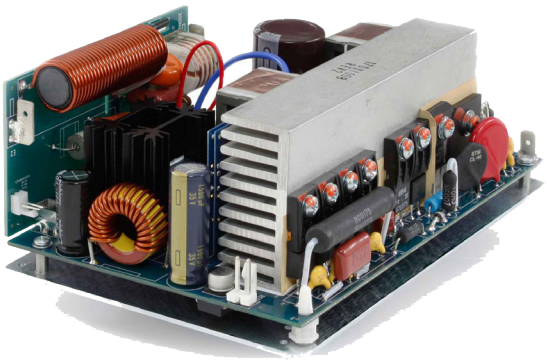
XLB-300 Xenon Arc Lamp Power Supply



The XLB-300 series Xenon arc lamp power supplies are designed for the specialty lighting industry for use in a wide variety of high performance applications including medical, endoscopy, dental, industrial and image projection.

All XLB power supplies are matched with "Short Pulse" igniters for reliable first strike lamp ignition and minimal electrode wear. The power supply can be ordered with the Local igniter shown or the remote igniter shown on page 4

Specifications

Input:	100 to 240VAC ± 10%, 50/60Hz
Power Factor:	(Active power factor correction) > .98
Input Current:	5 amps max. (100VAC, max output power)
Maximum Output:	300 Watts
Output:	23 amps, 25volts maximum
Performance	
Regulation Mode:	Constant current with power limit
Current Ripple:	0.5% at maximum output current
Line Regulation:	0.5% at maximum output current
Inrush Current:	25A max
Leakage Current:	250uA
Igniter/Boost	
Boost Voltage:	150V
Boost Energy:	500mj.
Ignition Voltage:	up to 25kV (~1µS. rise time)
Igniter Polarity:	Positive
Igniter Energy:	65mj.
Protection:	Open/Short circuit proof, overtemp, over current.
Dimensions:	6.85" x 4.50" x 2.85" tall with internal igniter 174 x 114 x 72.4 mm
Environment	
Operating Temp:	0 to 40° C
Storage Temp:	-20 to +85° C
Cooling:	60 x 60mm 30cfm fan
Humidity:	0 to 90% non-condensing

Note: The XLB-300 can power any size lamp from 50 to 300 watts. Call us with your lamp specifications. Power supply photo shown on this page without safety cover and fan.

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Connections

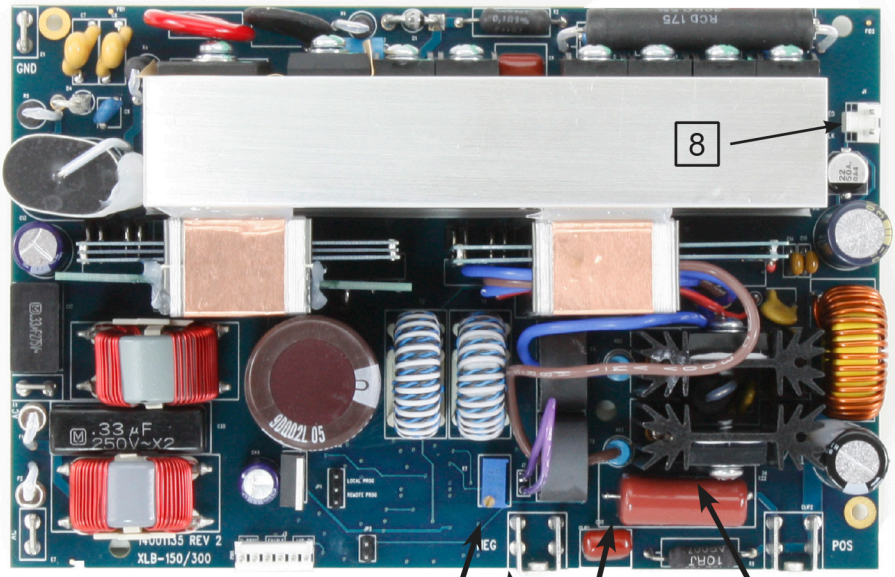
(Power Supply shown with on-board igniter removed)

Ground

Figure 1

AC Input

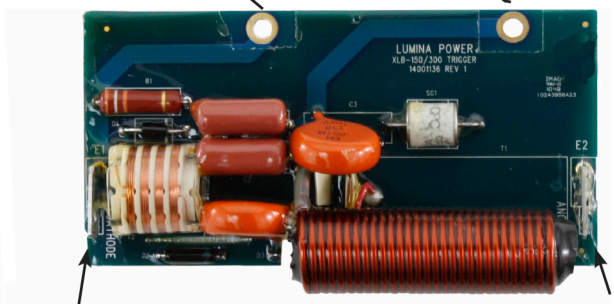
Neutral



Note:
Fan must be used to cool main heat sink. See notes page 3

1 2 3 4 5 6 7

Item	Description
1	Pin 1 + / Pin 2 return I Program: 0 to 5V=0 to full current **Note: Accuracy will be compromised when operating below 30% of the maximum value**
	Pin 3 + / Pin 4 return Remote Enable: +5 to 15V = Output ON
	Pin 5 Lamp ON (open Collector) Pin 6 GND
2	JP1, Local/Remote current program jumper (Default: Local Mode)
3	JP2, Remote enable jumper (Default: no jumper, Enabled when AC is applied)
4	Local current adjustment potentiometer (Turn clockwise to increase current)
5	Supply to igniter negative connection
6	Ignition sense wire (on board Igniter)
7	Supply to igniter positive connection
8	+24 volt Fan output 200mA



