TC12M056-F

High resolution telecentric lenses, magnification 0.531, WD 136.5

SPECIFICATIONS

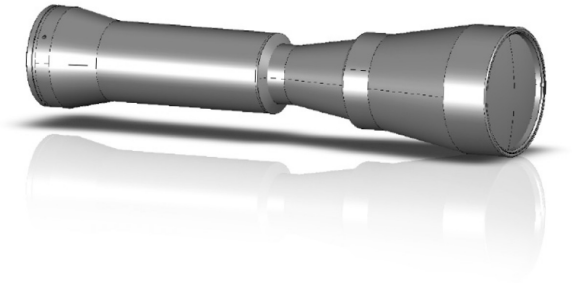
Magnification	(x)	0.531
Image circle Ø	(mm)	33.5

Object field of view		
with PYTHON 26.07 mm diagonal w x h 18.43 x 18.43	(mm x mm)	34.71 x 34.71
with APS-C CMV12000 28.16 mm diagonal w x h 22.53 x 16.90	(mm x mm)	42.43 x 31.82
with line - 4k detector 4k x 7 µm 28.67	(mm)	53.99
with APS-H PYTHON 32.58 mm diagonal w x h 23.4 x 23.4	(mm x mm)	43.39 x 43.39
with APS-H KAI-16050 32.4 mm diagonal w x h 26.93 x 17.95	(mm x mm)	50.71 x 33.81

Optical specifications		
Working distance (1)	(mm)	136.5
wF/# (2)		11
Telecentricity typical (max) (3)	(deg)	<0.08 (0.10)
Distortion typical (max) (4)	(%)	<0.08 (0.10)
Field depth (5)	(mm)	3.2
CTF@ 50 lp/mm	(%)	> 40

Mechanical specifications		
Mount (6)		F
Phase adjustment		Yes
Length (7)	(mm)	331.7
Diameter	(mm)	82.0
Mass	(g)	1201

Last update: 2019-11-13



3D preview

All product specifications and data are subject to change without notice to improve reliability, functionality, design or other. Photos and pictures are for illustration purposes only.

NOTES

1. 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.
2. Working F/#: the real F/# 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 5.5 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

Despite the efforts made to generate an error-free compatibility list, we always recommend to consult the Opto Engineering® technical support department before purchasing a compatible product. Opto Engineering® shall not be liable for any damage or malfunctioning caused by the incorrect selection of a compatible product.

LTCLHP series

High-performance telecentric illuminators

LTCLHP056-R	Telecentric HP illuminator, beam diameter 70 mm, red
LTCLHP056-G	Telecentric HP illuminator, beam diameter 70 mm, green
LTCLHP056-B	Telecentric HP illuminator, beam diameter 70 mm, blue

LTCLHP056-W	Telecentric HP illuminator, beam diameter 70 mm, white

LTCLHP CORE series

Ultra compact telecentric illuminators

LTCLCR056-R	Telecentric CORE illuminator, beam dimensions Ø = 74; x = 66, red
LTCLCR056-G	Telecentric CORE illuminator, beam dimensions Ø = 74; x = 66, green
LTCLCR056-W	Telecentric CORE illuminator, beam dimensions Ø = 74; x = 66, white

LTLA series

High-power strobed LED low angle diffused ringlights

LTLAC1-W	Diffusive strobed low angle ring light illuminator - large size medium power white
LTLAC2-R	Diffusive strobed low angle ring light illuminator - large size high power red
LTLAC2-G	Diffusive strobed low angle ring light illuminator - large size high power green
LTLAC2-W	Diffusive strobed low angle ring light illuminator - large size high power white

LTBC series

Continuos LED backlight

LTBC114114-W	Continuos LED backlight, 114x114 illumination area, white
LTBC114114-G	Continuos LED backlight, 114x114 illumination area, green

WI series

Protective windows

WI056	Protective window for 80 mm clamping diameter optics

CMHO series

Clamping mechanics

CMHO056	Clamping mechanics for TCxx056 lenses and LTCLHP056-X illuminators

COE HR AS-X series

20MP, 26MP and 29MP area scan cameras for high-speed applications

COE-260-M-10GIGE-100-IR-F	HR Area Scan camera PYTHON 25K, CMOS, 5120 × 5120, 26 MP, 4.5 pix, APS-H, Gray, 10GigE, 40 fps, F - mount, Glass filter
COE-260-M-10GIGE-100-IR-I	HR Area Scan camera PYTHON 25K, CMOS, 5120 × 5120, 26 MP, 4.5 pix, APS-H, Gray, 10GigE, 40 fps, M58x0.75 - mount, Glass filter