

MH3524X

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 3.45um pixel size(145lp/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.



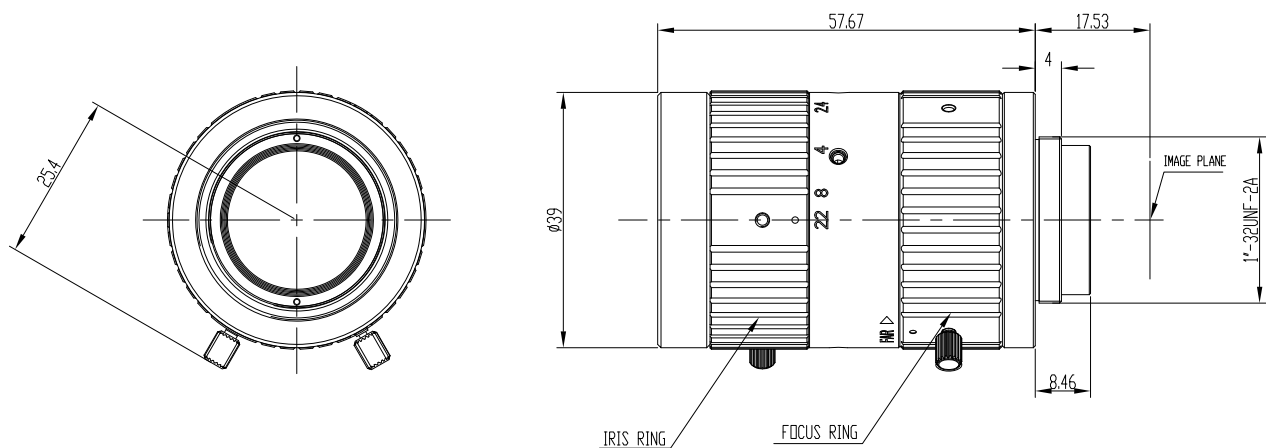
2. Features

- Supports up to 1.1" sensors, including 1/1.1" 8.9MP , 1" 5MP, 1.1" 12MP and so on;
- High resolution up to 145lp/mm, matching pixel size as small as 3.45um ;
- Optimized design for near working distance from 0.2m to 1.0m, matching most FA applications;
- Low distortion, mainly between 0.1% and 0.5%;
- Stable image quality when temperature varies between -10°C and 50°C;

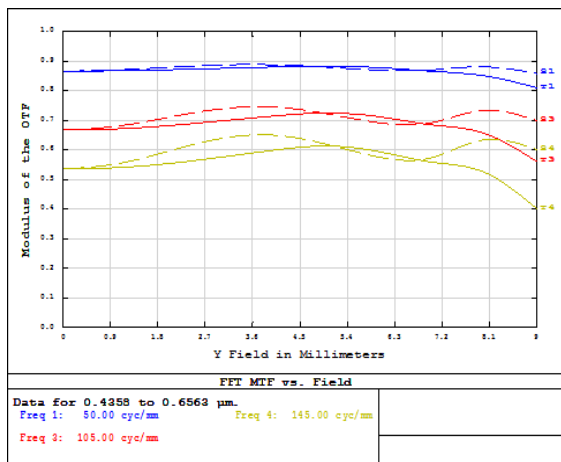
3. Technical Specification

Items	Spec.	conditions
Focal Length	35mm±5%	WD=0.4m
Relative Aperture	F2.4 to F16	
Image Circle	Φ18mm(1.1")	
Focus Range	0.2m to infinite	
Optical Distortion	-0.50%	WD=0.5m
TV Distortion	-0.07%	WD=0.5m
Angle of View	26.37°x21.47°x15.91°	For 1.1"(14.18mmx10.38mm), WD=0.4m
	24.18°x21.47°x11.53°	For 1"(14.18mmx7.51mm), WD=0.4m
Relative Illumination	60%~78%	Aperture=F2.4
	70%~85%	Aperture=F4.0
CRA(Chief Ray Angle)	11.2°	Image Circle=Φ18mm
Spectral Transmission	T>85%	435nm~700nm
Camera Mount	C-Mount	
Filter Thread	M30.5*P0.5	
Focus Control	Manual	
Iris Control	Manual	
Dimensions	57.7mm*Φ39mm	
Weight	66g	net weight
Operating Temperature	-10°C to +50°C	

4. Dimensions



5. MTF VS Field



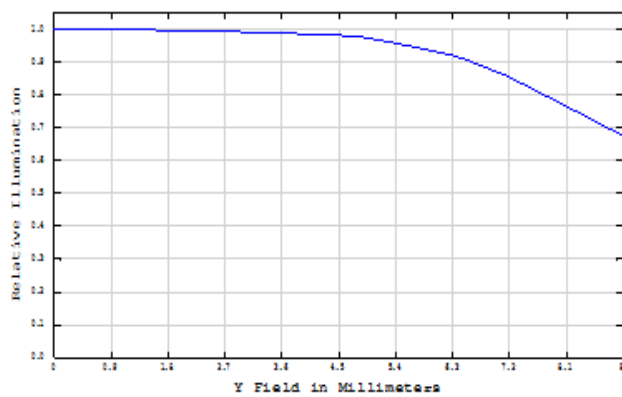
Condition: WD=0.4m, F2.4

6. Distortion

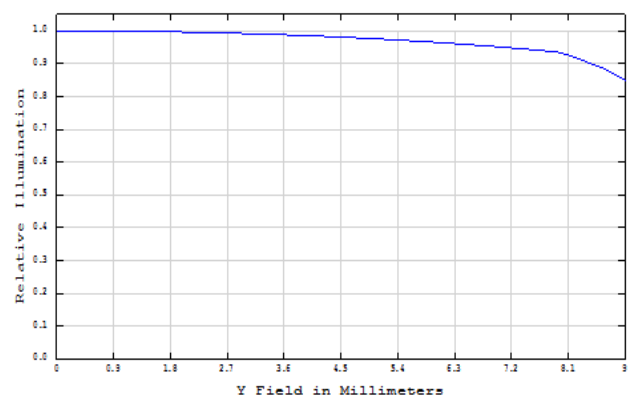


Condition: WD=0.4m

6. Relative illumination



Condition : F2.4,WD=0.4m



Condition : F4.0,WD=0.4m