Datasheet: ELM-T Telecentric C-mount lens with EL-16-40 integrated Update: 24.10.2023

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# S5VPJ1260

#### Lens module specifications

Focus tunable lens (Optotune)	Model	EL-16-40-TC-VIS-5D			
	Focal power	-2	0	+3	dpt
Magnification		0.316	0.311	0.303	Х
F/#		10.6	10.4	10.6	(Fixed)
Maximum sensor format		1			inch
Image circle (Φ)		16			mm
FoV (at max sensor format) H x V		41.7 x 31.2	41.1 x 30.8	40.0 x 30.0	mm
Working distance		211.2	190.0	155.1	mm
Field depth		4.9			mm
Optical leverage		11.6			mm/dpt
Optical Distortion		0.40	0.41	0.42	%
Telecentricity		0.02			0
Pixel size recommended		3.45			μm
MTF @ 50 lp/mm		44			%
Wavelength range		450 – 700			nm
Lifecycles (10-90% sinusoidal)		>1'000'000'000			cycles
Mount			С		
Dimension (Ф x L)		75.0 × 241.2			mm
Weight		1200			g

#### Focus tunable lens specifications EL-16-40-TC-VIS-5D Focal power range (@30°C)<sup>3</sup> dpt -2 to +3 Wavefront error (at 525 nm & 0 mA) <0.25/<0.5 λrms Optical axis vertical / horizontal -20 to +65 °C Operating temperature Storage temperature -40 to +85 °C Temperature sensor & memory STTS2004 (STMicroelectronics)

#### **Electrical specifications**

Control current (typical)	-250 to +250	mA
Absolute max. control current	-500 to 500	mA
Power consumption	0 to 0.7 (nominal) 0 to 2.8 (absolute max.)	W
Motor coil resistance @ 30°C	12	Ω
Absolute maximum voltage (coil)	10	V
Absolute maximum voltage (temp. sensor)	4.3	V

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Hirose connector (HR10G-7R-6P) Pin 1 Pin 2	Function Control current + Control current -	Sensor pins - -	
Pin 3	Ground	1-4	
Pin 4	Power (3.3V)	8	
Pin 5	I <sup>2</sup> C SCL	6	
Pin 6	I <sup>2</sup> C SDA	5	

### Controller

The liquid lens is controlled with electrical current and must be operated by a suitable lens controller. Hirose cables and liquid lens controllers are sold separately. The following controllers are considered fully compatible with S5VPJ1260:

- Optotune embedded controller ECC-1C
- Optotune lens driver EL-E-4i

**Mechanical drawings** 

W.D.=190

Optotune industrial controller ICC-4C-500

## Additional selection of controllers is available at https://www.optotune.com/controllers



DIA.C.A.

14,5

<u>4</u> 11,4

50,5

Hirose

Connector (not included)

C-Mount Ø35

#### 262,7 Ø 60 Ø 75 Ø 75 Ø 60 Ø 75 Ø 75

180,7

241,2

*Figure 1: Mechanical drawing of the S5VPJ1260* 

For more information on optical, mechanical and electrical parameters, please contact sales@optotune.com

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