

APPLICATIONS

- > Fast steering mirror
- > Point ahead mechanism
- > Line of sight stabilisation
- > Microscanning
- > Tracking
- > Fine Pointing

KEY FEATURES

- > Compact size
- > High control bandwidth
- > Low power consumption
- > Large optical deflection angle > 10 °
- > Eddy Current Positioning Sensor
- > Operating temperature range -10 °C..+60 °C
- > Vacuum Compatible
- > Withstand vibration & shocks
- > High Power Laser up to 80 W continuous
- > Redondant coils

RELATED PRODUCTS

- > MCLA18

AVAILABLE OPTIONS

- > Specific control loop calibration



PARAMETER

TYPICAL VALUE

UNIT

> Quasistatic performances ⁽¹⁾

Max Angular stroke ⁽²⁾	90	mrاد
Resolution	2	μrad
Linearity error in closed loop	<±0.2	%
Gain ⁽³⁾	130	mrاد/A

> Dynamic performances

Loaded resonance frequency ⁽⁴⁾	80	Hz
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> Mirror substrates and coatings options

Sic Options

Substrate size / clear apperture	17mm diameter / CA > 16.2mm
Coating options	Silver and Gold Dielectric for High Power Laser

Reflectivity on SiC substrate

with silver coating	> 95% fom 450nm to 2300nm at 45°
with high power laser dielectric coating	> 99.5% from 1490nm to 1680nm at 35-55°
Wavefront quality ⁽⁵⁾	λ/20 at 1600 nm

> Driving

Max driving voltage range	+/- 32	V
Max driving current range	+/- 1	A
Resistance @ 20 °C per axis (nominal coil)	11	Ohm
Resistance @ 20 °C per axis (redondant coil)	13	Ohm
Inductance @ 20 °C per axis (nominal coil)	34	mH
Inductance @ 20 °C per axis (redondant coil)	55	mH

> Dimensions & interfaces ⁽⁶⁾

Heigth	58	mm
Diameter	45	mm
Mass	<400	g

> Mechanical interfaces

see icd

> Optical interface ⁽⁶⁾

see icd

> Electrical interfaces

see icd

ANNOTATIONS

Performances measured in labs environment with +/- 10% tolerance. A misused can lead to temporary or definitive alterations of properties. Contact CEDRAT TECHNOLOGIES prior using actuators under non standard technical conditions

(1) Low frequency < 10 Hz

(2) Stroke limited by a mechanical stop. Peak to peak stroke in open & closed loop at ambient

(3) Gain value measured in quasistatic condition @ 0.05 Hz

(4) Loaded with 17 mm diameter SiC mirror of 4.5 gm and controlled with MCLA18

(5) Measured at 1600 nm at mirror manufacturing

(6) See mirror ICD

