TC16M 056

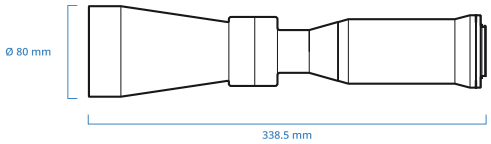
Bi-telecentric lens for 35 mm detectors, magnification 0.641 x, F-mount

Magnification	(x)	0.641
Image circle	(mm)	43.3

Object field of view		
with 2k x 10 µm detector	(mm)	31.9
with 4k x 7 µm detector	(mm)	44.7
with 8k x 5 µm detector	(mm)	63.9
with 36 x 24 mm detector	(mm x mm)	56.1 x 37.4

Optical specifications		
Working distance (1)	(mm)	150.0
f/# (2)		16
Telecentricity typical (max) (3)	(deg)	< 0.04 (0.08)
Distortion typical (max) (4)	(%)	< 0.04 (0.10)
Field depth (5)	(mm)	2.5
CTF@ 70 lp/mm	(%)	> 40

Mechanical specifications		
Mount (6)		F
Length (7)	(mm)	338.5
Diameter	(mm)	80
Mass	(g)	1250



NOTES

1. Working distance: distance between the front lens and the object. Set this distance within +/- 3% of the nominal value for maximum resolution and minimum distortion.
2. Working F-number: the real F-number of a lens when used as a macro. Lenses with smaller apertures can be supplied on request.
3. 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.
4. Percent deviation of the real image compared to an ideal, undistorted image: typical (average production) values and maximum (guaranteed) values are listed.
5. At the borders of the field depth the image can be still used for measurement but, to get a very sharp image, only half of the nominal field depth should be considered. Pixel size used for calculation is 4.8 µm.
6. FD stands for Flange Distance (in mm), defined as the distance from the mounting flange (the “metal ring” in rear part of the lens) to the camera detector plane.
7. Measured from the front end of the mechanics to the camera flange.

COMPATIBLE PRODUCTS

LTCLHP056-G
Telecentric HP illuminator, beam diameter 70 mm, green

CMHO 056
Clamping mechanics for TCxx056 lenses and LTCL056-X illuminators

LTRN 056 NW
Ring LED illuminator, white