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**Instructions for Mounting and Operation
of ARC Model DS-421
30 Watt Deuterium Light Source**

Description:

The ARC Model DS-421 is a 30 watt deuterium light source system designed for use with ARC SpectraPro™ series spectrometers. It consists of a 30 watt deuterium lamp (Hamamatsu p/n L591), housing with light source collections mirror and fan, interconnecting cable, and deuterium power supply. The lamp is factory installed and aligned prior to shipment. Adjustments are provided on the light collecting mirror mount in the event that realignment becomes necessary.

Mounting:

For proper operation, the lamp housing should be mounted to the entrance slit of the spectrometer. The light collection mirror, located inside the lamp housing, is designed to focus light from the lamp onto the entrance slit of the spectrometer. To mount the lamp housing to the entrance slit, the following procedure is recommended:

1. Locate the two (2) shoulder screws and the two (2) 8-32 cap screws supplied with the DS-421. Insert the shoulder screws into the two bottom outside tapped holes of the entrance slit of the spectrometer and tighten the screws. These are used to mount the lamp housing.
2. Remove the four (4) slotted screws from the top of the lamp housing, then remove the cover.

DO NOT TOUCH THE LAMP (BULB) OR THE SURFACE OF THE FOCUSING MIRROR

3. Carefully slide the two (2) “key hole” type slots of the lamp housing mounting flange over the shoulder screws in the entrance slit of the spectrometer. Insure that the top two holes of the lamp housing mounting flange align properly with the top two tapped holes of the spectrometer entrance slit.
4. Insert the two (2) 8-32 cap screws in the top two holes of the lamp housing mounting flange and tighten the screws.

5. Replace the lamp housing cover.

Operation:

For operation, connect the cable between the lamp housing and the deuterium power supply. Plug the deuterium power supply into a properly fused and grounded 110V AC 50/60 Hz power source (220V AC optional). Plug the fan line cord into the 16 pin connector on the side of the lamp housing. Plug the other end of the line cord into a properly fused and grounded 110V AC 50/50 Hz power source (220V AC optional). Depress the rocker switch on the rear panel of the lamp housing to start the fan. The fan must be operating at all times during operation of the light source. Turn “ON” the power switch on the front panel of the deuterium power supply. The lamp starts automatically after approximately 30 seconds. To shut off the light source, turn “OFF” the power switch on the deuterium power supply. Depress the rocker switch on the rear panel of the lamp housing to turn off the fan. Refer to the enclosed deuterium power supply OEM instruction manual for detailed power supply operating instructions.