新特光电
Sintec Optronics

ELM-25-4.2-18-C

Lens module specifications

Effective focal length	25	mm	
F/#	4.2	(fixed)	
Maximum sensor format	1.1	inch	
Maximum image circle (Φ)	18	mm	
Lifecycles (10-90% sinusoidal)	>1'000'000'000	cycles	
FOV Diagonal	39	°	
FOV Horizontal	32	°	
FOV Vertical	23	°	
Back Focal Length	17.526	mm	
Optical Distortion	< 0.06	%	
Pixel size recommended	3.45	µm	
Wavelength range	400-900	nm	
Relative illumination	> 92	%	
Max chief ray angle	19.5	°	
Working distance range	200 – infinity	mm	
Mount	C-mount		
Total Track Length	108.2	mm	
Dimension (Φ x L)	47 x 90.7	mm	

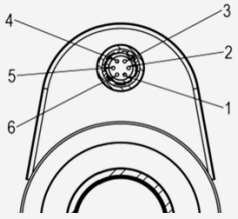
Focus tunable lens specifications

	EL-12-30-TC-VIS-16D		
Focal power range (@30°C)[3]	-6 to +10	dpt	
Wavefront error (at 525 nm & 0 mA) Optical axis vertical / horizontal	<0.15/<0.23	λRMS	
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^2C SCL	6
Pin 6	I^2C 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-25-4.2-18-C:

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

Mechanical drawings

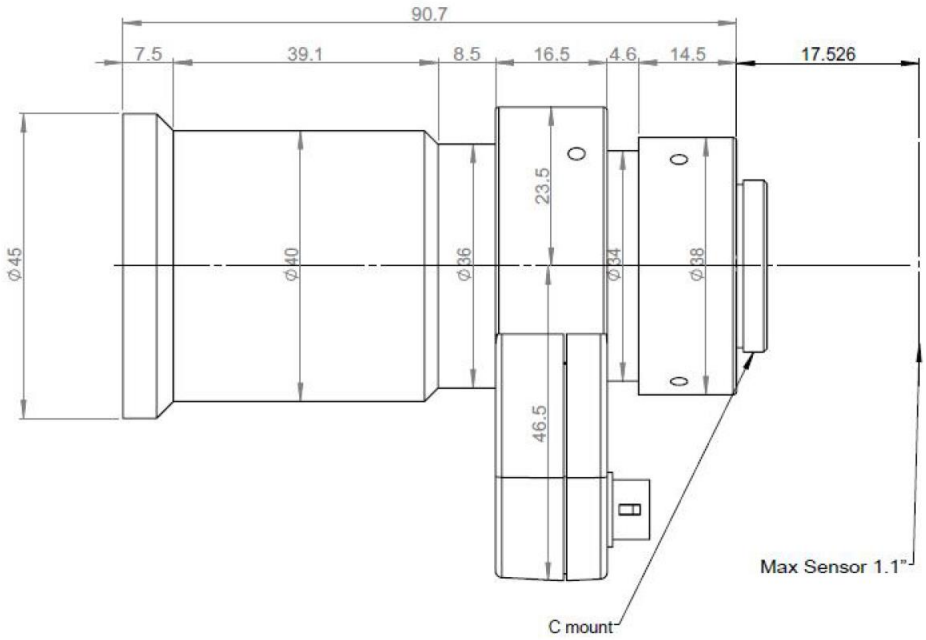


Figure 1: Mechanical drawing of the ELM-25-4.2-18-C