

# Machine Vision

AZURE Lenses Series



High Definition



High Precision

AZURE

# COMPANY PROFILE



AZURE Photonics Co., Ltd, is an ISO 9001:2015 certified leading worldwide manufacturer of customized optical components and optical assemblies.

With an innovative facility based in Fuzhou (China) since 2000 and global sales distribution and support at key global locations, AZURE utilizes advanced fabrication equipments and state of the art testing instrumentation and methods to turn concepts and prototypes into high quality cost effective solutions scaled up to serial production. Our experienced team of technical experts also offer optical and mechanical design services for the assemblies from the very beginning your project starts.

We produce a wide range of off-the-shelf and custom objective lenses working with area scan cameras/ line scan cameras as well as OEM optics – lenses(spherical, cylindrical), mirrors, windows, filters, prisms and beamsplitters. Our products are widely used in factory automation, logistics automation, motion capture systems, ITS(intelligent TransportSystem), life science, biometrics and other high-tech industries.

AZURE is committed to deliver customers with Quality Products, On-time Delivery, competitive pricing and 100% Customer Satisfaction.

# DIRECTORY

2MP Lenses Series 3

3MP Lenses Series 5

5MP Lenses Series 7

6MP Lenses Series 9

10MP Compact Lenses Series 11

Large Format Lenses Series 13

Manual Zoom Lenses Series 15

Macro Zoom Lenses Series 16

F/T-mount Lenses Series 17

V-mount Lenses Series 20

UV Lenses Series 27

SWIR Lenses Series 28

Telecentric Lenses Series 30

Board Lenses Series 35

The Near/Far Field Lenses Series 41

Lenses Accessories 44

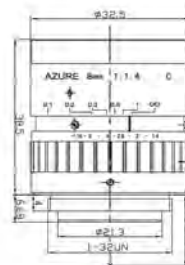
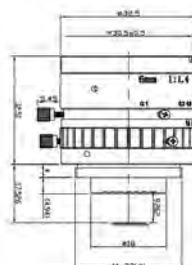
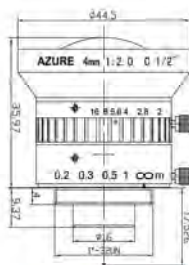
Endoscope 45

Filter Series 46

# 2MP Lenses Series



## 1/2" Format Manual Iris Fixed Lenses



Item No		AZURE-0420MM	AZURE-0614MM	AZURE-0814MM
Resolution		100lp/mm (2MP)	100lp/mm (2MP)	100lp/mm (2MP)
Format		1/2"	1/2"	1/2"
Mount		C	C	C
Focal Length		4mm	6mm	8mm
F/No		F2.0~F16	F1.4~F16	F1.4~F16
Back Focus		8.77mm	9.26mm	11.02mm
Iris Type		M-Iris	M-Iris	M-Iris
Angle of view ( DXVXH )	1/2"Format	90°× 61.8°×77.4°	67°× 43.8°×56.6°	54°× 33.6°×43.8°
	1/3"Format	73.74°× 48.46°×61.93°	53.13°× 33.39°×43.6°	41.11°× 25.36°×33.4°
	1/4"Format	53.13°× 33.4°×43.6°	36.87°× 22.6°×29.86°	28.07°× 17.06°×25.36°
Distortion		<-2.8%	<-1%	<-1%
Working Distance		0.1m ~ ∞	0.1m~∞	0.1m~ ∞
Design Wavelength		400~700nm	400~700nm	400~700nm
Filter Thread		No	M30.5 × 0.5	M30.5 × 0.5
Dimension		φ 44.5 × 35.97mm	φ 32.5 × 32.51mm	φ 32.5 × 38.5mm
Weight		130g	100g	107g

