

Cobra Series Fixed Focal Length Lenses **NEW**



Product Features

■ Compact design

Ø29 mm diameter compatible with camera size; compact and small

■ High resolution

Compatible with cameras which pixel size $\geq 2.2 \mu\text{m}$ and max. $2/3''(\text{Ø}11 \text{ mm})^{(1)}$ sensor; resolution up to 230 lp/mm in full FOV

■ **Wide spectrum range**

400-1000 nm optical coating spectrum; compatible with VIS and NIR.

 Low distortion

TV distortion $< 0.2\%$ ^[2]

■ **High relative illumination**

Chief ray angle $< 5^{\circ[3]}$, matching with cameras enables to realize high evenness image.

[1] The sensor size of applicable cameras to OPT-COB0828, OPT-COB1228 and OPT-COB1628 is up to 1/1.8" (Ø9 mm).

[2] OPT-COB0628B and OPT-COB0828B TV distortion $< 0.56\%$.

[3] OPT-COB0628F and OPT-COB0628B chief ray angle $< 7^\circ$.

Selection Guide

Diagram illustrating the breakdown of the part number **OPT-COB0828B** into its components:

- OPT**: Brand name
- COB**: Cobra series lenses
- 08**: Focal length: 8 mm
- 28**: Max F#: 2.8
- B**: Support 2/3" sensor; N: Near distance; F: Far distance

Resolution Comparison

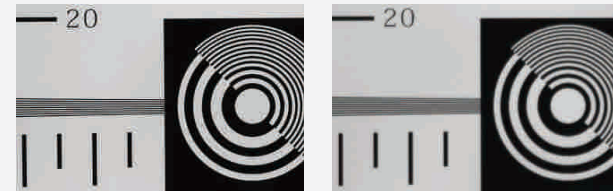
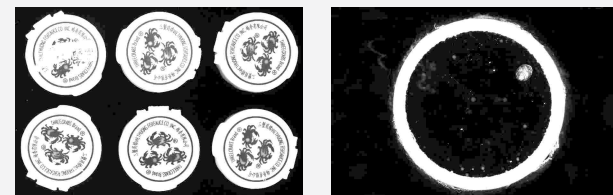


