Transmission Spheres

KNIGHT OPTICAL

An essential part of Fizeau interferometry, Knight Optical's precision range of transmission spheres utilise innovative Kreischer design for extended convex radius measurements. With 4" and 6" apertures available, and a standard bayonet mount, our transmission spheres are easily integrated into any typical interferometer to measure the transmitted wavefront of optical systems and the reflected wavefront of optical surfaces.

Standard Capabilities

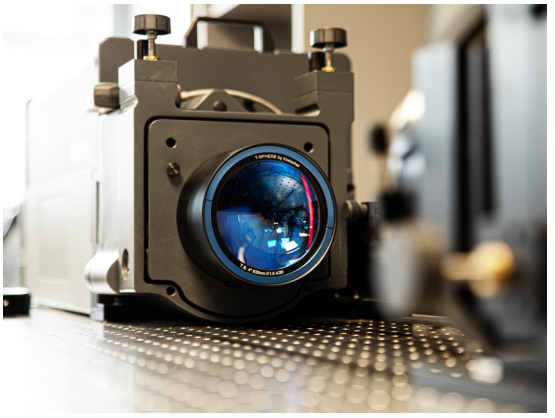
- Standard F/#'s at 633nm build
- F/0.75 to F/3.3 in our 4-inch series
- F/1.1 and F/2.4 in our 6-inch series
- Lambda/20 quality

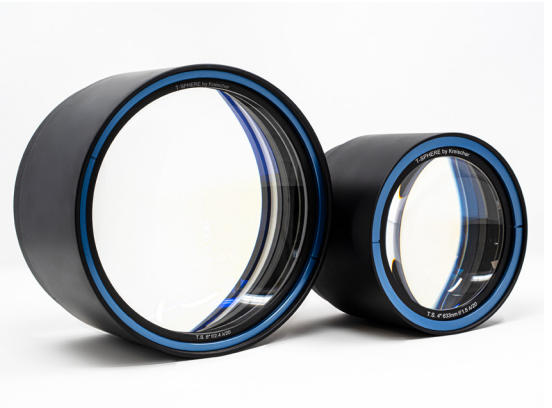
Key Features

- Innovative Kreischer design for extended convex radius measurements
- High precision, pitch polished reference surfaces for smooth, low irregularity wavefronts
- All transmission spheres are available at λ/20 quality (λ = 632.8nm)
- More standard F/#'s than other sources to meet metrology needs
- Unique design reduces lateral (tilt) retrace error
- Securely packaged in labelled storage box

Custom options

- λ/10 quality to precision λ/40 quality
- Custom F/#
- Custom wavelengths, including 532nm, 1064nm, 1550nm, and 3.39µm





The following transmission spheres are available at Knight Optical:

4-inch TS Series

F/#	R	D	WD	OD	L	EFL
F/0.56	22.7	40.7	8.1	147.8	132.3	55.8
F/0.65	39.0	60.0	22.0	133.4	101.8	65.6
F/0.75	50.0	66.7	32.5	133.4	101.8	76.1
F/1.0	90.0	90.0	72.2	133.4	96.3	100.3
F/1.5	142.7	96.4	130.0	133.4	83.4	150.4
F/2.4	264.5	110.2	255.0	133.4	96.3	244.4
F/3.3	344.7	104.2	336.0	133.4	71.1	339.3
F/4.9	540.1	110.2	532.0	133.4	71.1	500.2
F/6.0	633.3	104.7	626.0	133.4	71.1	615.3
F/7.1	800.1	112.7	794.0	133.4	71.1	723.5
F/10.7	1201.4	112.3	1195.0	133.4	71.1	1087.8
F/12.0 diverger	1201 cx	104.0	n/a	134.2	20.4	-1185.0
F/12.5 converger	1258.0 cc	101.0	1253.0	134.2	20.4	1286.0
F/14.3 converger	1431.9 cc	99.9	1425.0	134.2	20.4	1462.3
F/16.5 converger	1654.4 cc	100.1	1648.0	134.2	20.4	1683.2
F/20.0 diverger	2043 cx	102.7	n/a	134.2	20.4	-2026.4

6-inch TS Series

F/#	R	D	WD	OD	L	EFL
F/0.75	72.1	96.0	47.0	180.1	149.9	107.5
F/1.1	130.7	120.9	109.0	180.1	110.1	160.8
F/1.6	220.3	136.5	199.0	180.1	110.1	243.0
F/2.4	346.7	146.9	333.0	180.1	89.9	361.5
F/3.5	518.3	148.1	507.0	180.1	89.9	532.6
F/5.0	739.8	150.4	730.0	180.1	89.9	749.8
F/7.4	1128.0	152.4	1120.0	180.1	89.9	1127.4
F/15.5 converger	2342.3 cc	150.9	2314.7	177.7	47.5	2373.6

R	Radius of the reference surface	**OD**	Outer diameter of the lens cell
D	Diameter of the reference surface	**L**	Length the cell extends beyond the interferometer
WD	Working distance from focal point to cell	**EFL**	Effective focal length

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