

TC3MHR056-C

High resolution telecentric lens for 1.1" detectors, magnification 0.259x, C-mount

SPECIFICATIONS

Magnification	(x)	0.259
Image circle Ø	(mm)	17.6

Object field of view 8	(mm x mm or Ø)
with IMX174/IMX249 13.3 mm diag w x h 11.35 x 7.13	43.80 x 27.51
with IMX255/IMX267 16.1 mm diag w x h 14.19 x 7.51	54.79 x 29.00
with IMX253/IMX304 17.6 mm diag w x h 14.16 x 10.37	54.67 x 40.04
with KAI-4022/4021 21.5 mm diagonal w x h 15.2 x 15.2	Ø = 58.51
with KAI-08050 22.6 mm diagonal w x h 18.1 x 13.6 (7)	Ø = 52.49

Optical specifications

Working distance (1)	(mm)	157.8
wF/# (2)		8
Telecentricity typical (max) (3)	(deg)	<0.08 (0.10)
Distortion typical (max) (4)	(%)	<0.08 (0.10)
Field depth (5)	(mm)	8.9
CTF@ 50 lp/mm	(%)	> 55

Mechanical specifications

Mount		C
Phase adjustment (9)		Yes
Length (6)	(mm)	246.7
Diameter	(mm)	80
Mass	(g)	946

NOTES

- Working distance: distance between the front end of the mechanics and the object. Set this distance within +/- 3% of the nominal value for maximum resolution and minimum distortion.
- Working F-number (wF/#): the real F-number of a lens when used as a macro. Lenses with smaller apertures (higher wF/#) can be supplied on request.
- Maximum slope of chief rays inside the lens: when converted to milliradians, it gives the maximum measurement error for any millimeter of object displacement. Typical (average production) values and maximum (guaranteed) values are listed.
- Percent deviation of the real image compared to an ideal, undistorted image: typical (average production) values and maximum (guaranteed) values are listed.
- At the borders of the field depth the image can be still used for measurement but, to get a perfectly sharp image, only half of the nominal field depth should be considered. Pixel size used for calculation is 5,5 µm.
- Measured from the front end of the mechanics to the camera flange.
- With KAI-08050 (22.6 mm diagonal) detectors, the FOV of TC4MHRyyy-x lenses may show some vignetting at the image corners.
- For the fields with the indication "Ø =", the image of a circular object of such diameter is fully inscribed into the detector.
- Indicates the availability of an integrated camera phase adjustment feature

