Theia® TECHNOLOGIES

MY23F

Ultra Wide, No Distortion 5 Megapixel Lens

Typical Wide Angle Lens

LINEAR OPTICAL TECHNOLOGY

- ✓ Patented Linear Optical Technology® provides **ultra wide** field of view of 120° for greater coverage with fewer cameras
- ✓ **Metal housing and focus lock** allows the lens to survive high vibration environments. It comes with a thumbscrew and 2 set screws and an optional set screw and allen wrench.
- ✓ **NIR corrected** for **multi-spectral imaging & Day/Night** cameras
- ✓ Supports **5+ megapixel resolution** cameras for demanding applications
- ✓ With **M12, CS or C mount** options convenience & ease of installation
- ✓ Compatible with **1/3", 1/2.7" HD, 1/2.5", 1/2.3" 4K***, and **1/1.8"** sensor sizes

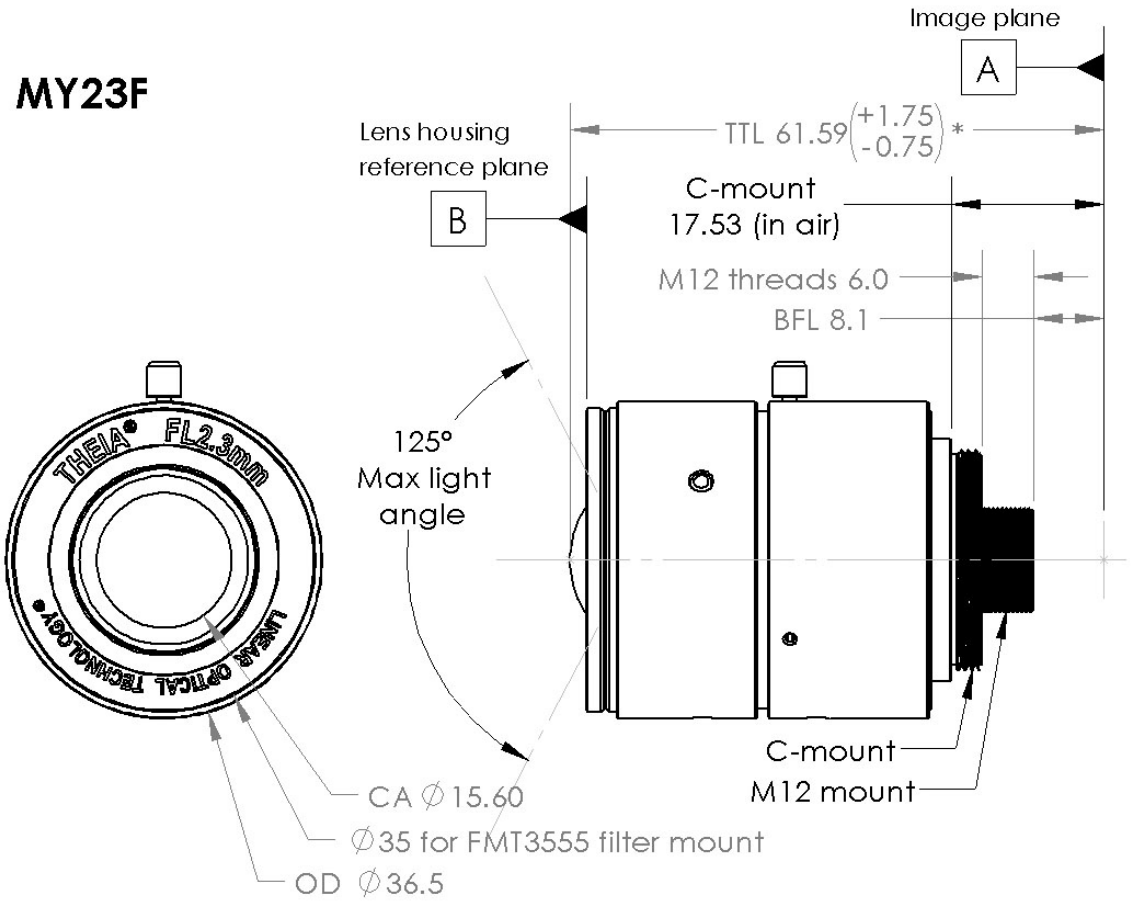
Lenses	**MY23F**
Mount	Combination C / M12 mount
Focal length	2.3mm
Linear Optical Technology®	Yes *(this technology causes the image to be flipped)*
Distortion	< 0.5%
Image circle	Ø9.2mm (1/1.8" format)
Resolution	5+ megapixel, 200lp/mm
F/#	F/2.2
IR Correction	430nm to 940nm
Focus range	0.5m to ∞, MOD: 0.1m
Lens Length to Mount	44mm
Lens Length (TTL)	61.6mm (depending on focus position)
Back focal length (BFL)	7.3mm (depending on focus position)
Chief ray angle (CRA)	< 15°
Weight	81g
Operating temperature	-20C to 60C (<70% humidity, non-condensing)
Storage temperature	-30C to 70C (<90% humidity, non-condensing)

