

ELM-16-4.8-18-C



Lens module specifications

Effective focal length	16	mm
F/#	4.8	(fixed)
Maximum sensor format	1.1	inch
Maximum image circle (Φ)	18	mm
Lifecycles (10-90% sinusoidal)	>1'000'000'000	cycles
FOV	Diagonal	56 °
	Horizontal	46 °
	Vertical	36 °
Back Focal Length	17.526	mm
Optical Distortion	< 0.1	%
Pixel size recommended	3.45	µm
Wavelength range	400-900	nm
Relative illumination	> 88	%
Max chief ray angle	27	°
Working distance range	200 - infinity	mm
Mount	C-mount	
Total Track Length	114.5	mm
Dimension (Φ x L)	55 x 97	mm

Focus tunable lens specifications

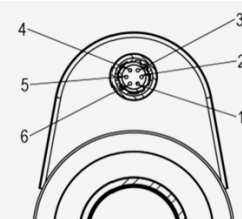
EL-12-30-TC-VIS-16D

Focal power range (@30°C) ³	-6 to +10	dpt
Wavefront error (at 525 nm & 0 mA)	<0.15/<0.23	λRMS
Optical axis vertical / horizontal		
Operating temperature	-20 to +65	°C
Storage temperature	-40 to +85	°C
Temperature sensor & memory	Yes	MAX31875R2TZS+T & CAT24C64C4CTR

Electrical specifications

Control current (typical)	-250 to +250	mA
Absolute max. control current	-300 to 300	mA
Power consumption for 5 dpt range (±60mA)	55	mW
Max power consumption (@ 250 mA)	940	mW
Motor coil resistance @ 25°C	15	Ω
Absolute maximum voltage (coil)	6	V
Absolute maximum voltage (memory & sensor)	4	V

Hirose connector (HR10G-7R-6P)	Function	Sensor pins
Pin 1	Control current +	-
Pin 2	Control current -	-
Pin 3	Ground	1-4
Pin 4	Power (3.3V)	8
Pin 5	I ² C SCL	6
Pin 6	I ² 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 ELM-16-4.8-18-C:

- Optotune embedded controller ECC-1C
- Optotune industrial controller ICC-4C-500

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



Mechanical drawings

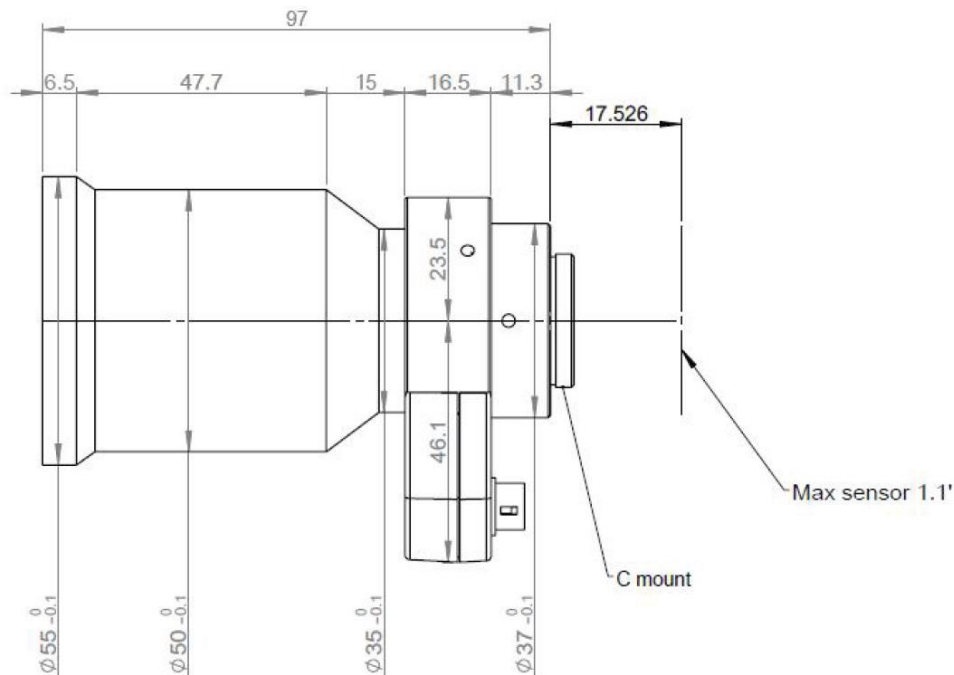


Figure 1: Mechanical drawing of the ELM-16-4.8-18-C

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