

We have been producing off-axis paraboloids for more than 40 years and are now accepted as one of Europe's leading manufactures of high-precision optics. Off-axis paraboloids can be difficult to align, and to minimise this problem, we have developed a range of tube collimators.

At the heart of each collimator is one of our superb off-axis paraboloids, maintained in its position by a proprietary mount in a thick walled tube. The optics use zero-expansion glass ceramic for high stability and various coating options can be offered. The focal plane has an entrance port to locate precisely equipment up to 2kgs. For higher loads a platform can be provided. On this we can integrate visible light target generators, and IR black bodies. These can also include reticles mounted in a precision holder.

#### Applications:

Provides a reference wavefront for MTF testing of other optics, cameras etc.

Resolution tests of optics.

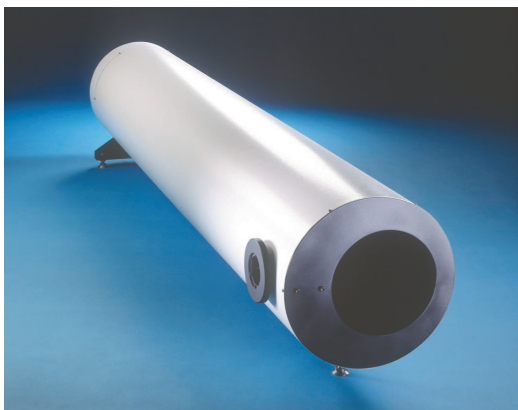
May be used in bore-sighting for alignment and inspection of customer systems.

Star simulation.

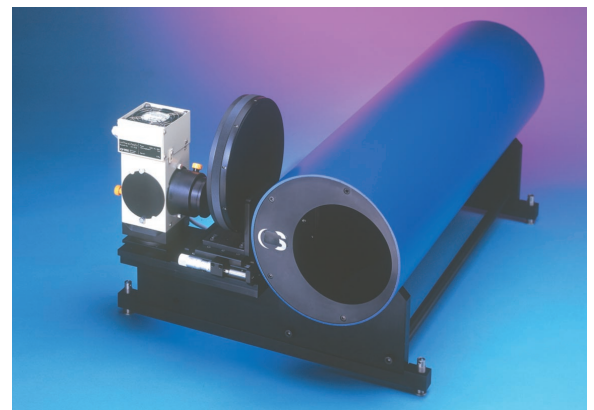
MRTD testing.

#### Standard features:

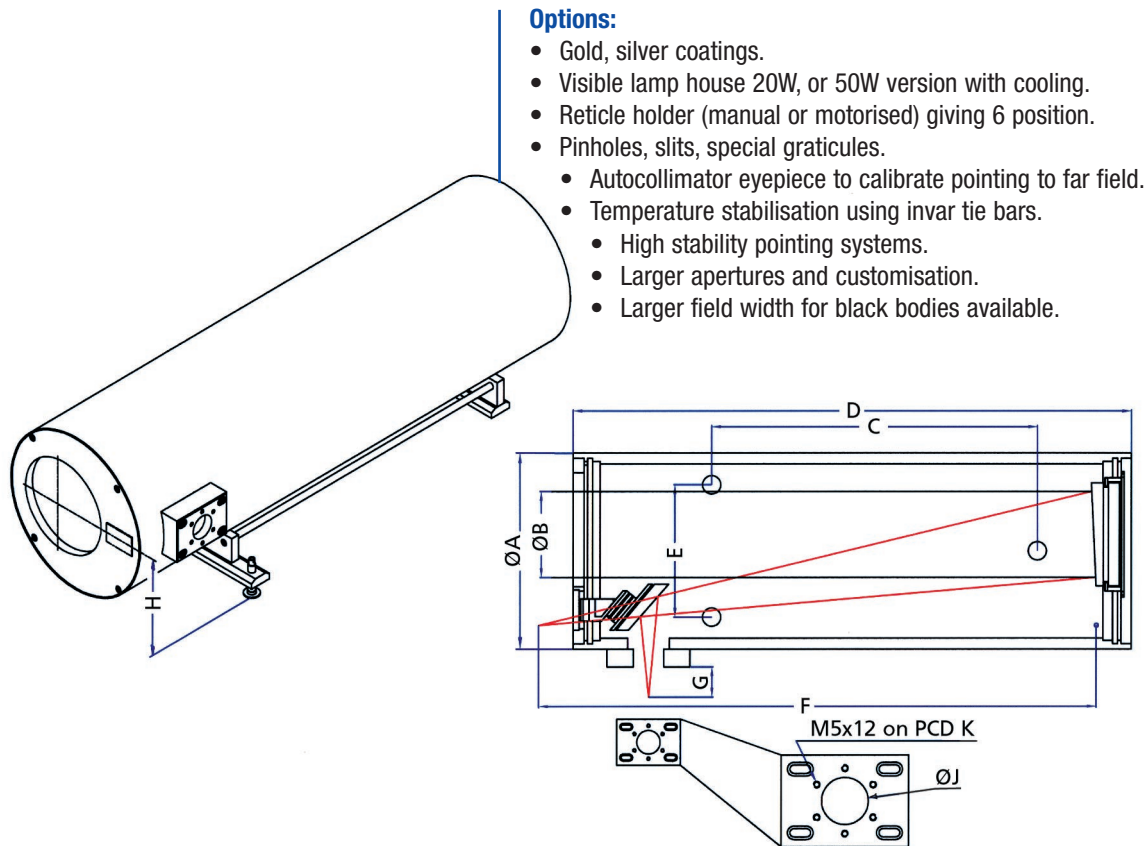
- Wavefront accuracy  $>\lambda/5$  p-v at 633nm.
- May be used across the whole spectrum, IR to UV, totally achromatic.
- Field of view  $>20\text{mm}$ .
- Exact measured distance from entrance port to focal plane recorded for each instrument. • Each collimator is supplied with an OPD map showing wavefront accuracy and measured focal length.
- Standard coating: protected aluminium.
- Three feet giving  $\pm 10\text{mm}$  height adjustment and drilled to fit metric optical tables.
- Tubes are finished Nextel black internally, OS blue, white or black to choice externally.



Collimator 200/2000 with standard entrance port.



Collimator 120/750 with removable lamp house and reticle holder.



**Options:**

- