www.cedrat-technologies.com | actuator@cedrat-tec.com

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...)

Fig. 1: View of the LPM20-3 motor

REFERENCES	UNIT	LPM20-3
> Notes	Space product	
Heigh (normal direction of the contact zone)	mm	80.0
Normal vibration displacement	µ (pk-pk)	3.00
Operation frequencies	kHz	22.50
Volatage max.	Vrms	10.0
Electical power (per electrical port)	W	12.0
Width	mm	80.0
Lenght (tangential direction of the contact zone)	mm	66.0
Mass	g	350.0
Capacitance (perelectricalport)	µF	2.10
Stoke	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 500mm long with sub D9 connectr	

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.

Fig. 2: Courtesy of CNES

SPACE HERITAGE

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