



# Theia<sup>®</sup>

TECHNOLOGIES



## ML183 Varifocal Ultra wide No Distortion 5 Megapixel Lens



LINEAR OPTICAL TECHNOLOGY

- ✓ Patented Linear Optical Technology<sup>®</sup> provides **ultra wide** field of view adjustable from 115° to 77° for greater coverage with fewer cameras
- ✓ **EasyZoom™** allows the user to optimize the field of view with minimal need for refocusing
- ✓ IR corrected from UV (435nm) to IR (850nm)
- ✓ Supports **multi megapixel resolution** cameras for demanding applications



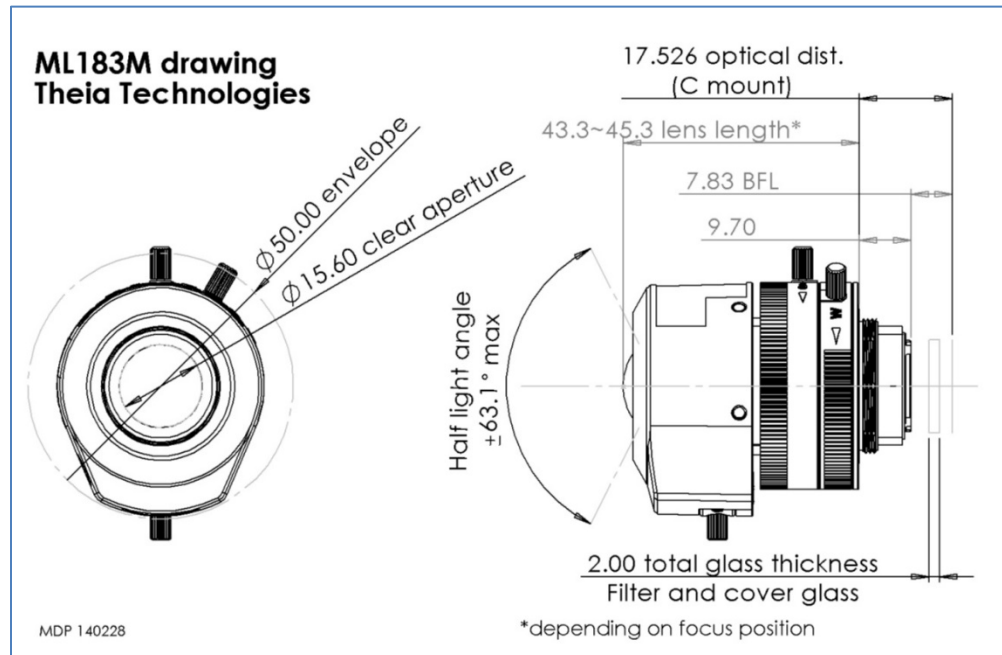
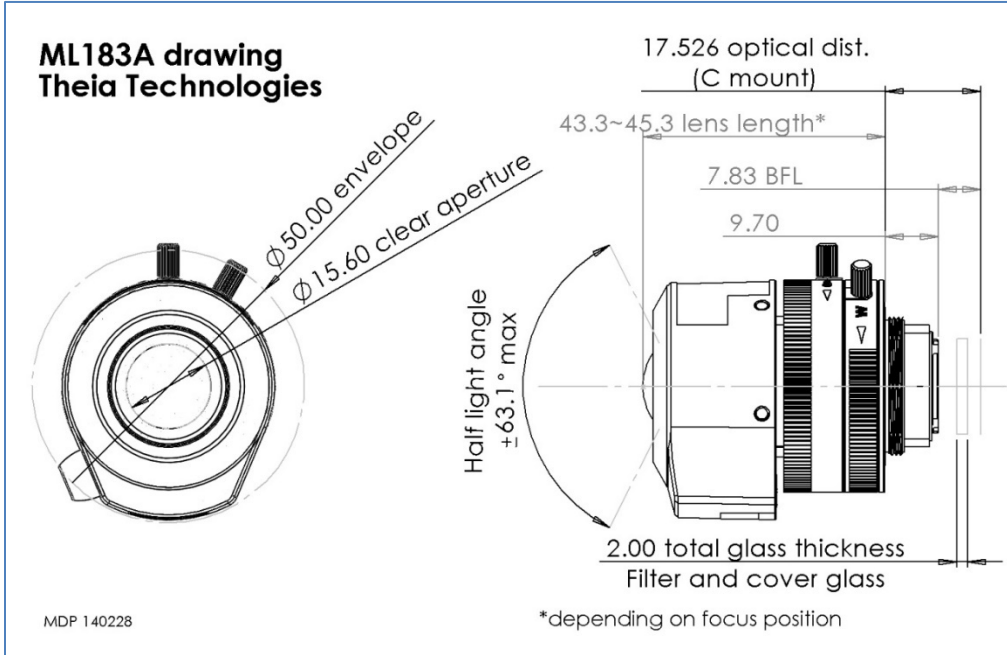
Typical wide angle lens