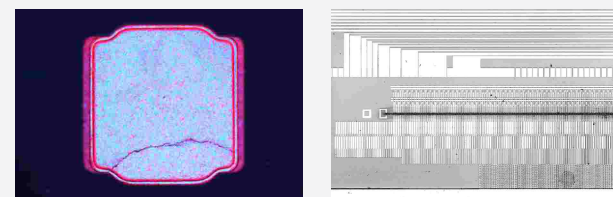
Image taken by Cobra

Image taken by other lens

Application Cases



Character defect detection on plastic parts

Sand particle on lens
detection

Chip crack detection

OLED screen size measurement

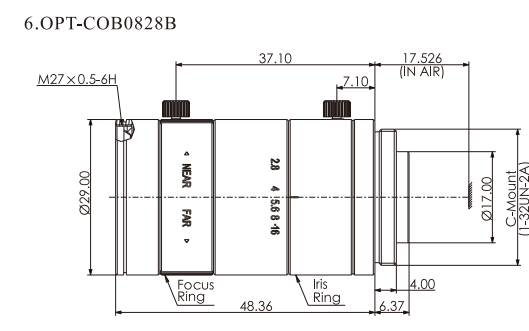
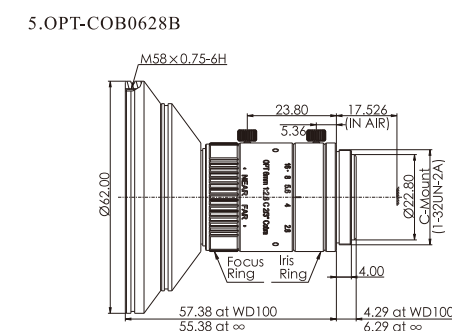
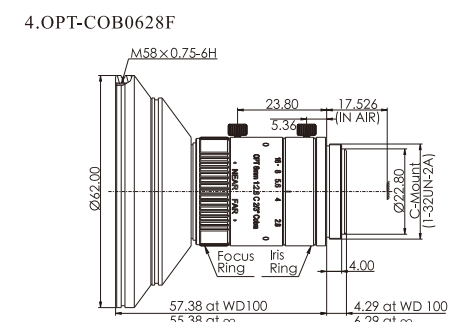
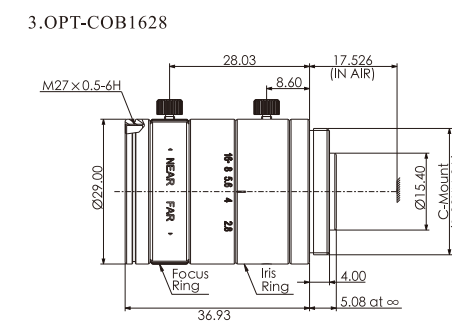
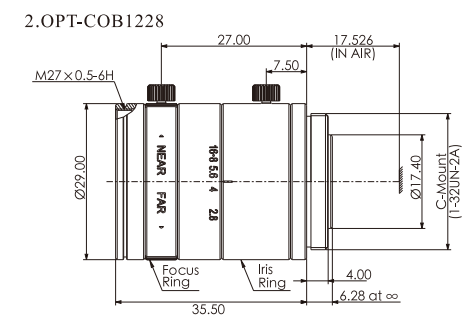
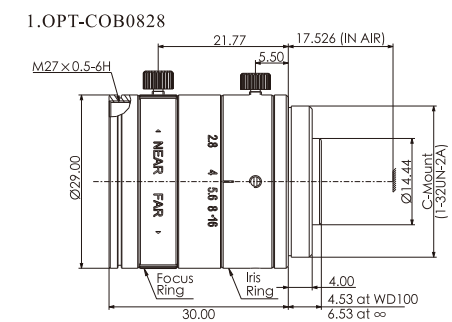
Model Table

No.	Model	Focal length (mm)	Aperture	Image circle Ø (mm)	Resolution (μm)	TV Distortion	WD (mm)	Back Focal Length (mm)		Mag. at MOD	Chief Ray Angle	Filter thread (mm)	Weight (kg)
1	OPT-COB0828	8	F2.8-F16	9(1/1.8")	2.2	< 0.18% at WD300	100-∞	12.99 at WD100	12.34 at ∞	0.071X at WD100	< 5°	M27×0.5-6H	0.05
2	OPT-COB1228	12	F2.8-F16	9(1/1.8")	2.2	< 0.16% at WD300	100-∞	14.00 at WD100	12.76 at ∞	0.101X at WD100	< 5°	M27×0.5-6H	0.06
3	OPT-COB1628	16	F2.8-F16	9(1/1.8")	2.2	< 0.10% at WD300	100-∞	15.76 at WD100	13.57 at ∞	0.135X at WD100	< 5°	M27×0.5-6H	0.06

