

Technical data sheet

Lens

Part no.: 50148546

Lens S-M12-16F8

Contents

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For illustration purposes only

Technical data

Basic data

Suitable for	DCR 1048i
	IVS 1048i

Optical data

Working range	200 ... 1,300 mm
Focal length	16 mm
Lens mount	S-Mount
F-stop (F)	8
Diaphragm type	Fixed
Wavelength	400 ... 950 nm
Resolution	2 megapixel
Sensor size	1 / 3"
Primary plane, object side	14.84 mm
Primary plane, image side	15.93 mm
Opening angle, object side	21.3 °
Opening angle, image side	14.64 °

Mechanical data

Design	Cylindrical
Thread size	M12 x 0.5 mm
Housing color	Black

Environmental data

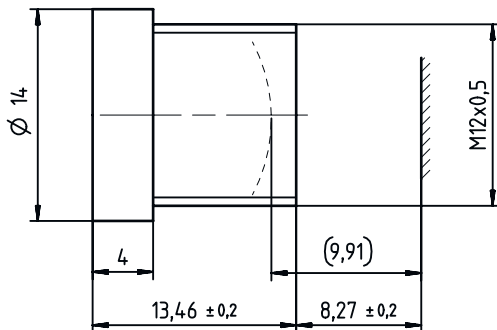
Ambient temperature, operation	-20 ... 60 °C
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Classification

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
ETIM 5.0	EC002498
ETIM 6.0	EC003015
ETIM 7.0	EC003015
ETIM 8.0	EC003015
ETIM 9.0	EC003015

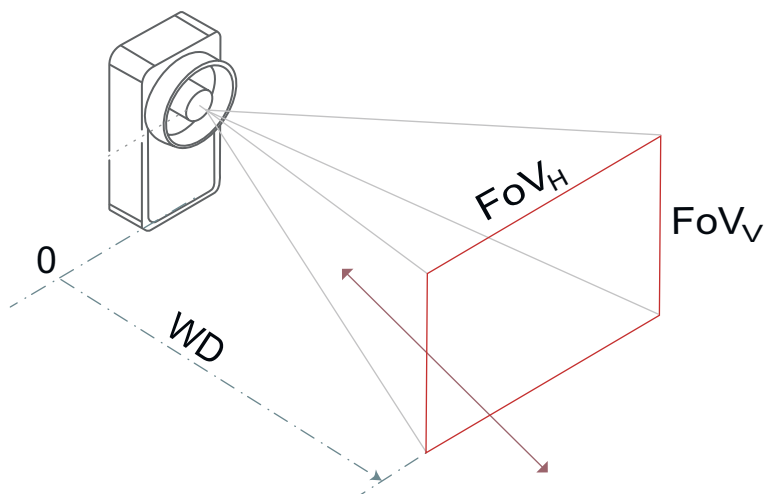
Dimensioned drawings

All dimensions in millimeters



Diagrams

Depth of field and field of view



Depth of field

A	B	C
200	204	225
300	294	337
400	380	455
500	462	579
600	541	709
700	618	846
800	691	990
900	762	1.142
1.000	830	1.303
1.100	896	1.473
1.200	959	1.653
1.300	1.021	1.844

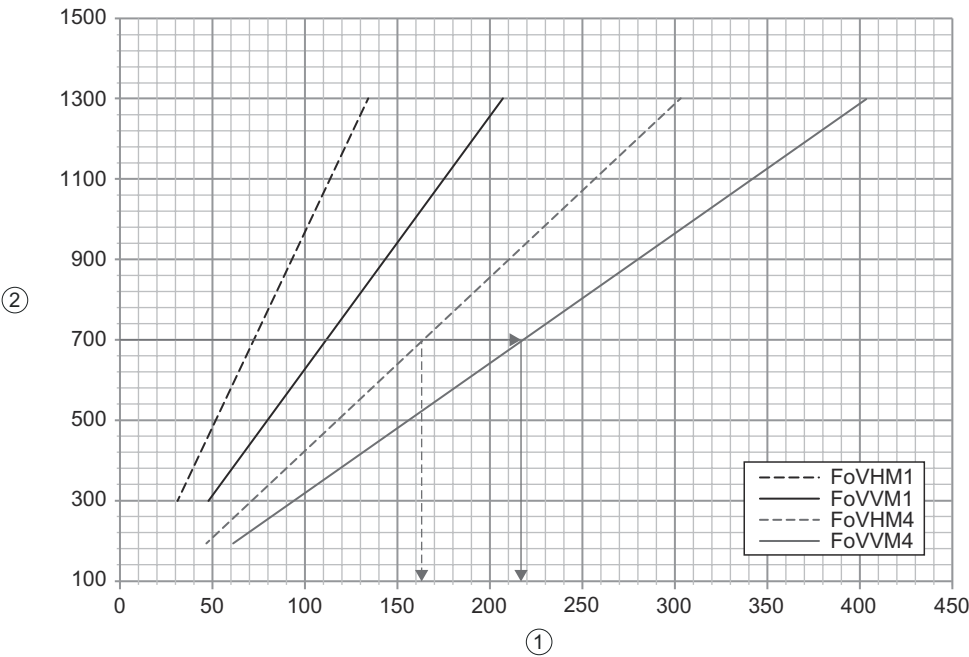
- A Working distance (WD) [mm]
 B Short range
 C Distant range
 - The depth of field (DoF) is the range within which the object can move away from or closer to the camera without going out of focus.
 - The depth of field depends on the lens aperture, the distance to the test object, the lens focal length 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 618 to 846 mm.

Field of view (FoV)

A	B		C	
	FoV _H	FoV _V	FoV _H	FoV _V
200			62	46
300	47	31	93	69
400	63	41	124	93
500	79	52	155	116
600	95	62	186	139
700	111	72	217	163
800	127	83	248	186
900	143	93	279	209
1.000	158	103	310	232
1.100	174	114	341	256
1.200	190	124	372	279
1.300	206	134	403	302

- 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 111 x 83 mm for devices with low resolution (-M1) and 217 x 163 mm for devices with high resolution (-M4).

Diagrams



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

Modulus size [mm]

A	B	C
200	0,1	0,15
300	0,15	0,2
400	0,2	0,25
500	0,2	0,3
600	0,25	0,4
700	0,3	0,45
800	0,35	0,5
900	0,4	0,55
1.000	0,45	0,6
1.100	0,45	0,7
1.200	0,5	0,75
1.300	0,55	0,8

- A Working distance (WD) [mm]
- B Bar codes
- C 2D-codes