Technical data sheet
Lens
Part no.: 50148542
Lens S-M12-4F8

For Illustration purposes only

Contents

Technical data

Basic data

Suitable for	IVS 1000i & DCR 1000i

Optical data

Working range	45 ... 150 mm
Focal length	3.6 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	16.642 mm
Primary plane, image side	3.59 mm
Opening angle, object side	55.44 °
Opening angle, image side	9.77 °
Note	Due to the wide opening angle, the lens cannot be used with a cover hood. The degree of protection of the sensor without cover hood is IP40.

Mechanical data

Design	Cylindrical
Thread size	M12 x 0.5 mm
Net weight	14 g
Housing color	Black

Environmental data

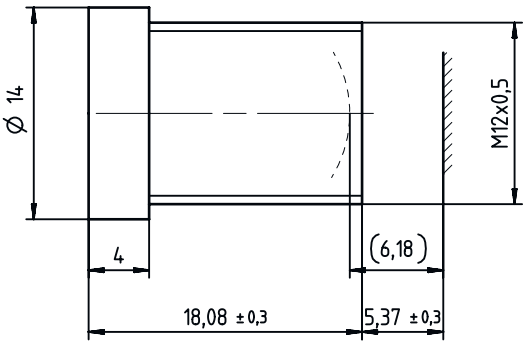
Ambient temperature, operation	-20 ... 60 °C

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

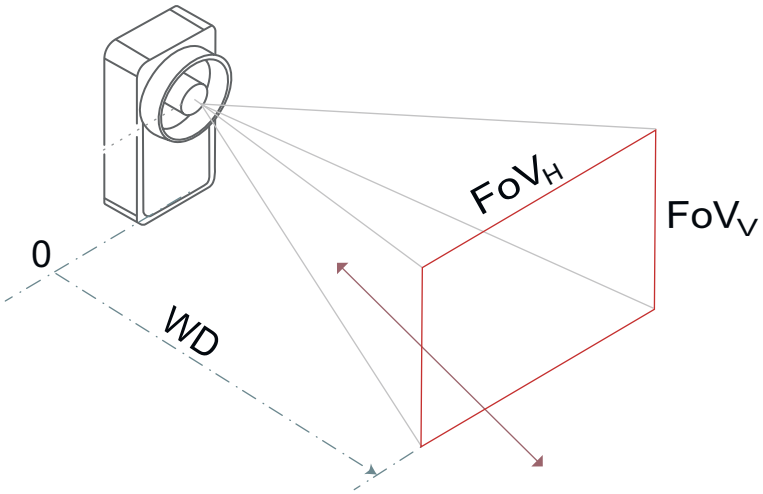
Dimensioned drawings

All dimensions in millimeters



Diagrams

Depth of field and field of view



Depth of field

A	B	C
45	47	79
55	53	98
65	59	120
70	62	132
80	67	158
90	72	189
100	76	225
110	81	267
120	85	318
130	89	381
140	92	460
150	96	563

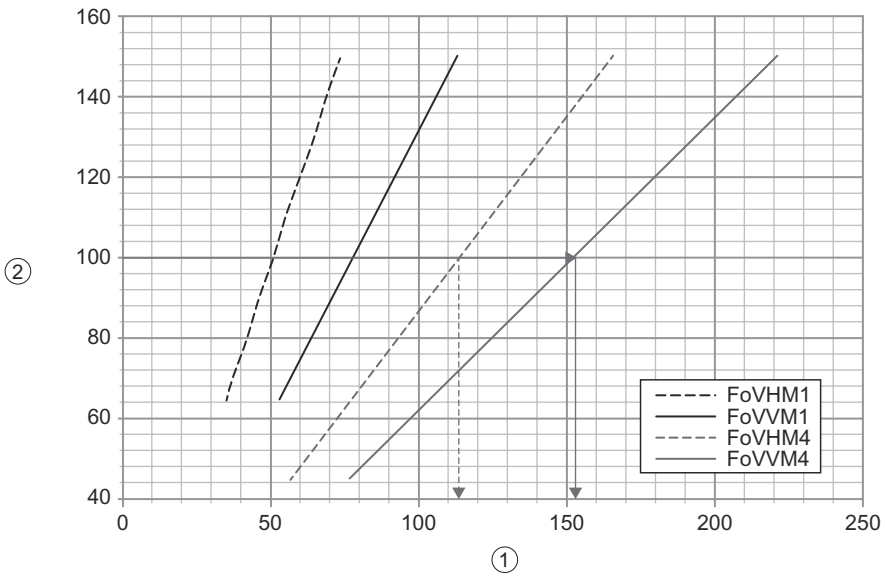
A	Working distance (WD) [mm]
B	Short range
C	Distant range
-	The depth of field (DoF) is the range within which the object can move away from or closer to the camera without going out of focus.
-	The depth of field depends on the lens aperture, the distance to the test object, the lens focal length and the pixel size of the camera.
-	Please note: During calculation, the double pixel size is used as the permissible blur.
Example: WD = 100 mm	The object should have a WD range of 76 to 225 mm.

Field of view (FoV)

A	B		C	
	FoV$_H$	FoV$_V$	FoV$_H$	FoV$_V$
45			77	57
55			90	68
65	53	35	104	78
70	57	37	111	83
80	64	42	125	94
90	71	46	139	104
100	78	51	152	114
110	85	55	166	125
120	92	60	180	135
130	99	65	194	145
140	106	69	208	156
150	113	74	221	166

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: WD = 100 mm	The FoV is 78 x 58 mm for devices with low resolution (-M1) and 152 x 114 mm for devices with high resolution (-M4).

Diagrams



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

Modulus size [mm]

A	B	C
45	0,1	0,15
55	0,15	0,2
65	0,15	0,2
70	0,15	0,25
80	0,2	0,25
90	0,2	0,3
100	0,2	0,3
110	0,25	0,35
120	0,25	0,35
130	0,3	0,4
140	0,3	0,5
150	0,3	0,5

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