Ferranti GRD7 Guard Ring Diode. This is a directly heated diode with cylindrical coaxial electrodes and a tungsten filament. The guard rings ensure a homogeneous anode-cathode field and eliminate the "fringe" effect. It is primarily designed for educational purposes but is also suitable where a saturated diode of high stability is required.

Thanks to Bob Sutherland for this info. and the datasheet

Physical details	
Base	IO
Max. overall length	109mm
Max. seated height	94mm
Max.diameter	33mm
Mounting position	Vertical, base down
The anode guard rings are of a non-magnetic material	
A hole in the anode allows the filament to be sighted for assessing temperature by optical methods, but allowance must be made for transmission losses due to the glass envelope and any film deposited on the glass.	
Base connections	
Filament	1+2, 7+8
Anode	3
Guard rings	5
NC	4, 6
Connection to the filament should be made from both 1+2 for one connection and 7+8 for the other.	
Ratings	

Continuous	
Max. filament voltage	6V
Max. anode voltage	300V
Max. anode dissipation	2W
Intermittent, short periods of operation	
Max. filament voltage	7V
Max. anode voltage	300V
Max. anode dissipation	5W

Hull's Law - basic magnetron effect - can be demonstrated by surrounding the GRD7 with a solenoid to produce a magnetic field parallel to the electrode axis. The magnetic field affects the electron path, eventually causing cut-off as electrons stop reaching the anode.

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