DTT15XS-SG

Double Tip Tilt

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

APPLICATIONS

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

KEY FEATURES

- Compact & High Dynamic
- Low capacitance & low power consumption
- Symetric push pull mechanical and electrical design
- Strain Gages sensor (SG)
- Integrated SG conditioner
- High resonance frequency
- EE Prom with recorded performances data
- Operating Temperature -50°C to +65°C
- Rugged to vibrations and shocks

RELATED PRODUCTS

- CCBµ20
- CCBµ40

AVAILABLE OPTIONS

- Open loop
- Customisation vs environmental specifications
- Look up table

AVAILABLE INTERFACES

- Specific mirror interface

ANNOTATIONS

Guaranted in labs environment. A misused can lead to temporary or definitive alterations of properties. Contact CEDRAT TECHNOLOGIES prior using actuators under non standard technical conditions

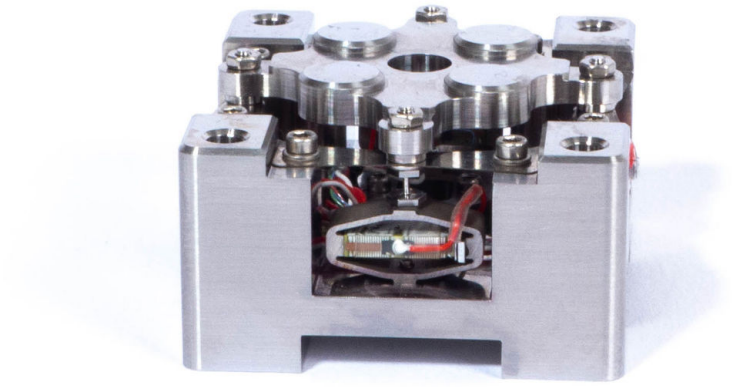
(1) AC voltage, full range @ 1Hz at Ambient Temperature

(2) With low noise amplifier SNR=100dB

(3) Blocked-free: The actuator is fixed to a mechanical support assumed infinitely stiff

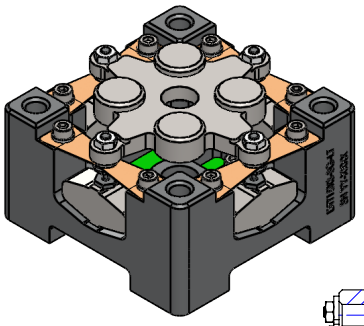
(4) Per axis, quasistatic excitation, free-free, on the admittance curve

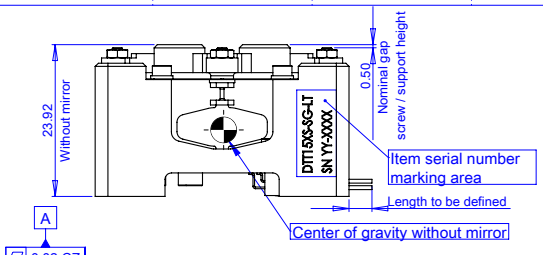
(5) unloaded, excluding wires, without mirror

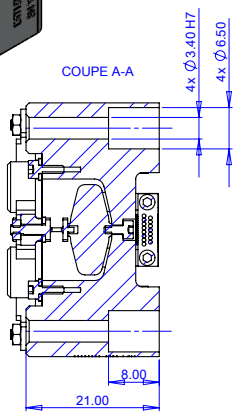


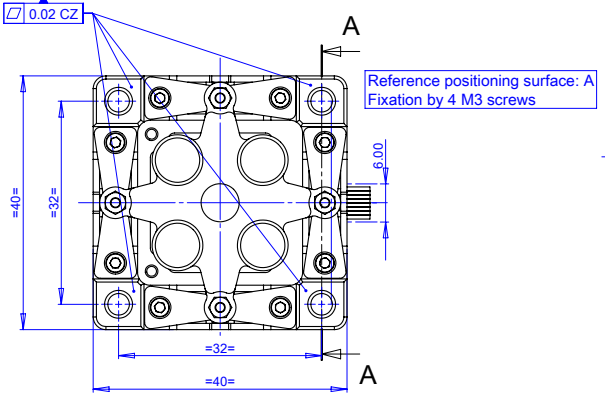
NON CONTRACTUAL PICTURE

PARAMETER	TYPICAL VALUE	UNIT
Quasistatic performances (1)		
Nominal stroke	2	mrad
Minimal stroke	> 1.4	mrad
Resolution (2)	< 1	µrad
Dynamic performances		
Unloaded Blocked - free resonance frequency (3)	> 3.000	Hz
loaded Blocked - free resonance frequency with rectangular glass mirror 52*42*4 mm (3)	> 1.700	Hz
Driving		
Voltage range	-20 to +150	V
Capacitance (4)	<0.6	µF
Dimensions & interfaces		
Height (5)	<24	mm
Cross section (5)	<40x40	mm
Mass (5)	<110	g
Mechanical interfaces	See ICD	
Optical interface	See ICD	
Electrical interfaces	See ICD	



