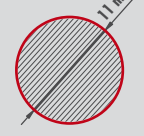
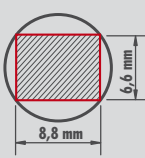
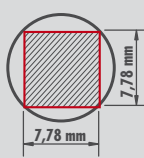
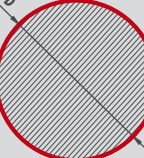
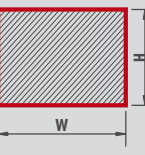
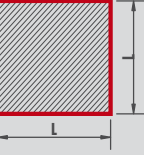
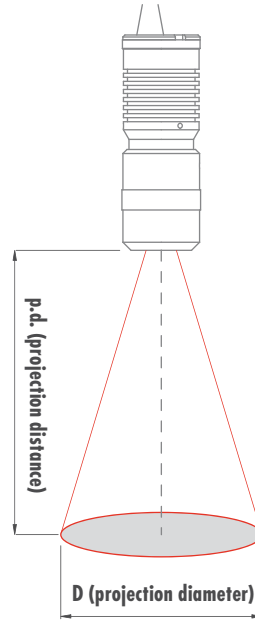


LTPR SERIES

Projection lens selection

	circle	4:3 (2/3") type	square
pattern size			
projection area size			



The pattern drawing that has to be projected must be inscribed in a circle whose diameter is 11 mm, same diagonal of a 2/3" detector.

For example, the pattern drawing could cover the entire 11 mm diameter area or be like a 8.8 x 6.6 mm rectangle (same size of a 2/3" detector) or, again, be a square whose side is 7.78 mm.

Unless the projection optics introduces significant distortion, the shape of the projection respects the same features and aspect ratio of the engraved area of the pattern. The projected area dimensions will be "M" times the original dimensions of the pattern, where M is the optical magnification at which the selected projection lens is operating.

LTPR units can integrate most types of high resolution lenses. Besides our OEPL optics, specifically tailored for this projection application, any high resolution C-mount lens can be used, provided it is tailored for 2/3" detectors (11 mm image diagonal). Telecentric lenses for 2/3" detector can also be interfaced, thus providing a parallel projection of the pattern scheme and enabling unparalleled performances in 3D measurement applications. C-mount lenses and telecentric optics can be connected to the unit by means of the mount adaptor included in the product package. Here below are listed the projection diameters and the recommended projection distances achievable by means of different types of optics.

OEPL projection optics

OEPL lens	lens description	minimum projection distance (p.d.) (mm)	maximum projection distance (p.d.) (mm)
VIS PROJECTION OPTICS			
OEPL18	18° projection, full angle	300	800
OEPL25	25° projection, full angle	250	600
OEPL38	38° projection, full angle	200	500
OEPL50	50° projection, full angle	100	300
UV PROJECTION OPTICS			
PEB2528-UV	25° projection, full angle	250	500



Telecentric lenses

VIS	TC 23 04	TC 23 07	TC 23 09	TC 23 16	TC 23 24	TC 23 36
p.d. (mm)	57,1	61,2	63,3	45,3	69,2	103,5
D (mm)	5,5	8,3	11,0	20,8	31,4	45,2
VIS	TC 23 48	TC 23 56	TC 23 64	TC 23 72	TC 23 80	TC 23 96
p.d. (mm)	134,6	159,3	182,3	227,7	227,7	279,6
D (mm)	59,8	70,0	80,0	89,9	99,7	117,8
UV	TCUV2336	TCUV2348	TCUV2356	TCUV2364	TCUV2380	
p.d. (mm)	98,7	130,7	154,0	176,0	221,0	
D (mm)	45,7	60,0	70,1	80,1	99,6	



2/3" C-mount lenses

C-mount Lens	D (mm)								
	@50 mm	@75 mm	@100 mm	@150 mm	@200 mm	@250 mm	@300 mm	@400 mm	@500 mm
6 mm	81	127	172	264					
8 mm	58 (*)	92	127	195	264	333			
12 mm	35 (*)	58 (*)	81	127	172	218	264		
16 mm		41 (*)	58 (*)	92 (*)	127	161	195	264	333
25 mm				55 (*)	77 (*)	99 (*)	121 (*)	165	209 (*)
35 mm						68 (*)	83 (*)	115	146



(*) = spacers maybe needed to compensate back focal length