Lenses	ML183A DC-autoiris	ML183M Manual iris
Mount	C mount	
Focal length	1.8-3.0mm	
Linear Optical Technology <sup>®</sup>	Yes <i>(Note: this technology causes the image to be flipped)</i>	
Distortion	<1%	
Image circle	Ø7.4mm (at FL 1.3mm)	
Resolution	Up to 5MPix resolution	
F/#	F/1.8 to close	
IR Correction	435-850nm, <10um focal plane shift	
EasyZoom™	Yes	
Minimum focus distance	30cm	
Pan focus	.5m ~ ∞	
Lens length (TTL)	60.8 – 62.8mm	
Back focal length (BFL)	7.8mm	
Chief ray angle (CRA)	< 15°	
Temperature range	-20C to 60C	
Weight	63g	58g
Iris cable length	30cm	N/A

**Fields of view**

Sensor size	<b>1/3"</b>	<b>1/2.7" HD</b>	<b>1/2.5"</b>
Field of view (H)	105° - 77°	111° - 84°	115° - 88°
Field of view (V)	90° - 62°	95° - 68°	99° - 71°
Field of view (D)	117° - 90°	123° - 96°	126° - 100°

**Lens drawings**



### Entrance pupil location

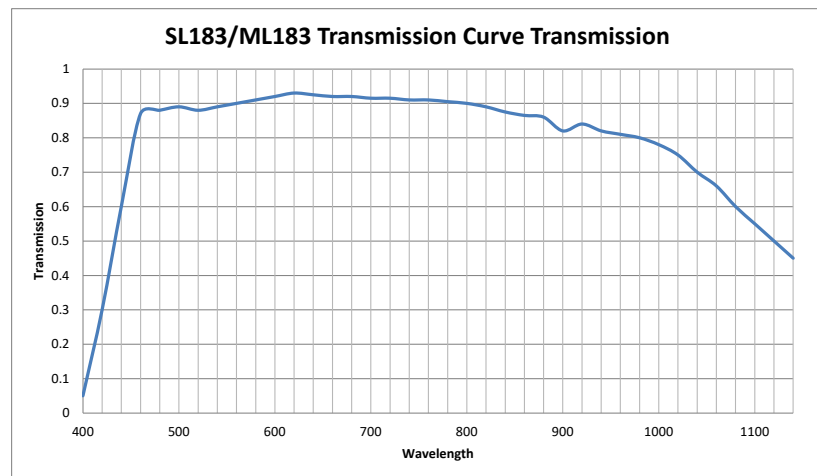
The entrance pupil location is inside the lens. The first lens element vertex or the lens plastic can be used as a reference to find the location.

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



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### Revisions

Version	Change	Reason
200106	Revision list added	
221114	Transmission chart added	Customer requested
	Entrance pupil chart added	Customer requested
	Expanded main specs table	Missing some common items
	Corrected QR barcode	Incorrect target location (page not found)