# 2MP Lenses Series

## 2/3" Format Manual Iris Fixed Lenses



Item No	AZURE-1214MM	AZURE-1614MM
Resolution	100lp/mm (2MP)	100lp/mm (2MP)
Format	2/3"	2/3"
Mount	C	C
Focal Length	12mm	16mm
F/No	F1.4~F16	F1.4~F16
Back Focus	9.83mm	9.87mm
Iris Type	M-Iris	M-Iris
Angle of view (DXVXH)	2/3"Format	48.86° × 30.44° × 39.94°
	1/2"Format	36.86° × 22.62° × 29.86°
	1/3"Format	28.07° × 17.06° × 22.62°
	1/4"Format	21.23° × 12.84° × 17.06°
Distortion	<-1%	<-1%
Working Distance	0.1m~∞	0.1m~∞
Design Wavelength	400~700nm	400~700nm
Filter Thread	M30.5 × 0.5	M30.5 × 0.5
Dimension	φ 32.5 × 41.62mm	φ 32.5 × 35.24mm
Weight	85g	80g



Item No	AZURE-2514MM	AZURE-3514MM
Resolution	100lp/mm (2MP)	100lp/mm (2MP)
Format	2/3"	2/3"
Mount	C	C
Focal Length	25mm	35mm
F/No	F1.4~F32	F1.4~F32
Back Focus	9.43mm	9.39mm
Iris Type	M-Iris	M-Iris
Angle of view (DXVXH)	2/3"Format	24.18° × 14.6° × 19.42°
	1/2"Format	18.18° × 10.97° × 14.59°
	1/3"Format	13.69° × 8.24° × 10.97°
	1/4"Format	9.15° × 5.5° × 7.32°
Distortion	<-1%	<-1%
Working Distance	0.3m~∞	0.5m~∞
Design Wavelength	400~700nm	400~700nm
Filter Thread	M30.5 × 0.5	M30.5 × 0.5
Dimension	φ 32.5 × 33.39mm	φ 32.9 × 36.91mm
Weight	60g	90g



Item No	AZURE-5020MM	AZURE-7524MM
Resolution	100lp/mm (2MP)	100lp/mm (2MP)
Format	2/3"	2/3"
Mount	C	C
Focal Length	50mm	75mm
F/No	F2.0~F16	F2.4~F22
Back Focus	9.38mm	16.25mm
Iris Type	M-Iris	M-Iris
Angle of view (DXVXH)	2/3"Format	12.7° × 7.7° × 10.2°
	1/2"Format	9.3° × 5.6° × 7.46°
	1/3"Format	7° × 4.2° × 5.6°
	1/4"Format	4.58° × 2.75° × 3.67°
Distortion	<0.4%	<0.8%
Working Distance	1m~∞	1m~∞
Design Wavelength	400~700nm	400~700nm
Filter Thread	M30.5 × 0.5	M34 × 0.5
Dimension	φ 32.9 × 33.65mm	φ 36 × 54.9mm
Weight	80g	140g

# 3MP Lenses Series



## 2/3" Format Manual Iris Fixed Lenses



Item No	AZURE-0814M3M	AZURE-0918M3M	AZURE-1218M3M
Resolution	120lp/mm (3MP)	120lp/mm (3MP)	120lp/mm (3MP)
Format	2/3"	2/3"	2/3"
Mount	C	C	C
Focal Length	8mm	9mm	12mm
F/No	F1.4~F16	F1.8~F16	F1.8~F16
Back Focus	12.56mm	10.87mm	11.72mm
Iris Type	M-Iris	M-Iris	M-Iris
Angle of view ( DXVXH )	2/3"Format	64.26°× 41.66°×53.76°	61.85°× 39.54°×51.22°
	1/2"Format	53.13°× 33.4°×43.6°	47.09°×29.3°× 38.44°
	1/3"Format	41.11°× 25.36°×33.4°	36.19°×22.19°× 29.3°
Distortion	<0.7%	<-0.5%	<-0.3%
Working Distance	0.1m~∞	0.1m~∞	0.1m~∞
Design Wavelength	400~700nm	400~700nm	400~700nm
Filter Thread	M37 × 0.5	M27× 0.5	M27 × 0.5
Dimension	φ 39× 46.1mm	φ 29 × 31.7mm	φ 29 × 41.98mm
Weight	220g	63g	73g

