SPECIFICATIONS

MODEL #: VT4Z1450MFZI

1inch 14-50mm F2.6 IR-CORRECTED MOTORIZED FOCUS/ZOOM/IRIS

TUSS Vision, Inc.
http://www.tussvision.com

1. Application — IR-corrected Varifocal lens with Motorized Focus/Zoom/Iris for 1inch sensor

2. Optical specification — Testing condition: Dummy glass (Equivalent of BK7, thickness1.5mm)

Focal length	14-50 mm +/-5%
F-Number	F2.6 (Wide) to F2.6 (telephoto) +/-5%
Effective image circle	Diameter 16.8 mm
Back focus length	13.995 mm
Flange back focus	17.526 mm +0.05 mm
Object distance	1.2 m to Inf.
Angle of view	Wide 50.5°x 38.0° Telephoto 14.5°x11.1°
Lens components	12 Groups and 15 elements

Projective resolution

Wide		Telephoto	
Center	120 lp/mm	Center	120 lp/mm
Corner	100 lp/mm	Corner	100 lp/mm

Thickness of inside glass filter: 1.5 mm

3. Focusing system

Operation method	Stepping motor drive
Rated voltage	DC 3.3V
Excitation method	2 phase excitation
Drive mode	Bi-polar Drive
Coil resistance	20Ω +/-7%
Step angle	0.088°
Noise	60 dB (Max.)
Output gear torque	200 gf-cm (Min.)
Max. starting frequency	800 pps (Min.)
Max. slewing frequency	1,100 pps (Min.)

Sequence of excitation

phase \ step	1	2	3	4
A	H	H	L	L
$\overline{A}$	L	L	H	H
B	L	H	H	L
$\overline{B}$	H	L	L	H

Cable length: 250mm Molex: 51021-0400

Rotation angle	100°
Number of steps	7,102 steps

4. Zooming system

Operation method	Stepping motor drive
Rated voltage	DC 3.3V
Excitation method	2 phase excitation
Drive mode	Bi-polar Drive
Coil resistance	20Ω +/-7%
Step angle	0.088°
Noise	60 dB (Max.)

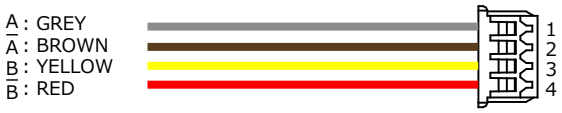
Output gear torque 200 gf-cm (Min.)

Max. starting frequency 800 pps (Min.)

Max. slewing frequency 1,100 pps (Min.)

Sequence of excitation

phase \ step	1	2	3	4
A	H	H	L	L
$\overline{A}$	L	L	H	H
B	L	H	H	L
$\overline{B}$	H	L	L	H



Cable length: 250mm Molex: 51021-0400

Rotation angle 100°

Number of steps 14,914 steps

14 mm	20 mm	25 mm	30 mm	40 mm	45 mm	50 mm
0	4,455	7,226	9,374	11,148	12,679	14,914

steps

5. Iris system

Operation method Stepping motor drive

Rated voltage DC 3.3V

Excitation method 2 phase excitation

Drive mode Bi-polar Drive

Coil resistance 20Ω +/-7%

Step angle 0.088°

Noise 60 dB (Max.)

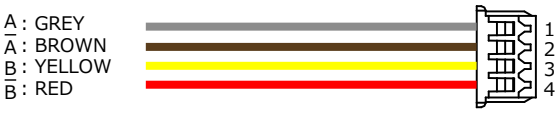
Output gear torque 200 gf-cm (Min.)

Max. starting frequency 800 pps (Min.)

Max. slewing frequency 1,100 pps (Min.)

