



68931 Power Supply with Research Lamp Housing; a bifurcated fiber bundle is at the output of the housing condenser.

- Operate a wide range of QTH lamps and IR sources
- Constant current for radiometric applications
- Convenient current preview feature
- CE Marked

These power supplies run our quartz tungsten halogen lamps and IR elements. They are improved versions of our popular 68831 and 68835 Supplies. They are still highly stable, constant current power sources, but they are now CE compliant.

BUILT-IN SMARTS

These Radiometric Supplies are microprocessor controlled. Multiple set-ups can be stored for different lamps. Current and power controlled modes of operation are possible.

SOFT START PROTECTS LAMPS

These supplies include circuitry that gradually applies power on start-up. This prevents catastrophic damage from in-rush current. The reduction in thermal shock to calibrated lamps ensures longer validity of the calibration.

WHY RADIOMETRIC POWER SUPPLIES?

These are the recommended power sources for calibrated QTH lamps. Use them with uncalibrated QTH lamps and IR elements if output stability is critical. Table 1 compares these supplies to our other QTH and IR element power sources. Current control mode is the most stable. Power control mode prolongs the life of the elements.

Table 1 Comparison of QTH and IR Element Power Supplies

Power Supply Model No.	Operates These Sources	Light Ripple	Soft Start	Digital Meter	Safety Interlock	Current Pre-set	Input for Light Intensity Controller	Detail Page
68931	10 - 250 W QTH Lamps and 22 and 140 W IR elements	< 0.05% r.m.s.	✓	✓	✓	✓	✓	This Page
68935	600 and 1000 W QTH Lamps	< 0.05% r.m.s.	✓	✓	✓	✓	✓	This Page
68938	10 - 100 W QTH Lamps and all Oriel IR elements	< 0.4% r.m.s.	✓	✓				1-137
63941	10 and 20 W QTH Lamps	< 2%						1-136

VERSATILE POWER SUPPLIES - RUN A NUMBER OF LAMPS AND IR ELEMENTS

The 68931 and 68935 Supplies operate a wide range of resistive loads. Use them to run the following QTH lamps and IR elements. (See pages 1-130 to 1-131 for dimensional diagrams and specifications on the QTH lamps. See page 1-140 for information on the IR elements.)

Table 2 Sources Operated by 68931 and 68935 Power Supplies

Lamp/Element Type	Model No.
68931 Power Supply	
10 W QTH	
20 W QTH	6318
50 W QTH, Short Filament	6319
50 W QTH, Long Filament	6332
75 W QTH with integral reflector	6337
75 W QTH with integral reflector	6352
100 W QTH	6354
100 W QTH with integral reflector	6333
250 W QTH	6359
45 W Calibrated QTH	6334
45 W Uncalibrated QTH	63358
200 W Calibrated QTH	63360
200 W Uncalibrated QTH	63355
140 W IR Element	63368
22 W Ceramic IR Element	6363
	6575
68935 Power Supply	
600 W QTH	
1000 W QTH	6336
1000 W QTH, FEL Type	6317
1000 W Calibrated QTH	6315
1000 W Uncalibrated QTH	63350
	63362

DIGITAL METER ENSURES REPEATABLE CURRENT SETTINGS

The 68931 and 68935 use a digital meter to ensure repeatable current settings. This is particularly useful for the calibrated lamps where you need to accurately duplicate the calibration current setting. You can switch the display between voltage, wattage and current. You can also display accumulated run time hours.

OPTIONAL LIGHT INTENSITY CONTROLLER

For applications where long term output stability is critical, use the 68950 Light Intensity Controller (page 1-156). The 68950 interfaces with the 68931 and 68935 Power Supplies to compensate for such factors as lamp aging and ambient temperature changes. Fig. 1 shows the output of a 50 W QTH lamp with and without the 68950.