# 3MP Lenses Series

2/3" Format Manual Iris Fixed Lenses



Item No	AZURE-1618M3M	AZURE-2518M3M
Resolution	120lp/mm (3MP)	120lp/mm (3MP)
Format	2/3"	2/3"
Mount	C	C
Focal Length	16mm	25mm
F/No	F1.8~F16	F1.8~F16
Back Focus	13.5mm	12.7mm
Iris Type	M-Iris	M-Iris
Angle of view ( DXVXH )	2/3"Format	36.8°× 22.5°×29.8°
	1/2"Format	28.07°× 17.06°×22.62°
	1/3"Format	21.24°× 12.84°×17.06°
Distortion	<-0.35%	<-0.1%
Working Distance	0.1m~∞	0.15m~∞
Design Wavelength	400~700nm	400~700nm
Filter Thread	M27 × 0.5	M27 × 0.5
Dimension	φ 29× 41.47mm	φ 29× 35.03mm
Weight	71g	60.5g



Item No	AZURE-3518M3M	AZURE-5018M3M
Resolution	120lp/mm (3MP)	120lp/mm (3MP)
Format	2/3"	2/3"
Mount	C	C
Focal Length	35mm	50mm
F/No	F1.8~F16	F1.8~F16
Back Focus	11.73mm	11.35mm
Iris Type	M-Iris	M-Iris
Angle of view ( DXVXH )	2/3"Format	16.04°× 9.6°×12.8°
	1/2"Format	11.7°× 7°×9.3°
	1/3"Format	9°× 5.3°×7°
Distortion	<-0.1%	<-0.1%
Working Distance	0.25m~∞	0.5m~∞
Design Wavelength	400~700nm	400~700nm
Filter Thread	M27 × 0.5	M27 × 0.5
Dimension	φ 29× 38.2mm	φ 29× 36.4mm
Weight	71g	60g

# 5MP Lenses Series



## 1/2" ,2/3" Format Manual Iris Fixed Lenses



Item No		AZURE-0414M5M	AZURE-0614M5M	AZURE-0814M5M
Resolution		150lp/mm (5MP)	150lp/mm (5MP)	150lp/mm (5MP)
Format		1/2"	1/2"	2/3"
Mount		C	C	C
Focal Length		4mm	6mm	8mm
F/No		F1.4~F32	F1.4~F16	F1.4~F16
Back Focus		10.34mm	9.8mm	9.91mm
Iris Type		M-Iris	M-Iris	M-Iris
Angle of view ( DXVXH )	1/2"Format	85°× 58.76°×75.12°	64.48°× 41.6°×53.8°	66.2°× 42.78°×55.24°
	1/3"Format	73.74°× 48.46°×61.93°	53.13°× 33.39°×43.6°	53.13°× 33.4°×43.6°
	1/4"Format	53.13°× 33.4°×43.6°	36.87°× 22.6°×29.86°	41.11°× 25.36°×33.4°
Distortion		<-1.5%	<-1%	<-1%
Working Distance		0.1m~∞	0.1m~∞	0.1m ~ ∞
Design Wavelength		400~700nm	400~700nm	400~700nm
Filter Thread		M52 × 0.75	M35.5× 0.5	M35.5 × 0.5
Dimension		φ 54 × 50.87mm	φ 38.5 × 50.4mm	φ 38.5 × 50.7mm
Weight		142g	140g	156g

