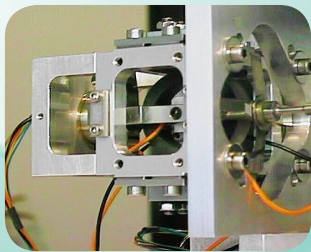


Linear Piezo Motor LPM20-3



Description

The LPM20-3 is a Linear Piezoelectric Motor that displays the known advantages of a piezo motor (e.g. a standstill force at rest of 50 N without any power supply, a high positioning accuracy, ..).

References	Unit	LPM20-3
Notes		Space product
Height (normal direction of the contact zone)	mm	80,0
Normal vibration displacement	μm (pk-pk)	3,00
Operating frequencies	kHz	22,50
Voltage max.	Vrms	10,0
Electrical power (per electrical port)	W	12,0
Width	mm	80,0
Length (tangential direction of the contact zone)	mm	66,0
Mass	g	350,0
Capacitance (per electrical port)	μF	2,10
Stroke	mm	3,0
Standstill force	N	50,0
Maximal driving force	N	20,0
No-load speed	mm/s	100,0
Lifetime	number of strokes	500 000
Electrical interfaces		4 PTFE insulated AWG26 wires 500 mm long with sub D9 connector

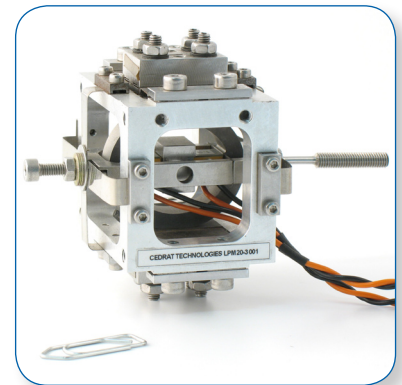


Figure 1: View of the LPM20-3 motor.

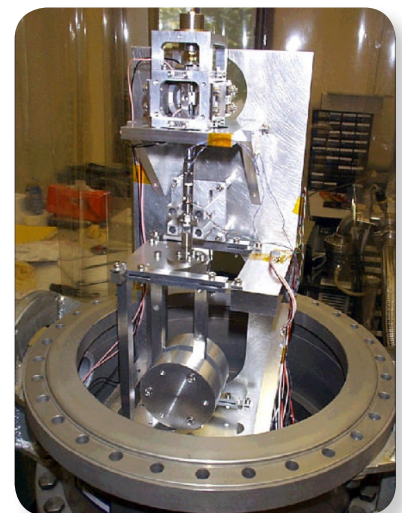
Space evaluation program

The LPM20-3 followed a space evaluation program including

- Functional tests,
- Lifetime test (1e6 cycles),
- Thermal vacuum test (5 / 45°C),
- Random vibrations cycles including a Launch Locking devices.

Space heritage

3 Engineering Models have been used in a refocusing mechanism by EADS-SODERN.



Courtesy of CNES.