



Model 5500A-100 Series Multi-channel High Current LED Driver/Controller



The 5500A common cathode LED driver by Innovations in Optics provides independent control of 18 high power LED channels. Unique to this application, each channel is powered by an individual high efficiency, constant current switch mode power supply capable of 5A continuous output.

The 5500A has been specially designed to ensure maximum output and lifetime from Innovations in Optics' LumiBright UV DMD Illuminators by ensuring uniform current density through the entire LED array.

The common cathode design of the driver allows for multiple channels to be run in parallel for a combined current of up to 90A.

Features:

- Constant current
- From 1 to 18 outputs
- Continuous mode or pulsed
- 20 microsecond pulses
- Air-cooling with intelligent fan speed control

Typical Applications:

- Direct Imaging
- 3D Printing
- UV Photocuring
- Remote Fiberoptic Lighting
- Fixed Pattern Structured Illumination

Connectivity:

- Ethernet, USB, RS-232, and RS-485 connectivity
- I/O for thermistor and photosensors
- External trigger

Primary Product Compatibility:

Individual drive control of LED die array

- Model 3300B Series of LumiBright™
UV-LED DMD Illuminators

Additional Product Compatibility:

High current drive control

of common cathode mode LED die array

- High Power UV LED LumiBright Light Engines
- High Power White LED LumiBright Light Engines
- Pattern Blazer™ High Power LED Fixed-Pattern Projector

