

LF14

Linear Filter Changer

ORDERING INFORMATION

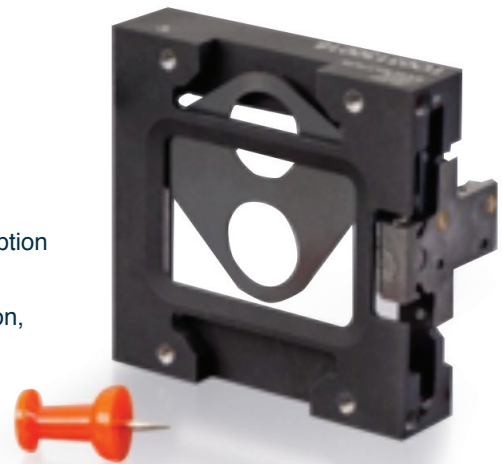
Part Number: LF140110AA-00
Linear Filter Changer

RELATED PRODUCTS/ ACCESSORIES

Part Number: ASIC-1E-01

Product Features

- Silent operation – undetectable
- Best SWaP Performance
- Closest Back Working Distance
- Negligible EMI/RFI signature – no distortion
- Holding and braking without power consumption
- MIL-STD-810F Compliant for shock, vibration, and temperature – Safe & Reliable



Product Description

Nanomotion's LF14 Linear Filter Changer is designed to meet the most challenging operating conditions of optical systems. The LF14 operates linearly with a direct drive Edge motor, providing the lightest weight configuration while maintaining the closest back working distance.

The LF14 is provided with a blade that can accommodate different filter diameters and is capable of moving 14mm in 100 msec. The filter housing is supported by the Edge-Actuator bearing structure on one side and an outboard shaft bearing on the other, to eliminate any deflection or vibration.

Standard configurations utilize the Edge motor with a miniature position sensor, integral to the filter changer assembly, for closed loop operation. The filter changer is supported by our ASIC that closes the velocity loop and serves as a drive & control.

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MECHANICAL DRAWINGS AND INTERFACE

TECHNICAL SPECIFICATIONS

Mechanical

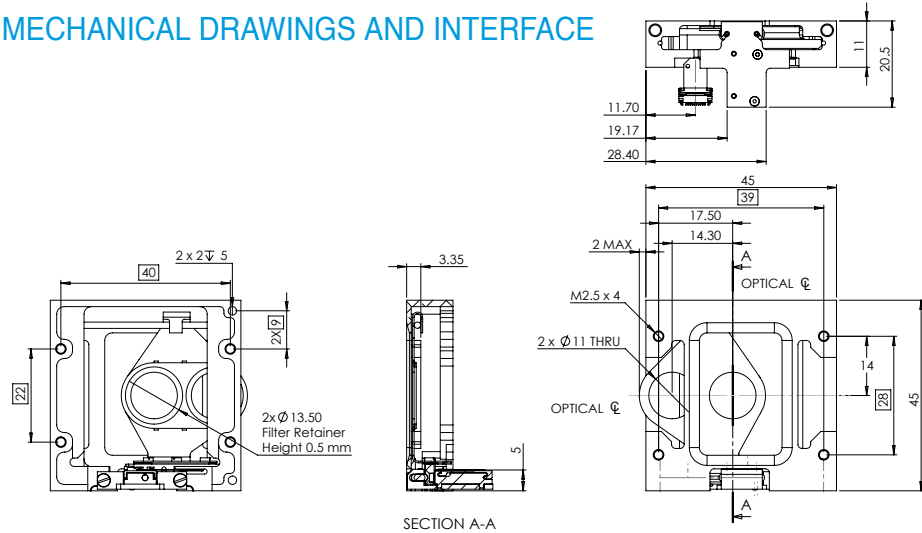
Retainer Diameter: \varnothing 11 mm
 Total weight: 15 gr
 Moving mass of 1.5 gr
 Back working distance: 3.5mm

Performance

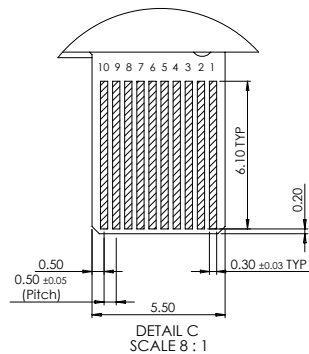
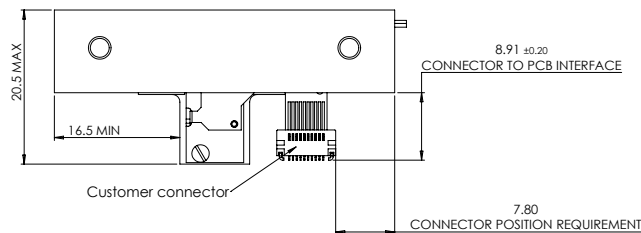
Stroke time: 150msec
 Operation from -40°C to 70°C
 Vibration: 10 g rms (holds position without power)
 Shock: 300 g, any orientation
 Position holding @ power off:
 10g linear acceleration
 MTBF: 50,000 hours

Electrical

Drive voltage: 4.2V
 Power consumption at idle:
 Max: 500mW
 Idle: 8mW (keeps position)



ELECTRICAL INTERFACE



pin number	pin name	description
1	N.C.	DISCONNECTED
2	SC_1	PR1 COLLECTOR
3	GND	GROUND
4	SA_1	PR1 ANODE LED
5	SCL	NM MOTOR COMMON
6	P_2	NM MOTOR PHASE 2
7	P_1	NM MOTOR PHASE 1
8	SA_2	PR2 ANODE LED
9	GND	GROUND
10	SC_2	PR2 COLLECTOR

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