Model Table

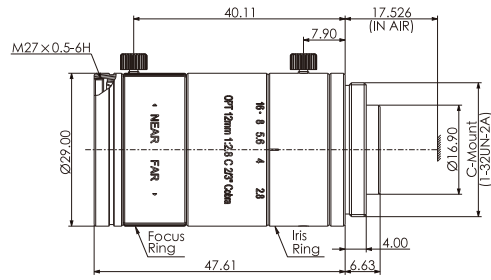
No.	Model	Focal length (mm)	Aperture	Image circle Ø (mm)	Resolution (μm)	TV Distortion	WD (mm)	Back Focal Length (mm)		Mag. at MOD	Chief Ray Angle	Filter thread (mm)	Weight (kg)
4	OPT-COB0628F	6	F2.8-F16	11 (2/3")	2.2	< 0.15% at WD500	100~∞	12.77 at WD100	12.41 at ∞	0.049X at WD100	< 7°	M58×0.75-6H	0.15
5	OPT-COB0628B	6	F2.8~F16	11 (2/3")	2.2	< 0.46% at WD 250	100~∞	12.77 at WD 100	12.41 at ∞	0.048X at WD 100	< 7°	M58×0.75-6H	0.15
6	OPT-COB0828B	8	F2.8~F16	11 (2/3")	2.2	<0.56% at WD 300	30~∞	13.06		0.168X at WD 30	< 5°	M27×0.5-6H	0.08
7	OPT-COB1228B	12	F2.8~F16	11(2/3")	2.2	< 0.1% at WD 300	80~∞	13.03		0.112X at WD 80	< 5°	M27×0.5-6H	0.09
8	OPT-COB1628B	16	F2.8~F16	11(2/3")	2.2	< 0.02% at WD 300	100~∞	14.89		0.126X at WD 100	< 5°	M27×0.5-6H	0.07
9	OPT-COB2528B	25	F2.8~F16	11(2/3")	2.2	< 0.15% at WD 300	150~∞	16.63 at WD 150	12.65 at ∞	0.159X at WD 150	< 5°	M27×0.5-6H	0.05
10	OPT-COB3528B	35	F2.8~F16	11(2/3")	2.2	< 0.20% at WD 350	210~∞	18.39 at WD 210	12.87 at ∞	0.161X at WD 210	< 5°	M27×0.5-6H	0.06
11	OPT-COB5028B	50	F2.8~F22	11(2/3")	2.2	< 0.07% at WD 500	400~∞	20.56 at WD 400	13.67 at ∞	0.136X at WD 400	< 5°	M27×0.5-6H	0.06
12	OPT-COB5028N	50	F2.8~F22	11(2/3")	2.2	< 0.01% at WD 300	250~2000	18.11		0.222X at WD 250	< 5°	M27×0.5-6H	0.08
13	OPT-COB7528B	75	F2.8~F16	11(2/3")	2.2	< 0.07% at WD 500	250~1000	13.06		0.363X at WD 250	< 5°	M37.5×0.5-6H	0.21

Dimensions (mm)

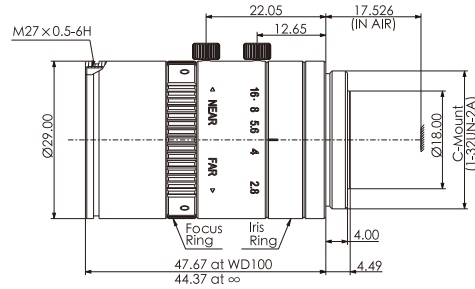


Dimensions (mm)

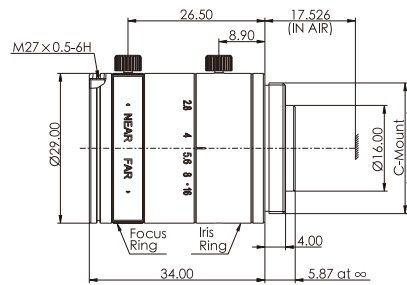
7.OPT-COB1228B



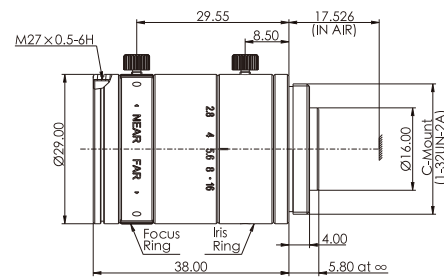
8.OPT-COB1628B



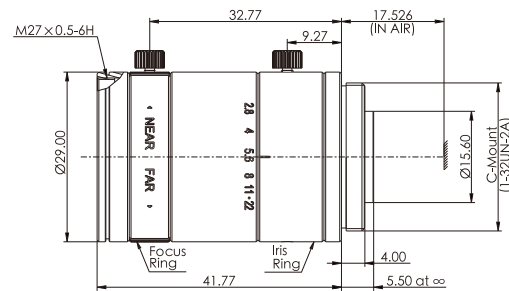
9.OPT-COB2528B



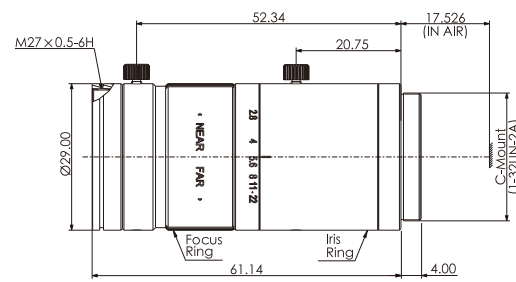
10.OPT-COB3528B



11.OPT-COB5028B



12.OPT-COB5028N



13.OPT-COB7528B