Local Igniter Board
Figure 2

Note: See Remote Igniter specifications on page 4

Cooling: The XLB-300 can operate lamps from 75 watts to 300 watts. Output power levels below 150 watts require an external fan as shown above. Power levels above 150 watts require the standard cover and intregal fan for proper cooling. Picture of cover/fan on page 3, lower right.

Connectors

Item	Description
1	AMP: 640456-6
2	2 position .1" center, jumper
3	1 position .1" center, jumper
5,7	6-32 screw
8	Molex: 26-60-4020, .156 CTR
AC in/Igniter Out: .250 Male fast-on	

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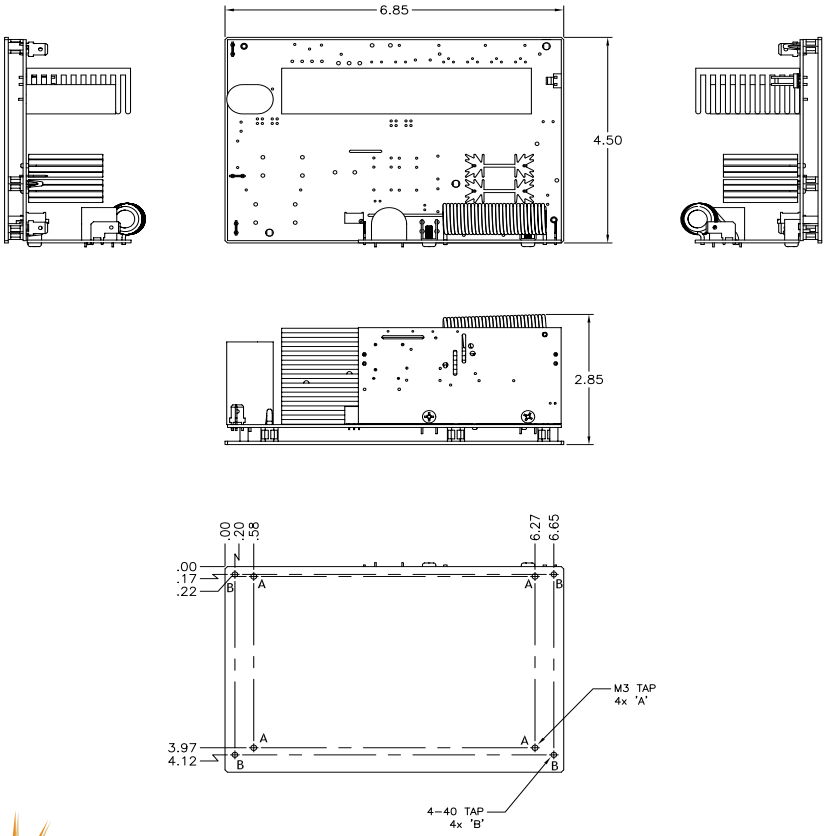
Interface and safety notes

1. Connector 1 pins 1-2: Output current can be adjusted using the on-board potentiometer or an external 0 to 5 volts applied to pins 1 & 2. Use local/remote jumper to select mode. Scaling for remote Program: 0 to 5V = 0 to full current. Unit ships in Local mode and will start at the current rating of the supply when AC is applied. **Important:** if your lamp requires less than the rated output current of the supply you must reduce the output current using the on-board pot (or remote programming) to avoid damaging the lamp.

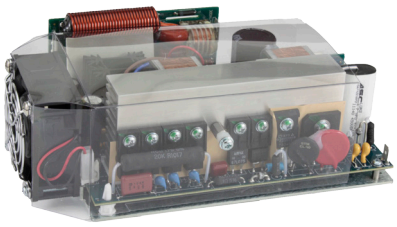
2. Connector 1 pins 3-4: Use these pins to enable power supply with an external +5 to 15V signal. Power supply ships in local enable mode (JP2, jumper installed) so the power supply will start when AC is applied. Use remote enable jumper to select mode.

3. The XLB-300 can be ordered with the igniter attached to the power supply or remotely using wires connected to the screw mounts on the power supply to the quick connects on the igniter board. For the most reliable ignition, locate the igniter as close to the lamp as possible. Note: Igniter requires some cool air to prevent overheating. Do not mount igniter in or around the lamp fan exhaust. Contact customer service for mounting recommendatons. When igniter is attached to the power supply the sense wire (item 6, figure 1) controls the output of the power supply during ignition. Models shipped for remote igniter operation ship with a twisted pair wire that needs to be connected to the power supply for proper operation.