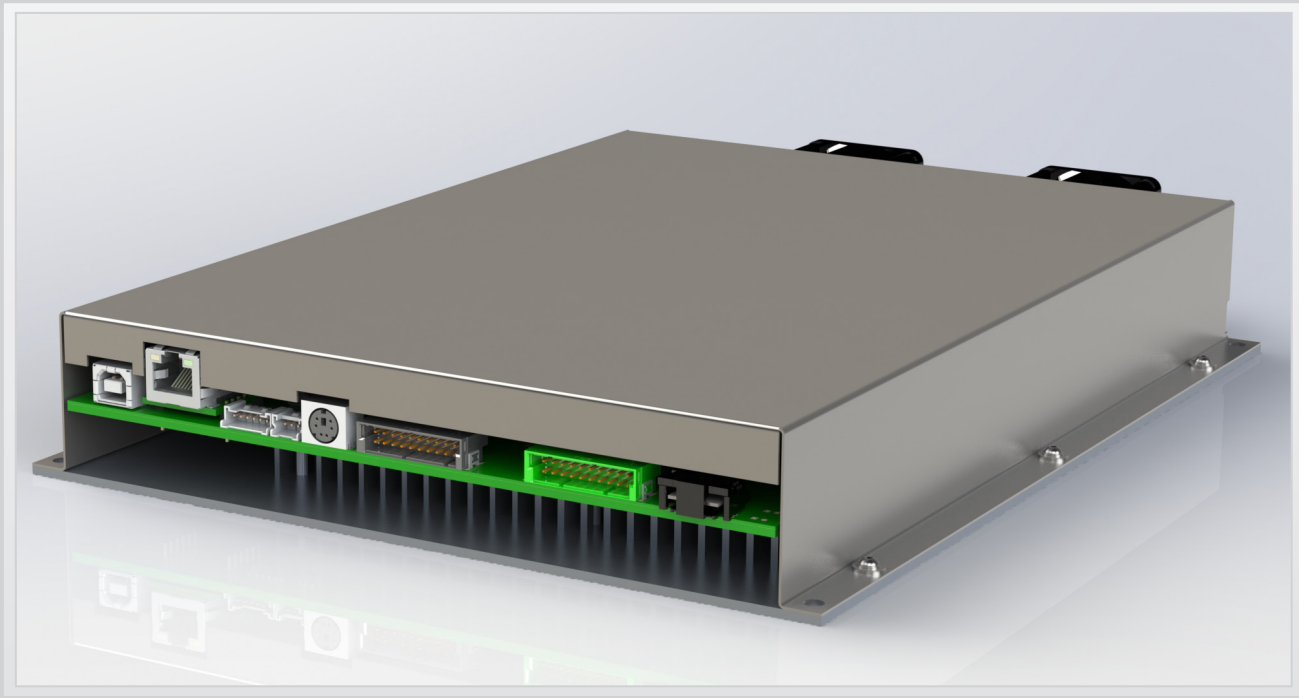
Table of Contents

Product Specifications.....2
Installation Control Document.....3



5500A-100 SERIES MULTI-CHANNEL DRIVER/CONTROLLER
SPECIFICATIONS

Parameter	Specification	Comment
Type	Constant current, dimmable	1 to 18 channels
Output voltage	6.0 V DC compliance	Maximum, cathode ground
Output current	0 to 5 Amps (10 bit resolution)	Per channel, common cathode
Input voltage	+24 VDC @ 25A max	+/- 5%
Efficiency	80% minimum	At maximum load
Current ripple	0.5% RMS maximum	At maximum voltage (5.5V DC)
Over Temp. sensors	In both source and driver	LED status indicators (local)
Operating modes	Continuous mode (CM) or pulsed mode	User selectable
Dimming	Analog or PWM	Set remotely
External trigger	Instantaneous or with programmable delay	User enabled
LED module I/O	Thermistor, photosensor	Monitoring
Pulse repetition rate	25 kHz	Maximum
Pulse width	20 μ sec	Minimum
Connectivity	USB 2.0 10/100 Mbps ethernet RS-232 (TIA-232-F) RS-485 (TIA-485)	Standard-A type RJ-45 3-pin Molex Sherlock™ 6-pin Mini-DIN
Programming	Command set for serial (USB) and telnet (Ethernet) communication	
Size and weight	228 X 290 X 45mm, ~1 kg	

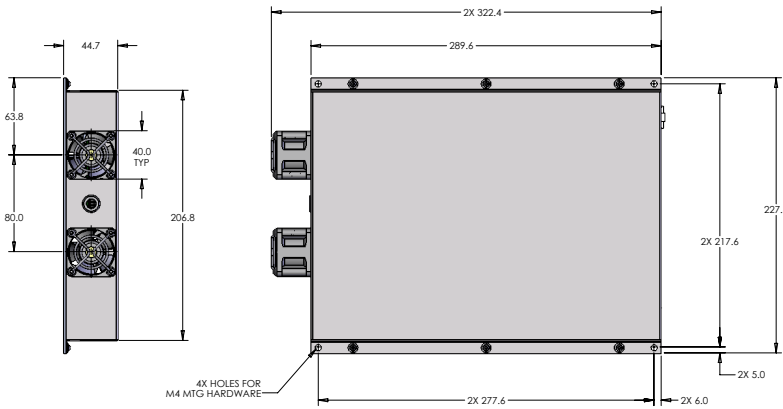


5500A-100 SERIES MULTI-CHANNEL DRIVER/CONTROLLER

INSTALLATION CONTROL DRAWING

REVISIONS				
REV	ECO NO	DESCRIPTION	DATE	ENG
1	N/A	PRERELEASED	12/6/2016	SFS

CONNECTOR DEFINITION		
CONNECTOR	TYPE	FUNCTION
J1	USB RECEPTACLE B	USB 2.0
J2	RJ45	ETHERNET 10/100 MBPS
J3	6 PIN MOLEX SHERLOCK™	INPUTS: THERMISTOR, PHOTODIODE, TRIGGER
J4	3 PIN MOLEX SHERLOCK™	RS-232 (TIA-232-F)
J5	6 PIN MINI-DIN	RS-485 (TIA-485)
J6	2 ROW, 20 PIN, BLK	OUTPUT CONNECTOR
J7	2 ROW, 20 PIN, GRN	OUTPUT CONNECTOR
J8	ELCON™ MINI POWER CONNECTOR	+24VDC INPUT



INSTALLATION CONTROL DRAWING

NOTES:
1. CONTENT FOR REFERENCE ONLY AND SUBJECT TO CHANGE

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS	DRW	SFS	DATE	12/6/2016
TOLERANCES:	ENG	SFS	DATE	12/6/2016
1 PLACE DECIMAL	ENG APVD	TB	DATE	12/6/2016
2 PLACE DECIMALS				
3 PLACE DECIMALS				
ANGLE				
MATERIAL:	FINISH:			



Innovations in Optics, Inc. 82 Cummings Park Woburn, MA 01801 TEL: (781) 933-4477 FAX: (781) 933-0007		
TITLE	DRIVER ASSY	
SIZE	DWG. NO. 5500A-100_ICD	REV 1
SCALE: 1:5	SHEET 1 of 1	

The products, their specifications and other information appearing in this document are subject to change by Innovations in Optics, Inc. (IOI) without notice. IOI assumes no liability for errors that may appear in this document, and no liability otherwise arising from the application or use of the product or information contained herein. None of the information provided herein should be considered to be a representation of the fitness or suitability of the product for any particular application or as any other form of warranty. IOI product warranties are limited to only such warranties as accompany a purchase contract or purchase order for such products. Nothing herein is to be construed as constituting an additional warranty. No information contained in this publication may be considered as a waiver by IOI of any intellectual property rights that IOI may have in such information. LumiBright™ and Pattern Blazer™ are trademarks of IOI, all rights reserved. This product is protected by U.S. Patents and Patents Pending in the U.S. and other countries.