

An essential part of Fizeau interferometry, Knight Optical's precision range of transmission spheres utilise innovative Kreisler 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

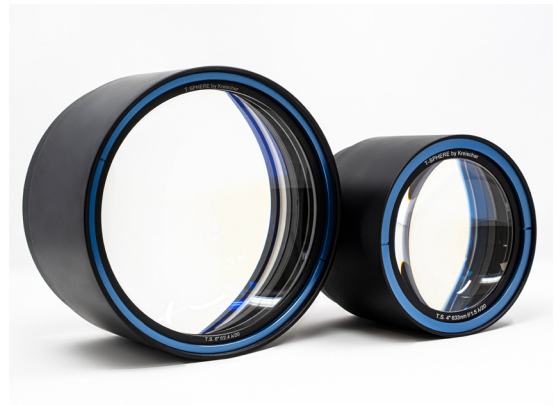
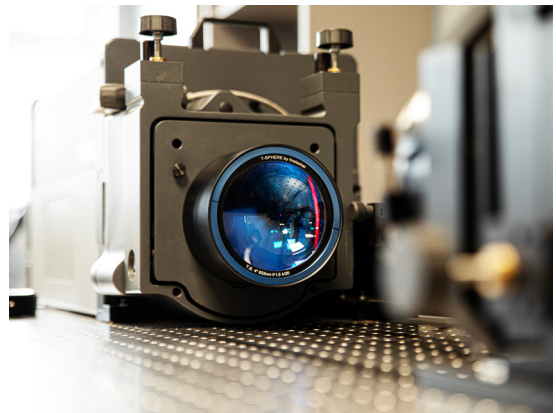
- Standard F/#'s at 633nm build
- F/0.75 to F/3.3 in our 4-inch series
- F/1.1 and F/2.4 in our 6-inch series
- Lambda/20 quality

## Key Features

- Innovative Kreisler design for extended convex radius measurements
- High precision, pitch polished reference surfaces for smooth, low irregularity wavefronts
- All transmission spheres are available at  $\lambda/20$  quality ( $\lambda = 632.8\text{nm}$ )
- 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

- $\lambda/10$  quality to precision  $\lambda/40$  quality
- Custom F/#
- Custom wavelengths, including 532nm, 1064nm, 1550nm, and 3.39 $\mu\text{m}$



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

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

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