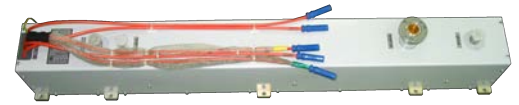


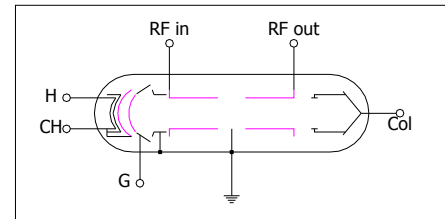
Features

Frequency range D	1,24 to 1,34 GHz
Frequency range C	1,34 to 1,44 GHz
RF peak output power	40 kW
RF average output power	800 W
Gain	35 dB
Duty cycle	2 %



Description

The LO-120 is a ring and bar, grid-pulsed and liquid cooled traveling wave tube for use as a driver or output tube in advanced radar system and test equipment. Each tube delivers at least 40 kW of RF peak power and minimum 800 W of average output power in L band without adjustment. The tube has a metal-ceramic vacuum envelope, single-stage depressed collector and periodic permanent magnet focusing structure.



H – heater; CH – cathode-heater;
G – grid; Col – collector

RF Performance Requirements

TECHNICAL DATA	MIN	MAX	UNITS
Frequency range D	1,24	1,34	GHz
Frequency range C	1,34	1,44	GHz
RF peak output power	40	-	kW
RF average output power	800	-	W
Gain	35	-	dB
RF drive power	-	15	W
Load VSWR	max 2:1		

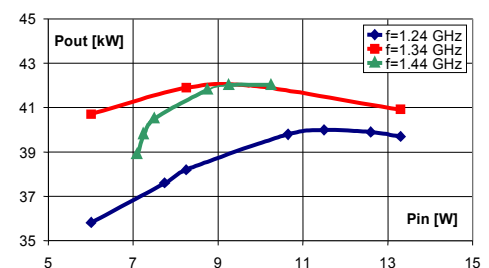
Electrical Requirements

TECHNICAL DATA	MIN	MAX	UNITS
Cathode voltage	-16,5	-19	kV
Collector voltage	83 ±2% cathode voltage		
Grid bias voltage	-500	-700	V
Grid pulse voltage	+400	+700	V
Cathode pulse current	7,0	8,5	A
SWS pulse current	0,4	3,5	A
Duty cycle	-	2,0	%
Pulse width	-	60	μs
Ion pump voltage	-	-2,0	kV
Heater voltage	9,5	12,0	V
Heater current	4,4	5,0	A
Heater warm-up time	4	-	min

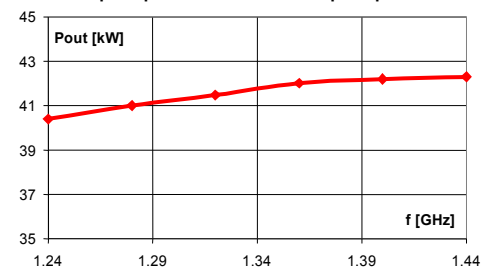
Notes

- The cathode and ion pump voltages are measured with respect to the ground.
- The heater, grid and collector voltages are measured with respect to the cathode.
- Optimum output power may occur after slight tuning of grid pulse voltage and RF input power at operating frequency.

Charts



Output power versus input power



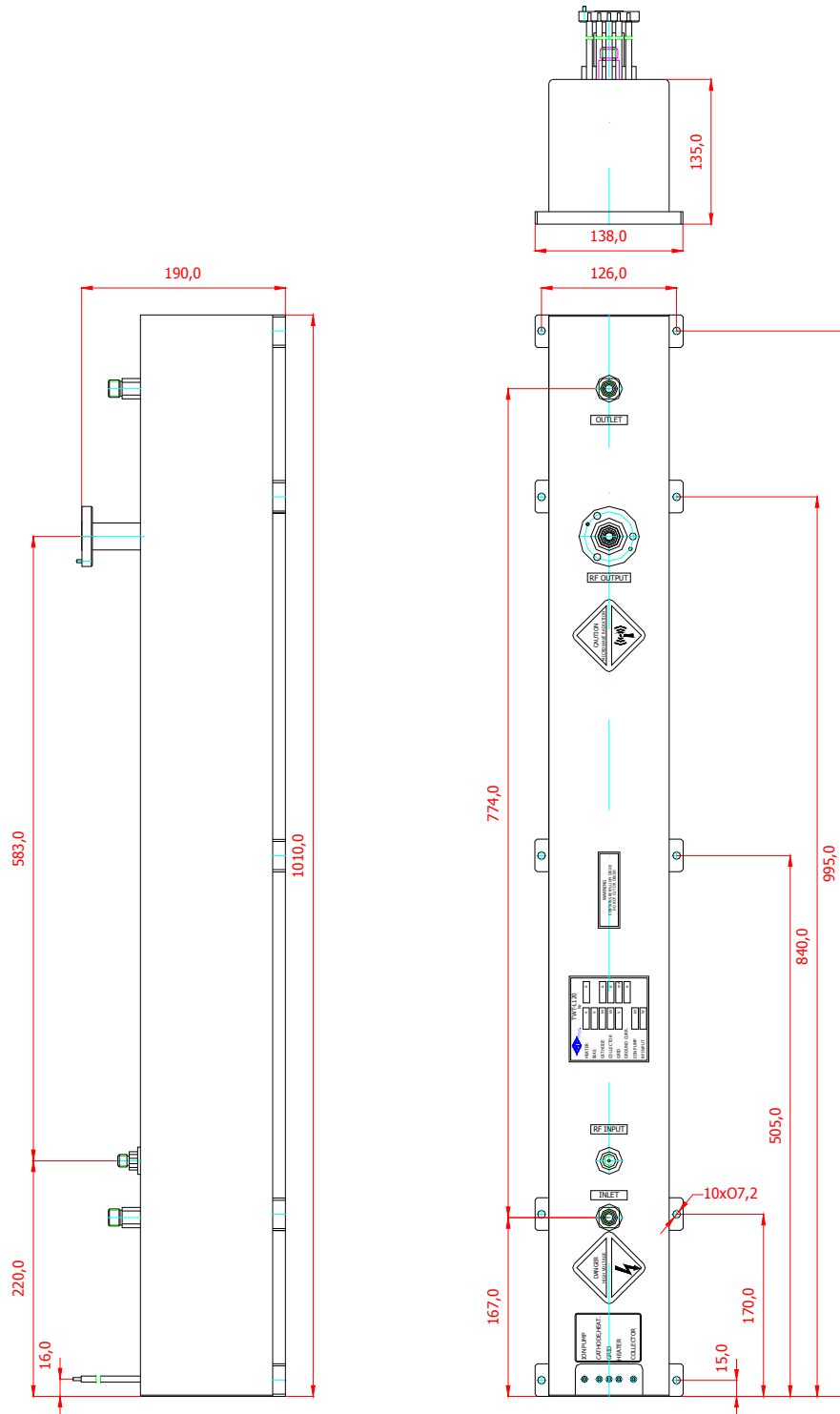
Output power versus input frequency

Mechanical Description

Dimensions	See Outline Drawing
Weight	27,0 kg
Liquid cooling	Min. 4 l/minutes, max 60°C on inlet
Mounting Position	Any
RF input connector	N 50
RF output connector	7/8" EIA

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The mechanical dimensions can be modified. Current detailed outline drawing are available on request.
All mechanical dimensions are in [mm].

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