

Thyratron L4040LD

High-voltage Switch Suitable for Medical Accelerator and Radar Applications

The L4040LD is a tetrode deuterium thyratron capable of switching peak power levels to 16.5 MW at average powers to 25 kW. The Thyratron is designed for line-type modulator applications. A large volume deuterium reservoir is incorporated to maintain stable gas pressure.

Specifications

Maximum Ratings	Symbol	Max.	Units		
Maximum peak anode voltage, forward (Note 1)	epy	33	kV		
Maximum peak anode current forward	ib	1000	A		
Maximum average anode current	lb	1.25	ADC		
Maximum average anode current, intermittent	lb	2.2	ADC		
Maximum current anode rate of rise	dib/dt	5,000	A/ μ S		
Maximum anode delay time	tad	0.25	μ s		
Maximum time jitter (Note 2)	tj	0.005	μ s		
Ambient temperature	-50° to +90°C				
Typical Operation	Symbol	Nom.	Min.	Max.	Units
G2 peak trigger voltage (Note 3)	Egy ₂	—	300	1,000	V
G2 trigger voltage pulse duration	tp	2	1	—	μ s
G2 trigger voltage rise time	tr	—	—	0.35	μ s
G2 trigger source impedance	Zg ₂	—	50	500	Ω
G2 negative control grid bias	Ecc ₂	-100	0	-150	VDC
G1 open circuit DC voltage	Egy ₁	—	75	150	VDC
G1 short circuit DC current	Igy ₁	—	50	100	mADC
Heater voltage	Ef	6.3	6.0	6.6	V
Heater current (at 6.3 volts)	If	24	—	—	A
Warm-up time	tk	—	5	—	min.

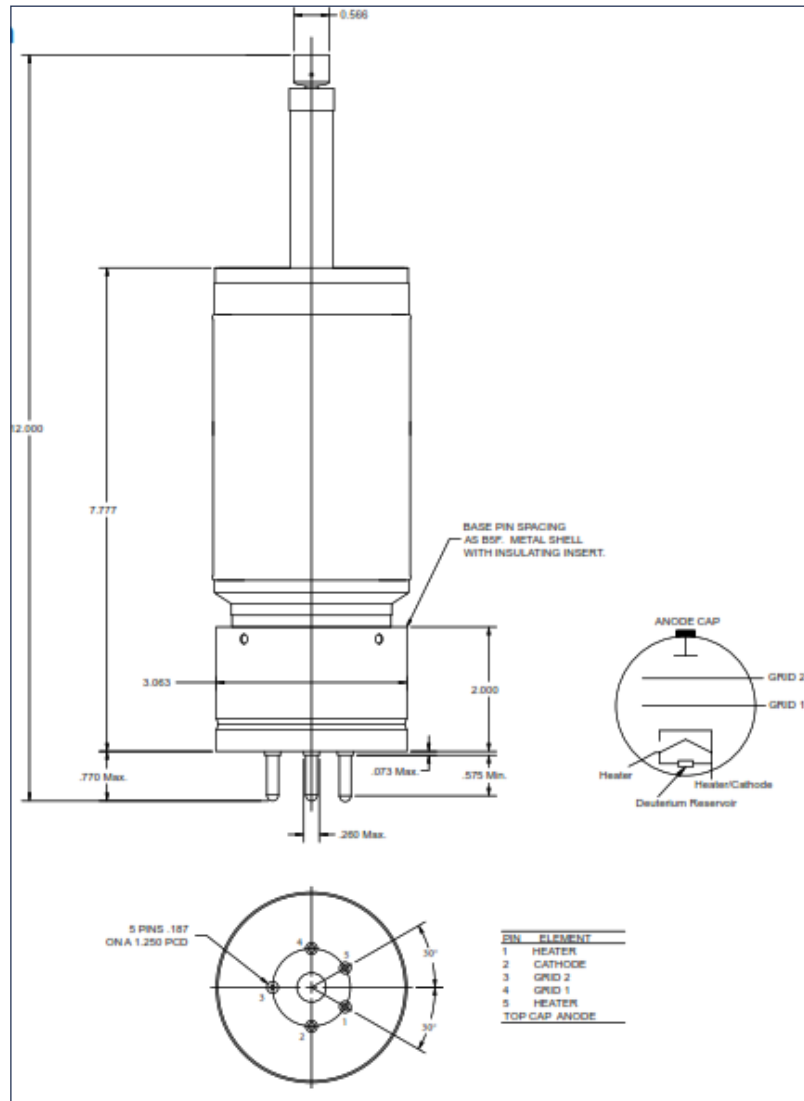


Specification Notes

1. During the first 25 microseconds after conduction, peak inverse anode voltage should be limited to 10 kV in order to obtain maximum tube life.
2. Time jitter (Tj) is measured at the 50% point on the leading edge of the anode current pulse.
3. The limits of anode delay time and anode time jitter are based on the minimum trigger. Using the highest permissible trigger voltage and lower trigger source impedance significantly reduces these values below the limits specified.

Thyratron L4040LD

Outline Drawing (Dimensions in inches)



Stellant Systems is a partner for civil, military, and commercial organizations whose missions seek to ensure a safe, aware, and connected world. We are a premier manufacturer of critical spectrum and power amplification systems for defense, space, medical & scientific and industrial customers worldwide.

www.StellantSystems.com



Headquarters

3100 Lomita Blvd.
Torrance, California 90505
T: 310-517-6000
info@stellantsystems.com

1035 Westminster Dr.
Williamsport, Pennsylvania 17701
T: 570-326-3561

107 Woodmere Rd.
Folsom, California 95630
T: 916-351-4500

