurement	
Range	10Hz-35KHz
Resolution	1Hz
Accuracy	0.1%reading
Input	Via voltage/current input
Timing measurement	
Trigger input	External x1(AC ON/Enable, A849101) and Vmeasurement input and Imeasurement input
Trigger level	
Range	5% ~ 95%F.S.
Resolution	2mV for voltage / 2mV for current
Accuracy	1%setting
Timing measure	
Resolution	0.01uS / 0.1mS
Accuracy	0.1uS / 1mS
Timing range	65uS / 650msec
Burst Mode measurement	
Frequency	
Range	10Hz-35KHz
Resolution	0.1Hz
Accuracy	0.1%reading
Duty(Ton)	
Range	3us-90ms
Resolution	1us
Accuracy	Error Max : 1us
Measurement speed	<10mS
Interface	PCI
Dimension	1 Slot width

Control Card	84903
BL control	
DC level control	
Program level	0 ~ 10V
Resolution	11 bits
Level Accuracy	0.5 % setting + 0.1 % F.S.
Sourcing current	20mA
PWM control	
Program level	0 ~ 10V
Resolution	7 bits
Accuracy	2 % + 1 % F.S (No Load) / 5.5% +1% F.S. (20mA output)
Sourcing current	20mA
Frequency	20Hz ~ 10kHz / 10kHz ~ 100kHz
Freq. Resolution	1Hz
Freq. Accuracy	0.1% (10kHz) / 1% (100kHz)
Duty	0 % ~ 100 % (10kHz) / 5% ~ 95% (100kHz)
Duty Resolution	1 %
Duty Accuracy	Error Max : 100nS
SMBUS control	
DC Output	5V
SM DATA	Bidirectional
SM CLK	Bidirectional
BLI measurement (DC)	
Range	0 ~ 20mA
Resolution	15 bits
Accuracy	0.1% reading + 1% F.S.
Analog output (Enable V and Vsave1, 2)	
Channel	
No. of channel	1 for Enable 2 for Vsave
DC level output	
Program level	0 ~ 10V
Resolution	11 bits
Level Accuracy	0.5 % setting + 0.1 % F.S.
Sourcing current	20mA
Analog I measurement (Idc)	
Range	0 ~ 20mA
Resolution	15 bits
Accuracy	0.1% reading + 1% F.S.
Digital I/O	
No. of channel	12 bits For Output 4 bits For Input
Output type	Open collector
Measurement speed	< 30mS
Interface	PCI
Dimension	1 Slot width

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