

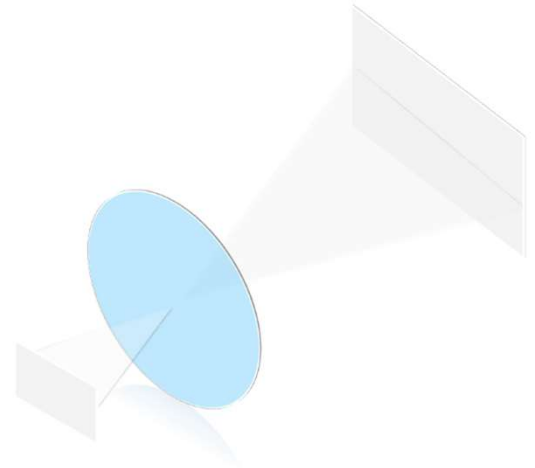
# FIELD OF VIEW CALCULATION

The field of view (FOV) describes the viewable area (in degree) that can be imaged by the sensor. For all optics it is calculated and measured.

$$FOV = 2 \cdot \arctan \left( \frac{N_{Col/Row} \cdot P}{2 \cdot f} \right)$$

**f** - focal length of the lens  
**P** - pitch of the sensitive elements  
**N<sub>Col/Row</sub>** - number of elements in Column or Row, depending if the FOV should be calculated in horizontal or vertical direction

The formula is valid only for long-focal-length optics. For short-focal-lengths with a wide field of view, it no longer holds.



The min. recommended measurement distance describes the distance, at which the devices are tested at Heimann Sensor GmbH. Shorter measuring distances need to be verified for individual cases.

Upon request, most sensors can be adjusted for shorter user defined measurement distances.

The coating has no influence on the minimum recommended measurement distance. If the application demand specific optical coatings, Heimann Sensor GmbH is also able to supply these, including long-wave-pass (LWP), diamond like carbon coatings (DLC) and band-pass filters (BP).

To account for spherical aberrations, Heimann Sensor GmbH can provide detailed specifications on field curvature and distortion upon request.

## MINIMUM RECOMMENDED WORKING DISTANCE

ARRAY SIZE	LENS			MIN. RECOMMENDED MEASUREMENT DISTANCE [cm]
	FOCAL LENGTH/APERTURE	COATING	FIELD OF VIEW	
8x8	L0.8/0.8	F5.0	51 x 51°	30
	L2.1/0.8	F5.0	19 x 19°	30
16x16R2/R3	L1.0/0.8	F5.0	90 x 90°	30
	L1.6/0.8	F5.0	46 x 46°	30
	L2.1/0.8	F5.0	44 x 44°	30
32x32	L5.0/0.85	F7.7	16 x 16°	50
	L1.6/0.8	F5.0	105 x 105°	30
	L1.7/0.8	ARC	120 x 120°	30
	L1.9/0.8	ARC	100 x 100°	30
	L2.1/0.8	F5.0	94 x 94°	30
60x40	L4.0/0.8	ARC	41 x 41°	50
	L5.0/0.85	F7.7	34 x 34°	50
	L1.4/0.8	ARC	120 x 68°	20
	L1.9/0.8	ARC	92 x 59°	30
80x64	L2.6/1.0	ARC	60 x 39°	30
	L4.0/0.8	ARC	38 x 25°	50
	L3.9/0.8	ARC	120 x 89°	30
	L4.8/0.8	ARC	88 x 67°	50
	L10/0.7	F7.7	41 x 33°	120
	L10.5/0.95	F7.7	39 x 31°	100
160x120	L21.5/0.9	ARC	19 x 15°	420
	L33/1.05	ARC	12 x 10°	850
	L3.95/0.8	ARC	121 x 81°	40
	L10/072	F7.7	38 x 30°	230

Modifications reserved Rev. 3 / 2026-03-09