Sequence of excitation

phase \ step	1	2	3	4
A	H	H	L	L
$\overline{A}$	L	L	H	H
B	L	H	H	L
$\overline{B}$	H	L	L	H



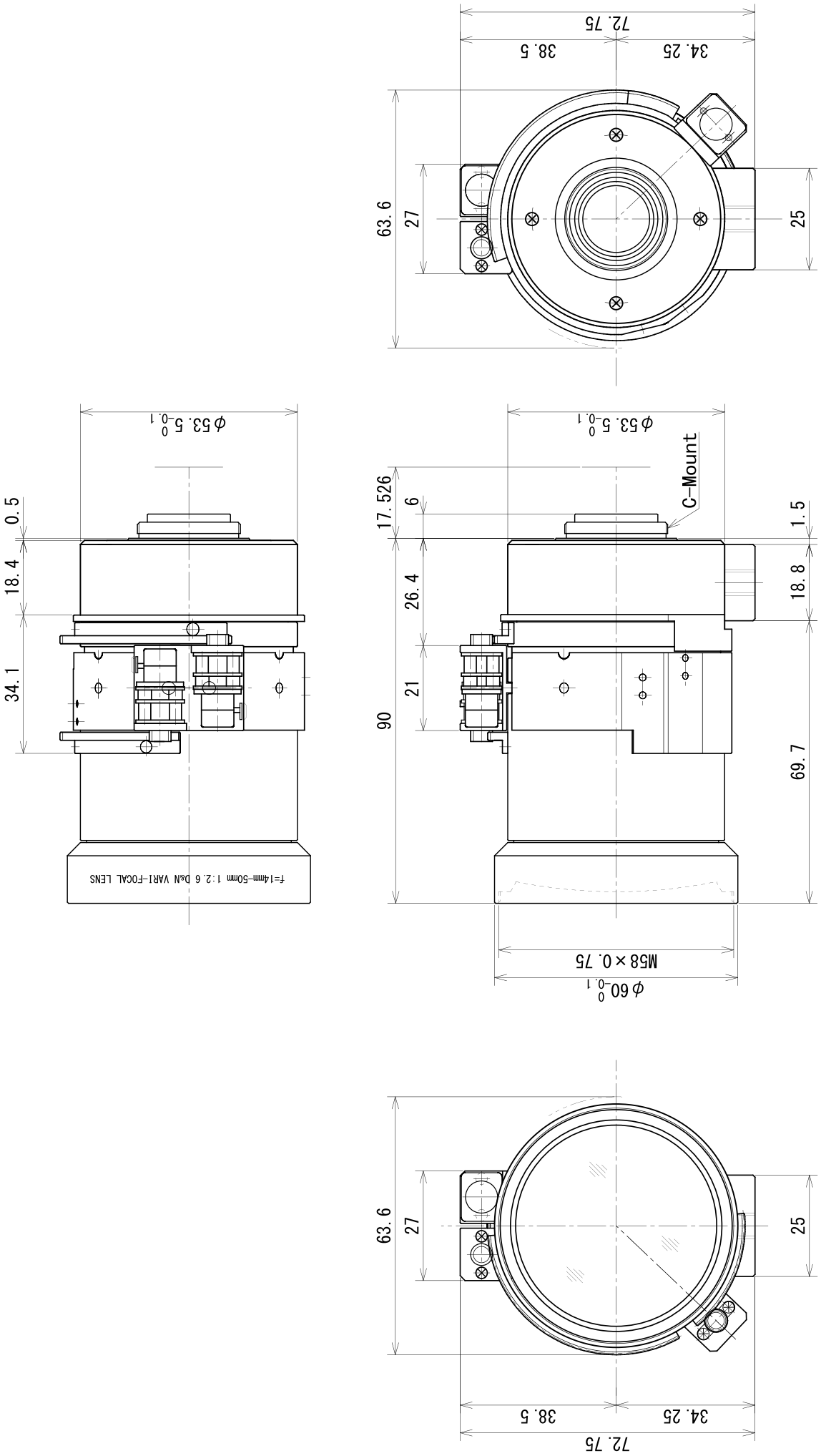
Cable length: 250mm Molex: 51021-0400

Rotation angle 41.5°

Number of steps 6,137 steps

F2.6	F2.8	F4.0	F5.6	F8.0	F11.0	F16.0
0	1,044	1,961	3,005	4,049	5,093	6,137

steps


72.75
38.5
34.25
63.6
27
25
φ53.5 0 -0.1
0.5
18.4
34.1
f=14mm-50mm 1:2.6 DsN VARI-FOCAL LENS
φ53.5 0 -0.1
C-Mount
17.526
6
1.5
26.4
18.8
21
90
69.7
M58×0.75
φ60 0 -0.1
63.6
27
25
72.75
38.5
34.25