



Model 5500A 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 3A 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 54A.

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 and RS-232 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

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5500A 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 3 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 (6.0V 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	15 kHz	Maximum
Pulse width	<20 μ sec	Minimum
Connectivity	USB 2.0 10/100 Mbps ethernet RS-232 (TIA-232-F)	Standard-A type RJ-45 3-pin Molex Sherlock™
Programming	Command set for serial (USB) and telnet (Ethernet) communication	
Size and weight	228 X 290 X 45mm, ~1 kg	

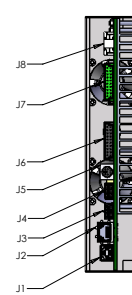
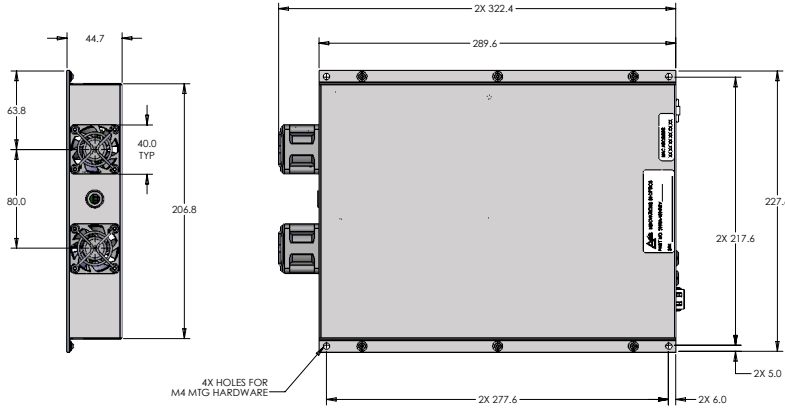
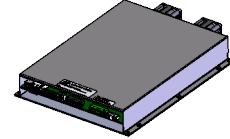


5500A SERIES MULTI-CHANNEL DRIVER/CONTROLLER

INSTALLATION CONTROL DRAWING

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

REVISIONS				
REV	ECO NO	DESCRIPTION	DATE	ENG
4	E-00108	REDESIGNED & REDRAWN	8/3/17	SFS



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: ± .1	ENG APVD	TB	DATE	12/6/2016
2 PLACE DECIMALS: ± .02				
3 PLACE DECIMALS: ± .005				
ANGLE: ± .5				
MATERIAL:	FINISH:			



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TITLE	DRIVER ASSY
SIZE	C
DWG NO.	5500A-100-ICD
SCALE	1:5
REV	4
SHEET	1 of 1

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