



# 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.

### 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 Compatability:

#### *Individual drive control of LED die array*

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

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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 $\mu$ 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	

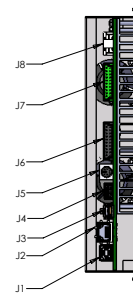
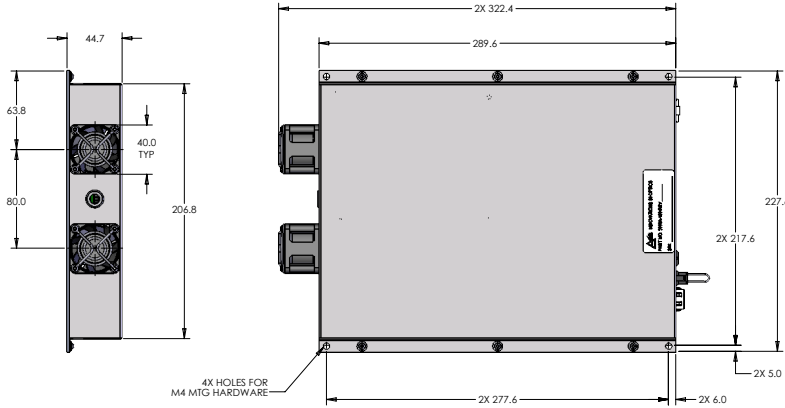


# 5500A SERIES MULTI-CHANNEL DRIVER/CONTROLLER

## INSTALLATION CONTROL DRAWING

CONNECTOR	TYPE	CONNECTOR DEFINITION	FUNCTION
J1	USB RECEPTACLE B		USB
J2	RJ45		ETHERNET 10/100 MBPS
J3	6 PIN MOLEX MICRO-FIT 3.0™		GPIO / ISOLATED TRIGGER
J4	6 PIN MOLEX MICRO-FIT 3.0™		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
5	E-00120	UPDATE CONNECTOR DEFINITION CHART	9/14/2017	SFS
6	E-00123	UPDATE TO DEPICT COVER CHANGE	9/25/2017	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: ± .05				
3 PLACE DECIMALS: ± .02				
ANGLE: ± .5				
MATERIAL:	FINISH:			



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TITLE **DRIVER ASSY**

SIZE **C** DWG. NO. **5500A-100-ICD** REV **6**  
SCALE: 1-5 SHEET 1 of 1

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