

Technical data sheet

Lens

Part no.: 50148544

Lens S-M12-8F8

Contents

- Technical data
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For illustration purposes only

Technical data

Basic data

Suitable for	IVS 1000i & DCR 1000i
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Optical data

Working range	100 ... 600 mm
Focal length	8 mm
Lens mount	S-Mount
F-stop (F)	8
Diaphragm type	Fixed
Wavelength	400 ... 950 nm
Resolution	5 megapixel
Sensor size	1 / 2.5"
Primary plane, object side	9.29 mm
Primary plane, image side	7.96 mm
Opening angle, object side	21.5 °
Opening angle, image side	10.26 °

Mechanical data

Design	Cylindrical
Thread size	M12 x 0.5 mm
Net weight	4 g
Housing color	Black

Environmental data

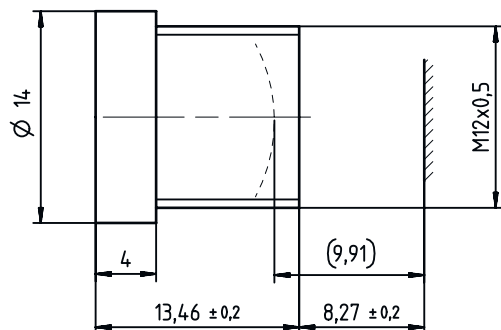
Ambient temperature, operation	-20 ... 60 °C
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Classification

Customs tariff number	90021900
ECLASS 5.1.4	27310203
ECLASS 8.0	27310203
ECLASS 9.0	27310203
ECLASS 10.0	27273603
ECLASS 11.0	27273603
ECLASS 12.0	27273603
ECLASS 13.0	27273603
ECLASS 14.0	27273603
ECLASS 15.0	27273603
ECLASS 16.0	27273603
ETIM 5.0	EC002498
ETIM 6.0	EC003015
ETIM 7.0	EC003015
ETIM 8.0	EC003015
ETIM 9.0	EC003015
ETIM 10.0	EC003015
UNSPSC 26.08	31241501

Dimensioned drawings

All dimensions in millimeters



Diagrams

Depth of field and field of view

Diagrams

Depth of field

F

- A Working distance (WD) [mm]
- B Short range
- C Distant range
- The depth of field (DoF) is the range within which the object can move away from or closer to the camera without going out of focus.
- The depth of field depends on the lens aperture, the distance to the test object, the lens focal length and the pixel size of the camera.
- Please note: During calculation, the double pixel size is used as the permissible blur.

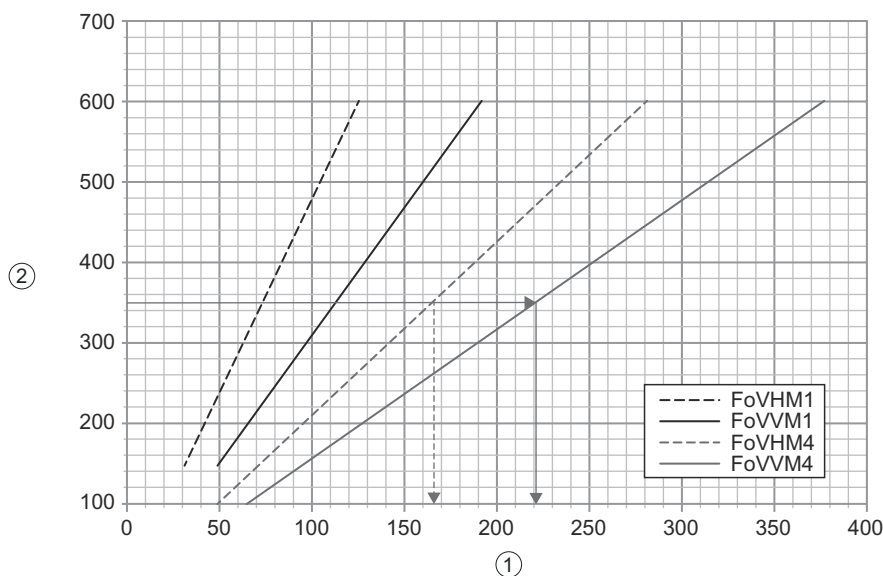
Example: The object should have a WD range of 276 to 534 mm.
WD = 350 mm

Field of view (FoV)

A	B		C	
	FoV _H	FoV _V	FoV _H	FoV _V
100			66	49
150	50	32	97	73
200	65	43	128	96
250	81	53	159	119
300	97	63	190	143
350	113	74	221	166
400	129	84	252	189
450	145	94	283	212
500	161	105	314	236
550	177	115	345	259
600	192	125	376	282

- A Working distance (WD) [mm]
- B Models with low resolution (-M1)
- C Models with high resolution (-M4)
- The field of view (FoV) is the range in which the sensor can capture its surroundings.
- It depends on the size of the imager and its resolution, on the focal length of the lens and on the distance of the sensor to the object.

Example: The FoV is 113 x 85 mm for devices with low resolution (-M1) and 221 x 166 mm for devices with high resolution (-M4).
WD = 350 mm



1 Dimensions [mm]
2 Working distance (WD) [mm]

Diagrams

Modulus size [mm]

A	B	C
100	0,1	0,15
150	0,15	0,2
200	0,2	0,25
250	0,2	0,35
300	0,25	0,4
350	0,3	0,45
400	0,35	0,5
450	0,35	0,5
500	0,4	0,55
550	0,45	0,7
600	0,5	0,8

A Working distance (WD) [mm]

B Bar codes

C 2D-codes