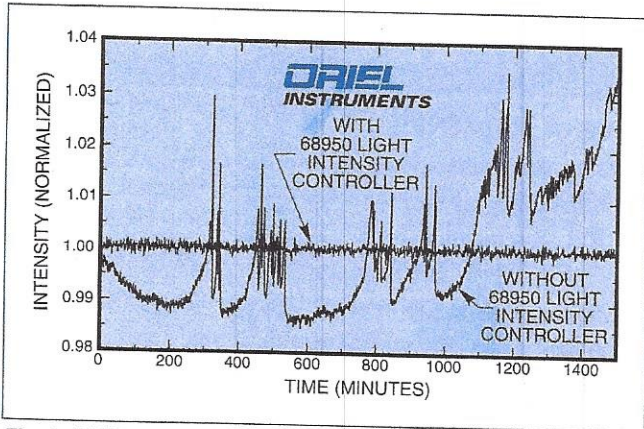


Fig. 1 50 W QTH Lamp, model 6332, operated by 68931, with and without 68950 Light Intensity Controller.

CURRENT PRE-SET FEATURE SAVES TIME

The Current or Power Pre-set lets you set the lamp operating conditions before operation. This is useful if you regularly switch lamp types and for all sources that take time to stabilize.

SAFETY INTERLOCK

Oriel Lamp Housings have thermal and door interlock switches which connect to the interlock socket on these power supplies. If the housing door is opened, or the housing overheats, the power supply automatically shuts itself off.

REMOTE MONITORING AND CONTROL

The analog voltage input and monitor output enable remote reading and control of the current, voltage, or power. The power supply can be easily read by a computer using an A/D board and it can be controlled with a D/A.

LIMITS

You can set current and power limits to protect your lamp from accidental burnout.

TECH NOTE

OUTPUT MODULATION

If you want to chop the beam from your source, and do not want to use a chopper, it is possible to modulate the light output through the input control that is used for the Light Intensity Controller. Filaments and IR elements do not cool immediately so only very low (Hz) modulation frequencies are effective.

SPECIFICATIONS

68931 Power Supply

AC input:	95-130 VAC/6 A, max. 190-260 VAC/3 A, max. 50/60 Hz
DC output:	0-15 A, 0-30 V, 0-300 W
Ripple with ohmic load:	<0.05% r.m.s.
Light ripple*:	<0.05% r.m.s.
Meter accuracy:	±0.1%
Line/load regulation:	±0.05%
Max. temperature:	40 °C
Weight:	30 lbs. (13.7 kg)

68935 Power Supply

AC input:	95-130 VAC/18 A, max. 190-260 VAC/9 A, max. 50/60 Hz
DC output:	0-10 A, 0-130 V, 0-1100 W
Ripple with ohmic load:	<0.05% r.m.s.
Light ripple*:	<0.05% r.m.s.
Meter accuracy:	±0.1%
Line/load regulation:	±0.05%
Max. temperature:	40 °C
Weight:	40 lbs. (22 kg)

* With Oriel Lamp in appropriate Oriel Lamp Housing.

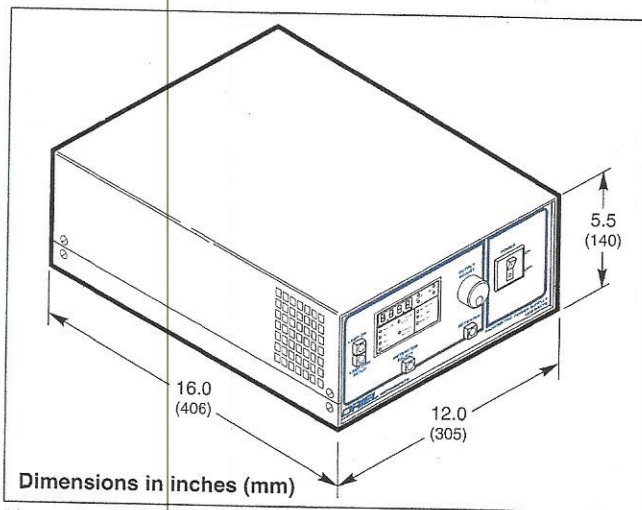


Fig. 2 Dimensional diagram of Radiometric QTH Supplies.

ORDERING INFORMATION

For These Lamps/Elements	Model No.	Price (\$)
10 - 250 W QTH and 22 and 140 W IR	68931	\$ 2,542.00
600 and 1000 W QTH	68935	\$ 3,185.00