# 5MP Lenses Series

## 2/3" Format Manual Iris Fixed Lenses



Item No	AZURE-1214M5M	AZURE-1614M5M
Resolution	150lp/mm (5MP)	150lp/mm (5MP)
Format	2/3"	2/3"
Mount	C	C
Focal Length	12mm	16mm
F/No	F1.4~F22	F1.4~F22
Back Focus	10.37mm	10.27mm
Iris Type	M-Iris	M-Iris
Angle of view (DXVXH)	2/3"Format	47.1°× 29.44°×39.58°
	1/2"Format	36.86°× 22.62°×29.86°
	1/3"Format	28.07°× 17.06°×22.62°
Distortion	< -0.3%	< -0.3%
Working Distance	0.1m ~ ∞	0.1m ~ ∞
Design Wavelength	400~700nm	400~700nm
Filter Thread	M35.5 × 0.5	M35.5 × 0.5
Dimension	φ 38.5 × 46.03mm	φ 38.5 × 46.03mm
Weight	150g	139g



Item No	AZURE-2514M5M	AZURE-3514M5M
Resolution	150lp/mm (5MP)	150lp/mm (5MP)
Format	2/3"	2/3"
Mount	C	C
Focal Length	25mm	35mm
F/No	9.98mm	13.09mm
Back Focus	F1.4~F16	F1.4~F16
Iris Type	M-Iris	M-Iris
Angle of view (DXVXH)	2/3"Format	23.6°×14.32°×19.06°
	1/2"Format	18.18°× 10.97°×14.59°
	1/3"Format	13.69°× 8.24°×10.97°
Distortion	< -0.1%	< -0.05%
Working Distance	0.2m ~ ∞	0.35m ~ ∞
Design Wavelength	400~700nm	400~700nm
Filter Thread	M35.5 × 0.5	M35.5 × 0.5
Dimension	φ 38.5 × 34.61mm	φ 38.5 × 38mm
Weight	110g	120g



Item No	AZURE-5020M5M	AZURE-7520M5M
Resolution	150lp/mm (5MP)	150lp/mm (5MP)
Format	2/3"	2/3"
Mount	C	C
Focal Length	50mm	75mm
F/No	F2.0~F32	F2.0~F22
Back Focus	9.78mm	10.7mm
Iris Type	M-Iris	M-Iris
Angle of view (DXVXH)	2/3"Format	12.36°× 7.45°×9.92°
	1/2"Format	9.04°× 5.42°×7.24°
	1/3"Format	6.78°× 4.08°×5.42°
Distortion	< -0.1%	< -0.1%
Working Distance	0.4m ~ ∞	0.8m ~ ∞
Design Wavelength	400~700nm	400~700nm
Filter Thread	M35.5 × 0.5	M40.5 × 0.5
Dimension	φ 38.5 × 44.94mm	φ 42 × 69.28mm
Weight	152g	290g

# 6MP



# Lenses Series



## Product features

- Designed for True Factory Automation
- Supports up to 1" Sensors
- Optimized for Close Measuring System
- Multilayer BBAR coating at 400nm – 950nm
- Feature Locking Iris and Focus Adjustment



# 6MP Lenses Series

## 2/3" Format Manual Iris Fixed Lenses

Item No	AZURE-NV0820M6M	AZURE-NV1220M6M
Resolution	170lp/mm (6MP)	170lp/mm (6MP)
Format	2/3"(compatible with 1/1.2" sensor)	2/3"(compatible with 1/1.2" sensor)
Mount	C	C
Focal Length	8mm	12mm
F/No	F2.0~16	F2.0~16
Back Focus	12.476mm	11.99mm
Iris Type	M-Iris	M-Iris
Angle of view ( DXVXH )	2/3"Format	69°× 44.84°×57.62°
	1/2"Format	53.13°× 33.4°×43.6°
	1/3"Format	41.11°× 25.36°×33.4°
Distortion	<0.45%	<1%
Working Distance	0.1m ~ ∞	0.1m ~ ∞
Optimum Working Distance	0.2~0.4m	0.2~0.4m
Design Wavelength	400~700nm	400~700nm
Filter Thread	M58 × 0.75	M37.5 × 0.5
Dimension	φ 61 × 59.34mm	φ 40 × 47.76mm
Weight	110.8g	-



