新特光电
Sintec Optronics

ELM-25-2.8-18-C

Lens module specifications

Effective focal length		26.6	mm	
F/#		2.8	(Variable)	
Maximum sensor format		1.1	inch	
Maximum image circle (Φ)		18	mm	
Lifecycles (10-90% sinusoidal)		>1'000'000'000	cycles	
FOV	Diagonal	36.5	°	
	Horizontal	30	°	
	Vertical	22	°	
Back Focal Length		11.01	mm	
Optical Distortion		< -2	%	
Pixel size recommended		2.4	µm	
Wavelength range		486-656	nm	
Relative illumination		> 65	%	
Max chief ray angle		11.0	°	
Working distance range		200 - infinity	mm	
Mount		C-mount		
Total Track Length		86.23	mm	
Dimension (Φ x L)		47.4x74.0	mm	

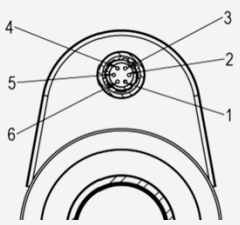
Focus tunable lens specifications

	EL-16-40-TC-VIS-5D		
Focal power range (@30°C)[3]	-2 to +3	dpt	
Wavefront error (at 525 nm & 0 mA) Optical axis vertical / horizontal	<0.25/<0.5	λRMS	
Operating temperature	-20 to +65	°C	
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	

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	I²C SCL	6
Pin 6	I²C 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-25-2.8-18-C:

- Optotune embedded controller ECC-1C
- Optotune lens driver EL-E-4i
- Optotune industrial controller ICC-4C-500

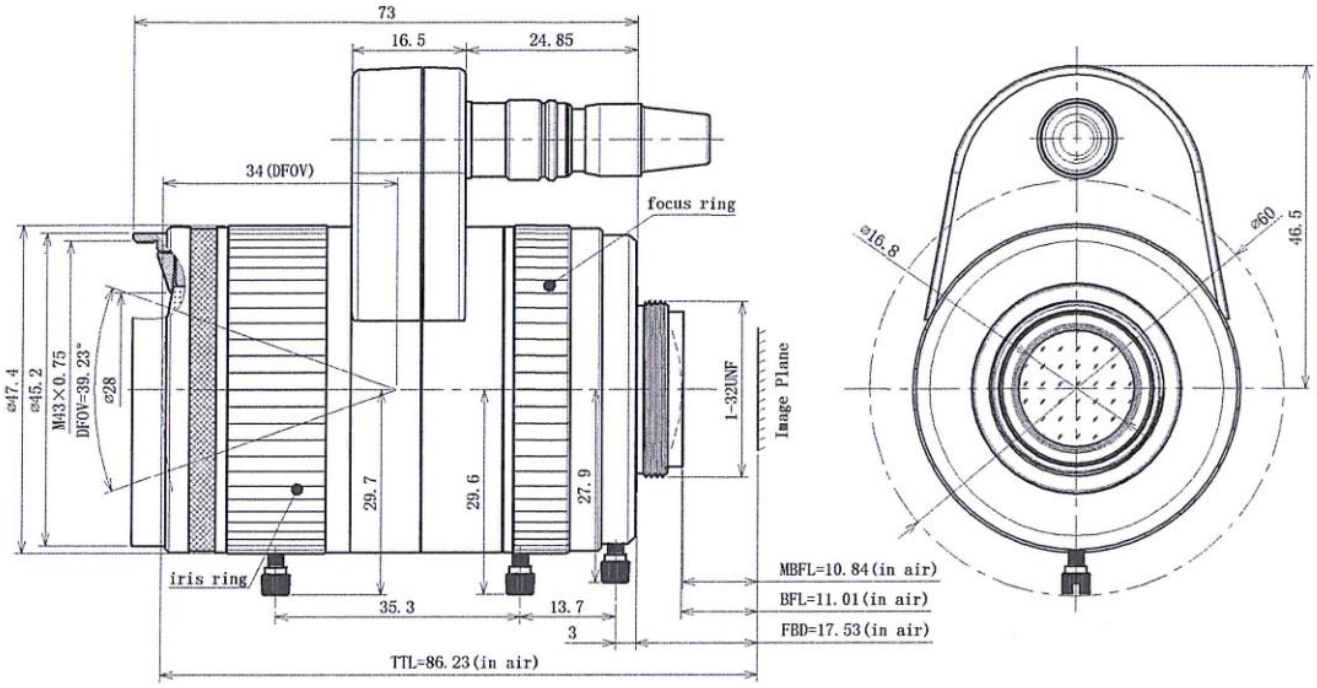


Figure 1: Mechanical drawing of the ELM-25-2.8-18-C