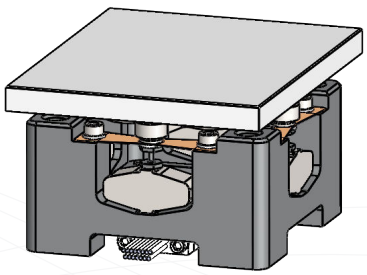




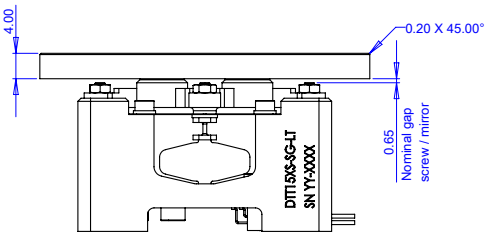


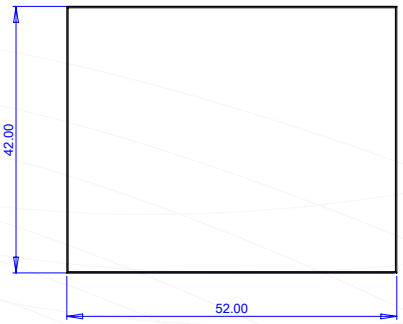
Mechanical ICD

Matière / Material :	Norme matière / Material standard :		Masse (g) / Weight (g) : 107	
Réf. traitement / Treatment ref. :	CEDRAT TECHNOLOGIES Innovation in Mechatronics	Ce document est la propriété de Cedrat TECHNOLOGIES. Il est strictement confidentiel et ne peut être reproduit, copié ou communiqué à des tiers sans l'autorisation écrite préalable de Cedrat TECHNOLOGIES. *This document is the property of Cedrat TECHNOLOGIES. It is strictly confidential and may not be reproduced, copied or communicated to any third party without the prior written consent of Cedrat TECHNOLOGIES.*		
Réf. traitement surface / Surface treatment ref. :	59 Chemin du Vieux Chêne 38246 MEYLAN Cedex FRANCE TEL. : 33 (0) 4 56 58 04 00			
Tolérances générales selon : *General tolerances according to :* Ra : Ebavurage/*Deburring :* Rayon raccord/*Radius curvature :*	DTT15XS-SG-LT			Echelle / *Scale* 2:1
Auteur / *Drawn* JST	Confidentialité / *Confidentiality* Confidentiel, selon contrat	Référence / *Reference* 035416-ICD-01	Révision / *Revision* A	Etat du document / *Life cycle* Applicable	Planche / *Sheet* 1/2



Mirror reference :
- Material Fused Silica (SiO2)
- More details see ref MD-4501-6139





Optical ICD

Matière / Material :	Norme matière / Material standard :		Masse (g) / Weight (g) : 107	
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DTT15XS-SG-LT EICD

Ref. :	035416-SPE-02
Version	A
Date	15/06/2020

	NAME	Fonction	Date and signature
From	Jonathan STENTZ	Mechanical engineer	Jonathan Stentz 2020.06.15 16:02:47 +02'00'
Verified by	Sylvain DUC	Electronic engineer	DUC Sylvain 2020.06.15 16:31:07 +02'00'
Validated by	Sylvain CHARDON	Electronic engineer	Chardon Sylvain 2020.06.15 16:24:17 +02'00'

Version	Date	AutHor	Modifications
A	15/06/2020	J. STENTZ	Creation

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DTT15XS-SG-LT	LIST OF CONNECTORS	Ref. :	035416-SPE-02
		Version	A
		Date	15/06/2020

sheet #	Connectors #	Name	Description	Product reference
INTER01	J1	Mechanism	Sub-D 15 Female - Horizontal SMT	OMNETICS / AS29100-015

DTT15XS-SG-LT	EQUIPMENT INTERCONNECTION DATA SHEET	Ref. :	035416-SPE-02
		Version	A
		Date:	15/06/2020

Page	INTER01

Connector Name :	Mechanism
Connector # :	J1

Pin	Signal name (Customer)	Signal name (CTEC)	Signal description	Signal type	I/O	CURRENT	VOLTAGE RANGE		Comment
						Max (A)	Min (V)	Max (V)	
1		VY	Y axis power	Power	Input		-20	150	
2		1-WIRE		Digital	Bidirectional				DS2431 EEPROM Memory
3		T°C		Analog	Output				PT100
4		PGND		Ground					Reference for Vx, Vy, +130V
5		+15V		Power	Input				
6		-15V		Power	Input				
7		AGND		Ground					Reference for 1-wire, T°C, SGX, SGY, Vref, +15V, -15V
8		SGX		Analog	Output		-10	10	
9		+130V	Contrinous power supply	Power	Input				
10		VX	X axis power	Power	Input		-20	150	
11		PGND		Ground					Reference for Vx, Vy, +130V
12		PGND		Ground					Reference for Vx, Vy, +130V
13		PGND		Ground					Reference for Vx, Vy, +130V
14		VREF		Analog	Input				5V nominal
15		SGY		Analog	Output		-10	10	