Lethal voltages exist at the AC input of the power supply. Voltages in access of 20kV are present in the igniter during lamp ignition. All connections should be made with the mains voltage disconnected. Installation and operation of this power should be performed by trained and qualified personel. Inproper operation can result in severe injury or death.



Ordering information:
XLB-300-XX-25- (L or R)-(C)
XX= Maximum ourput current
L = Local igniter
R = Remote Igniter
C = safety/cooling cover w/fan



XLB-300 with Fan/cover

- Power supply ships with clear cover/ fan when configured for lamps above 150watts.
- Cover/fan optional for power levels from 75 to 150 watts. Fan cooling is still required at these power levels. Recommended fan type is a 60 x 60mm, ≥30cfm.

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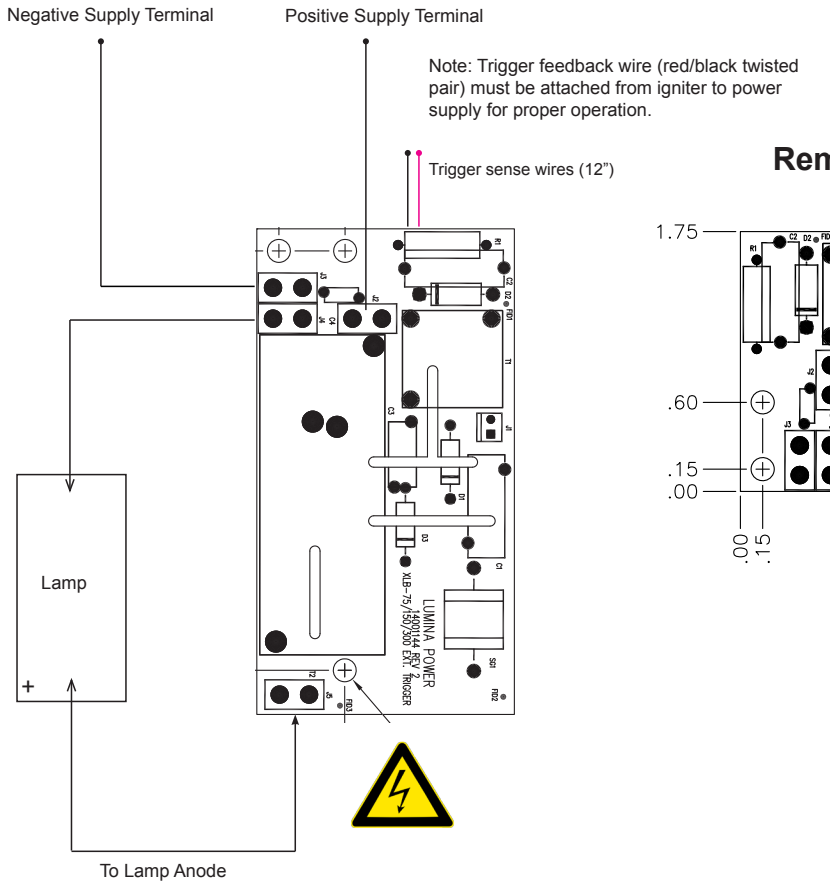
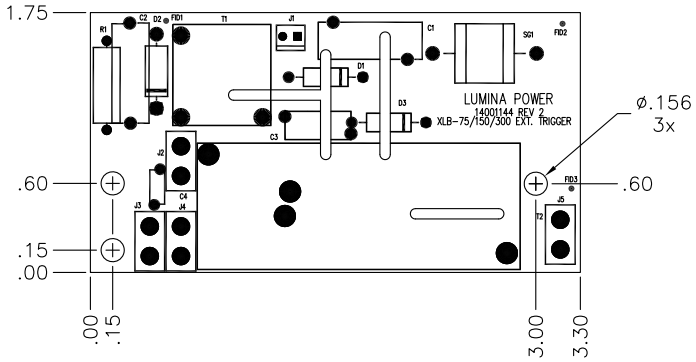
Remote Igniter Connection Diagram (anode ignition)

Note: Remote igniter replaces the local igniter shown on page 2. To avoid lamp damage please follow wiring instructions below.



Remote Igniter Dimensions



Notes on igniter installation and operation (applies to local and remote igniter)

The Igniter output is a high voltage pulse of about 1us. that will rise in voltage until the lamp ignites. The ignition point of the many different models offered by the lamp manufacturers varies widely and can range from 15kV to as high as 40kV.

1. The Igniter should be mounted as close to the lamp housing as possible. The distance from the power supply to the igniter is less critical and can be determined by the max current and practical wire size.

2. The maximum distance of wire between the igniter and the lamp should be as short as possible with a recommended maximum length of no more than 30cm (15cm is preferred). Keep this wire at least 25mm away from grounded sur faces and do not bundle this wire with other wires.

3. Covering the igniter is not recommended.

4. The power supply/igniter ships with a 60cm twisted pair wire called the trigger wire. This wire must be connected between the power supply and the igniter for proper operation.