



## B19R001, B22R001R, B25R001R BALLASTS

USHIO's ballasts are designed to operate with USHIO Sōlarc® lamp products only. The ballast consists of an internal regulator that delivers constant power to the Sōlarc® lamp. This design is ideally suited for both battery and AC power supply driven applications where both small size and high efficiency are needed.

USHIO's ballasts are self-contained systems with all the necessary starting, regulating and safety features to meet any needs from commercial to medical applications.

Performance Specifications			
Electrical	B19R001	B22R001R	B25R001R
Input Power	Specifications, unless otherwise indicated, are nominal at or near 25°C.		
Turn On Voltage <sup>1</sup> (volts DC)	9.8		
Turn Off Voltage <sup>1</sup> (volts DC)	9.2		
Maximum Voltage (volts DC)	16		
Steady State Current <sup>2</sup> (DC @12V)	2.0A	2.3A	2.6A
Environment			
Operating Temperature (°C)	0 to 70 (forced convection cooling recommended)		
Storage Temperature (°C)	-40 to 105		
Pinouts	Connector		
Input Power (Molex 41761 series)	J101	Pin 1 = "+" input power Pin 2 = "-" input power	
Output Power	P1 P2	Anode, white wire on ballast connector Cathode, black wire on ballast connector	

<sup>1</sup> Turn on and turn off specifications are a function of input wiring resistance. The specifications shown are for the condition where the voltage at the pins of J101 are regulated using the remote sense leads of a power supply.

<sup>2</sup> Steady state current flow after lamp warm up.

Mechanical

Figure 1. Assembly dimensions and connector locations. Dimension units are mm (inches).

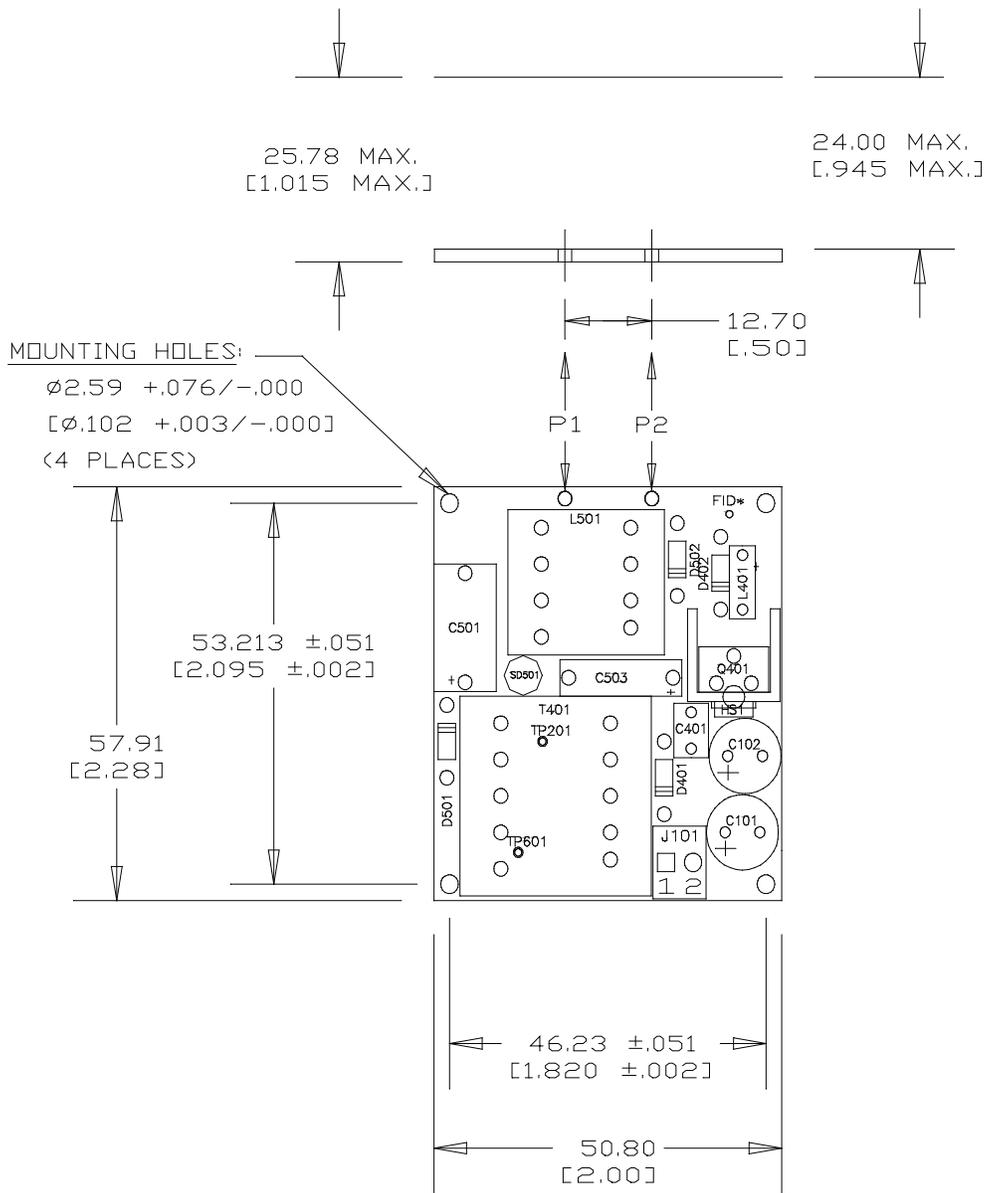
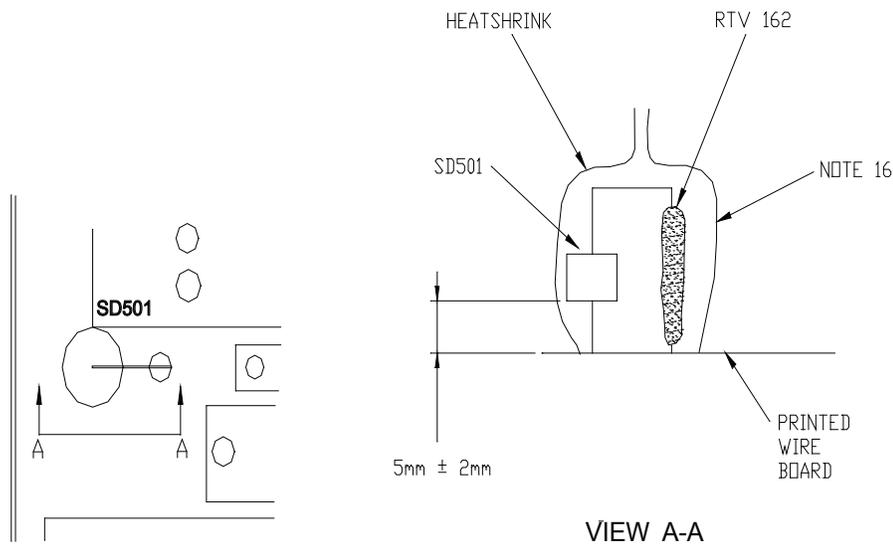


