

POWER SUPPLY & HOUSING FOR HIGH POWER DEUTERIUM LAMPS

INTRODUCTION

The C735 power supply and C731 housing have been designed and manufactured by Cathodeon specifically for use with the HPD2 high power deuterium lamp series.

The housing securely holds the lamp and is fitted with a fan designed to ensure an adequate flow of air around the lamp to maintain optimum operating conditions. It is also fitted with a shutter to prevent inadvertent exposure to hazardous UV radiation and interlocked to the power supply to ensure that the fans are running before the lamp is switched on to avoid overheating.

The power supply has low noise and drift characteristics, and designed to take into account the specific difficulties of providing a stable supply up to 3A. It is fully automatic in operation and provides warning of malfunction of the lamp. It conforms fully with EEC directive 89/336/EEC on electromagnetic compatibility (EMC) and warrants CE marking.

GENERAL OPERATION

With the key switch in the lamp housing in the OFF position, the filament voltage is set to 3V until the white 'htr control' comes on. An initial anode current of 1A is set and the key switch turned ON. The arc will strike within a second of depressing the lamp strike button. Please note that if the lamp is still hot from a previous run, at least five minutes must elapse for the lamp to cool before it can be restarted.

DIMENSIONS

	POWER SUPPLY	HOUSING
Width	440mm	185mm
Depth	440mm	160mm
Height	230mm	280mm
Weight	14.5Kg	3.5Kg

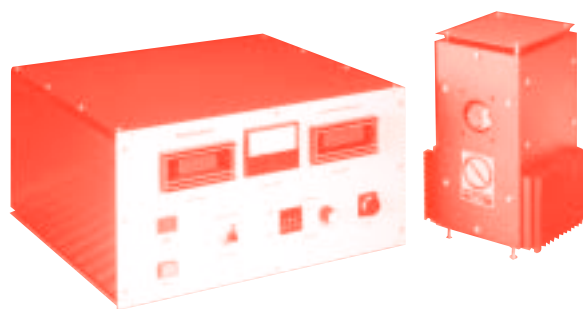
ORDERING CODES

PRODUCT	ORDERING CODE
Power supply	C735
Housing	C731

WARRANTY

The power supply and housing for Cathodeon's high power deuterium lamp is covered by warranty for one year from the date of purchase.

Fig 47 High Power Deuterium Lamp Power Supply and Housing



SPECIFICATIONS

Please note that this power supply is not available for OEM use.

Supply voltage	120-240V, 47-63Hz, single phase earthed neutral
Current waveform	Sinusoidal
Power factor	>95%
Compliance	EMC 89/339/EEC Electrical safety 72/23/EEC

ANODE SUPPLY

Maximum output voltage	140V adjustable by internal preset control
Stabilisation mode	Constant current
Output current	0.5 to 3A adjustable
Stability of output current	Mean value to better than 0.1% hour to hour
Speed of response	100mS
Ballast switch	24V output for relay in lamp housing; operates at adjustable arc current in the region of 1.5-2A

ANODE OVERVOLTAGE STARTER

Initiation	Press button switch on panel
Maximum overvoltage	450V open circuit
Maximum stored energy	2J

CATHODE HEATER SUPPLY

Maximum voltage	0-3.5V AC adjustable, measured at lamp cathode
Maximum rated current	12A
Stability	Better than 5% over supply voltage range
Meter	Analogue

INTERFACE WITH LAMP HOUSING

Interlocks	1. Keyswitch on lamp housing locks off HT and starter 2. Supply for indicator lamp
Supply for fan	24V 1A DC unstabilised
Cable and connector	As required

hi-Tech lamps

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Both power supply and housing are specifically designed for the high power deuterium lamps, and although the power supply will run these lamps safely and optimally, they are not suitable for use with other lamps. The system is suitable for applications which require a much higher output than that afforded by traditional analytical deuterium lamps, such as the analysis and production of semiconductor devices and light-limited spectroscopic measurements.