Fields of view

Sensor size	1/2.5”	1/2.3”	1/1.8”
Field of view (H)	102°	110°	116°
Field of view (V)	86°	84°	95°
Field of view (D)	114°	119°	126°

Lens drawing

Note: MY23F has both C-mount and M12 mount threads



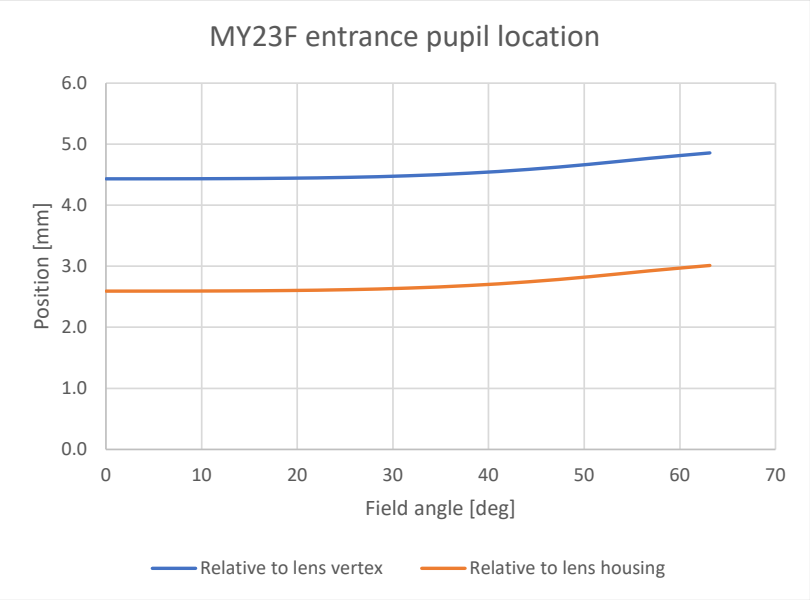
*Depending on focus distance, infinite focus shown BFL changes by the same amount

230105 MP

Entrance pupil location

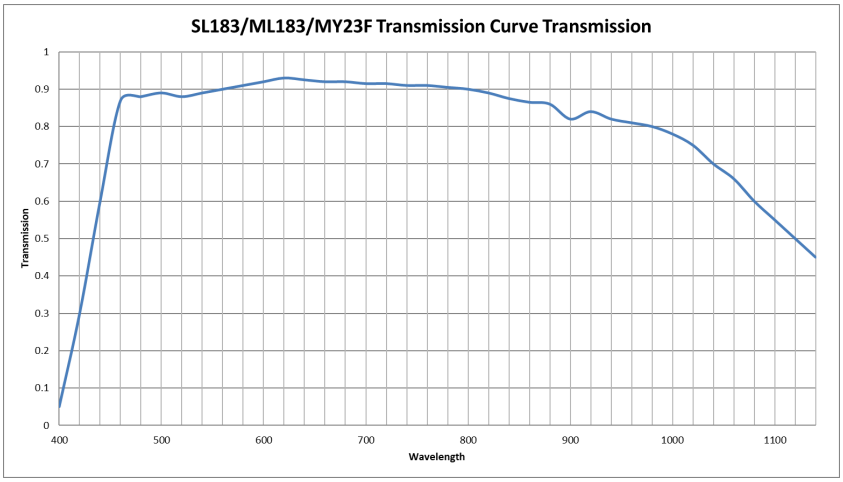
The entrance pupil location is inside the lens. The first lens element vertex or the lens housing reference can be used as a reference to find the location.

Field Angle (Deg)	Rel to lens vertex	Rel to lens housing
0	4.43	2.59
6	4.43	2.59
13	4.43	2.59
19	4.44	2.60
25	4.45	2.61
32	4.48	2.64
38	4.52	2.68
44	4.58	2.74
51	4.67	2.83
57	4.77	2.93
63	4.85	3.01



Lens transmission

Wavelength	Transmission
420	0.3
440	0.6
460	0.87
500	0.89
540	0.89
580	0.91
620	0.93
660	0.92
700	0.915
740	0.91
780	0.905
820	0.89
860	0.865
900	0.82
940	0.82
980	0.8



For more information, contact

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Revisions

Version	Change	Reason
220301	Initial	
220607	F/# spec update	Corrected F/#
	FOV chart	Updated for final design
	Changed drawing	Incorrect location of C-mount plane led to measurement errors; corrected location
	Added CS mount drawing	Not previously available
	Updated SY23F drawing	Clarification required
	FOV chart	Changed sensors/columns
220706	Added lens images	
220706	Changed max sensor size and associated FOV	Corrected
220711	Updated CAD drawings	Removed thumbscrew as it is not included in production
220722	Main table	Added some common specs
	QR code	Added theiatech.com/23web code
220722a	FOV chart	Corrected
221114	Added transmission and entrance pupil tables	Customer reqested
221219	Changed Distortion, Focus Distance, Operating and Storage Temperature	Corrected
221222	Removed SY23F specs, drawings	SY23F offered upon request
230103	Added image of Thumbscrew and Allen Wrench	Full offering pictured
	Entrance Pupil Location description	Corrected
230105	Updated Lens Drawing	Labelled Lens Vertex, Lens Housing Unit
240410	Added length to mount	Lens length clarification