Figure 2



Don't allow the metal end of the can, bottom end, to make contact with the upper lead when it is formed and inserted into the PWB.

Don't allow the leads or the metal ends of the can to come into contact with any adjacent parts.

### Wiring and Preparation Instructions

- 1) Mount the ballast as desired using the corner holes provided on the PWB or some other acceptable means.
- 2) Construct an input power connector assembly suitable to your application. Slide the connector housing portion of the assembly onto the J101 connector until the mating halves lock in place. Observe polarity in wiring as specified in the pinouts section in the performance specifications table. Locate J101 on the bottom edge of the assembly view in Figure 1.
- 3) Solder the Cathode lead (black wire) of the lamp connector assembly to P2. Solder the Anode lead (white wire) of the lamp connector assembly to P1. Locate P1 and P2 on the top edge of the assembly view in Figure 1. Failure to observe the lamp wiring polarity will degrade important performance features of the lamp.
  - Shortening the connector assembly leads is permissible.
  - Route the anode lead to minimize stray capacitance to it.
  - **High voltage pulses are present on P1 during ignition.**
  - **Using the provided lamp connector assures proper operation.**
- 4) Mount the lamp suitably for your evaluation purposes. Keep in mind that mounting techniques affect operating temperature and lamp performance. Lamp life is inversely proportional to operating temperature.
- 5) Connect the lamp and ballast using the appropriate connector assembly.
- 6) A small amount of air flow is recommended for cooling the ballast.

### Safety

These Sōlarc® lamp ballasts have been designed to meet worldwide safety regulations when applied correctly. Since it is a secondary device, it is part of the end product's approval. It may also conform to any EMC directives when the ballast and the lamp are enclosed in a metal or metal-coated enclosure. Proper interlocking for lamp replacement is always highly recommended. There is a risk of electric shock when using the ballast without proper precautions.

