MH1624X

1. Introduction

Considering the ever-smaller pixel size of CMOS sensors and the demand of restoring more details in machine vision inspection, a new lineup of FA lenses, the MH-X series, are developed to bring out high performance in resolution and distortion. ;

Optimized for 1.1" sensors with 2.5um pixel size(200lp/mm), and working distance of 0.2-1.0m, this series lenses can deliver a sharp image from the center to the corners in common machine vision applications, and bring out more small details with higher contrast.

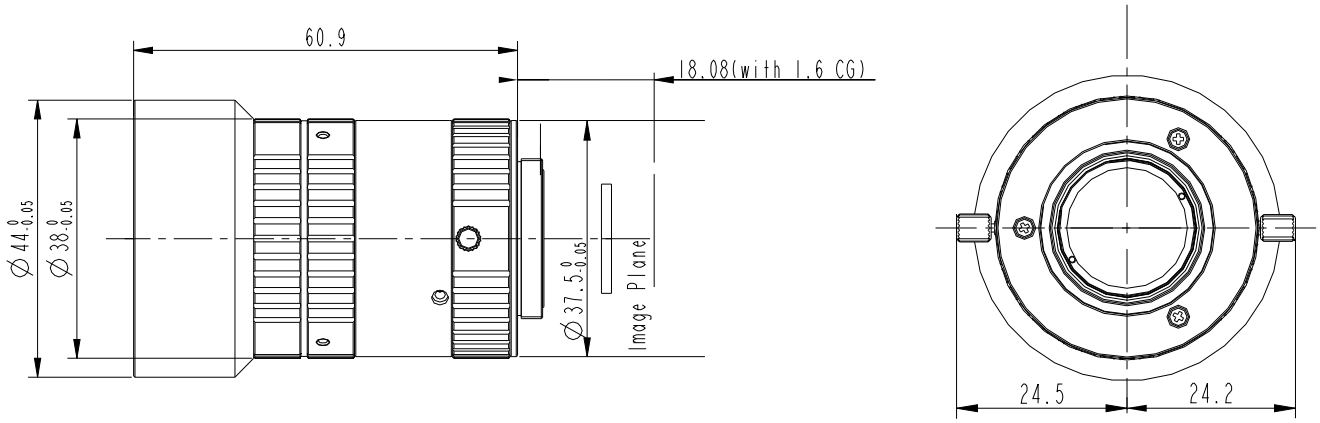
2. Features

- Supports up to 1.1" sensors, including 1/1.1" 8.9MP , 1" 5MP, 1.1" 12MP and so on;
- Focal length cover from 12mm to 50mm;
- High resolution up to 200lp/mm, matching pixel size as small as 2.5um ;
- Optimized design for near working distance from 0.2m to 1.0m, matching most FA applications;
- Low distortion, TV distortion mainly between 0.1% and 0.5%;
- Stable image quality when temperature varies between -20°C and 50°C;

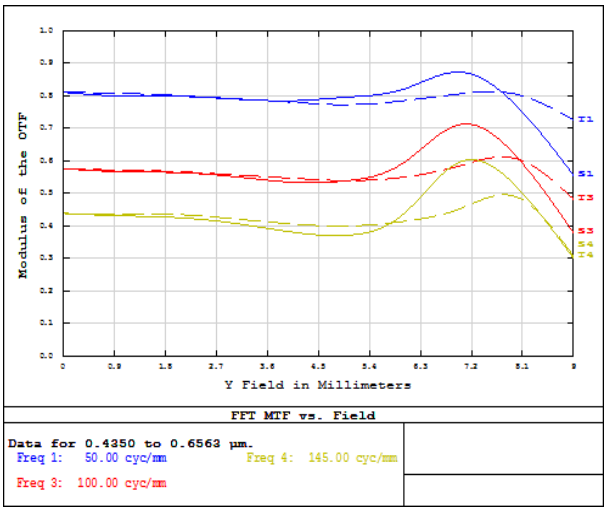
3. Technical Specification

Items	Spec.	conditions
Focal Length	16mm±1%	WD=0.4m
Relative Aperture	F2.4 to F16	
Image Circle	Φ18mm(1.1")	
Focus Range	0.17m to infinite	
Optical Distortion	-1.00%	WD=0.4m
TV Distortion	-0.22%	WD=0.4m
Angle of View	58.3°x48.5°x36.5°	For 1.1"(14.13mmx10.35mm), WD=1.0m
Relative Illumination	60%	Relative Aperture=F2.4, WD=0.4m
	95%	Relative Aperture=F4.0, WD=0.4m
CRA(Chief Ray Angle)	11.2°	Image Circle=Φ18mm
Spectral Transmission	T>85%	435nm~700nm
Camera Mount	C-Mount	
Filter Thread	M38*P0.5	
Focus Control	Manual	
Iris Control	Manual	
Dimensions	60.9mm*Φ44mm	
Weight	189g	net weight
Operating Temperature	-10°C to +50°C	

4. Dimensions

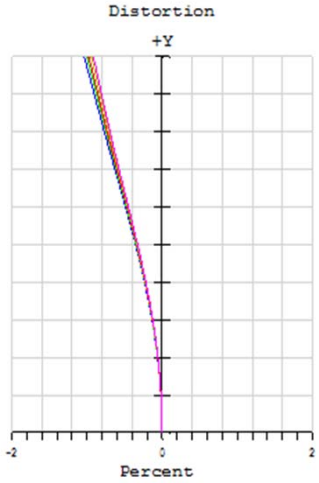


5. MTF VS Field



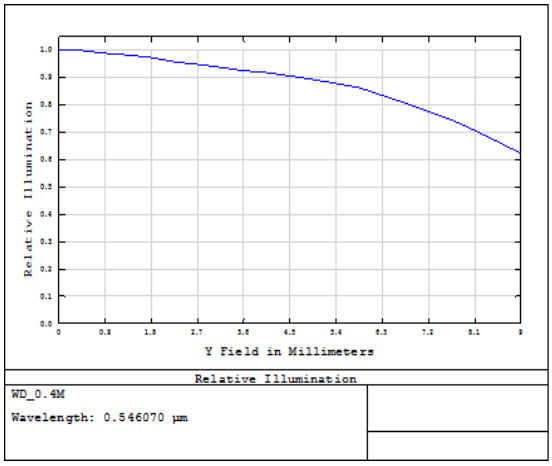
Condition: WD=0.4m, F2.4

6. Optical Distortion

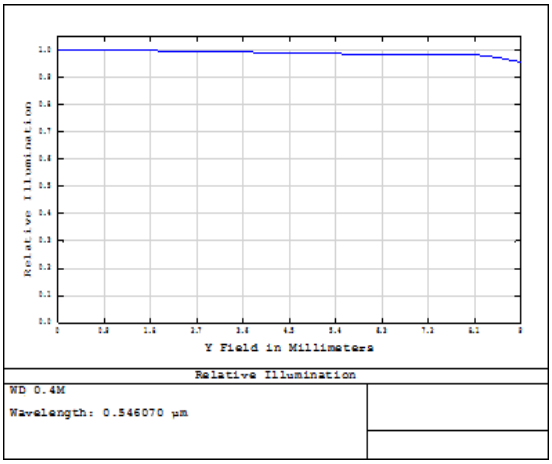


Condition: WD=0.4m

7. Relative illumination



Condition : F2.4,WD=0.4m



Condition : F4.0,WD=0.4m