Item No	AZURE-NV1620M6M	AZURE-NV2520M6M
Resolution	170lp/mm (6MP)	170lp/mm (6MP)
Format	2/3"(compatible with 1/1.2" sensor )	2/3"(compatible with 1" sensor)
Mount	C	C
Focal Length	16mm	25mm
F/No	F2.0~16	F2.0~16
Back Focus	12.88mm	13.029mm
Iris Type	M-Iris	M-Iris
Angle of view ( DXVXH )	2/3"Format	36.7°× 22.3°×29.6°
	1/2"Format	28.07°× 17.06°×22.62°
	1/3"Format	21.23°× 12.84°×17.06°
Distortion	<0.5%	<-0.25%
Working Distance	0.1m ~ ∞	0.2m ~ ∞
Optimum Working Distance	0.2~0.4m	0.2~0.4m
Design Wavelength	400~700nm	400~700nm
Filter Thread	M30.5 × 0.5	M30.5 × 0.5
Dimension	φ 38 × 53.05mm	φ 38 × 40.17mm
Weight	106.1g	97.3g



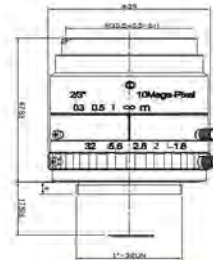
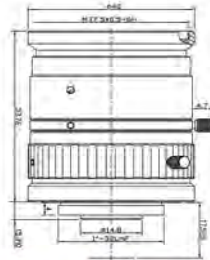
Item No	AZURE-NV3520M6M	AZURE-NV5020M6M
Resolution	170lp/mm (6MP)	170lp/mm (6MP)
Format	2/3"(compatible with 1" sensor)	2/3"(compatible with 1" sensor )
Mount	C	C
Focal Length	35mm	50mm
F/No	F2.0~16	F2.0~16
Back Focus	10.52mm	7.26mm
Iris Type	M-Iris	M-Iris
Angle of view ( DXVXH )	2/3"Format	17°× 10°×13.3°
	1/2"Format	13.04°× 7.85°×10.45°
	1/3"Format	9.8°× 5.89°×7.85°
Distortion	<-0.35%	<0.05%
Working Distance	0.2m ~ ∞	0.2m ~ ∞
Optimum Working Distance	0.2~0.4m	0.2~0.4m
Design Wavelength	400~700nm	400~700nm
Filter Thread	M30.5 × 0.5	M37.5 × 0.5
Dimension	φ 38 × 38.74mm	φ 43.2 × 62.74mm
Weight	94.4g	-



# 10MP Lenses Series



## 2/3" Format Manual Iris Fixed Lenses



Item No		AZURE-0518M10M	AZURE-0818M10M	AZURE-1218M10M
Resolution		200lp/mm (10MP)	200lp/mm (10MP)	200lp/mm (10MP)
Format		2/3"	2/3"	2/3"
Mount		C	C	C
Focal Length		5mm	8mm	12mm
F/No		F1.8~F11	F1.8~F22	F1.8~F32
Back Focus		8.54mm	12.47mm	16.22mm
Iris Type		M-Iris	M-Iris	M-Iris
Angle of view ( DXVXH )	2/3"Format	96.54°× 67.6°×84°	65.64°× 42.7°×55.6°	48.9°× 30.6°×40.1°
	1/2"Format	77.31°× 51.28°×65.24°	53.13°× 33.4°×43.6°	36.8°× 22.5°×29.7°
	1/3"Format	61.93°× 39.6°×51.28°	41.11°× 25.36°×33.4°	28°× 17°×22.5°
	1/4"Format	43.6°× 27°×35.49°	28.07°× 17.06°×22.62°	18.92°× 11.42°×15.19°
Distortion		<-4.2%	<-1%	<-0.42%
Working Distance		0.1m ~ ∞	0.1m ~ ∞	0.1m ~ ∞
Design Wavelength		400~700nm	400~700nm	400~700nm
Filter Thread		M62 × 0.75	M37.5 × 0.5	M27 × 0.5
Dimension		φ 65 × 43mm	φ 40 × 53.76mm	φ 39 × 47.83mm
Weight		150g	180g	140g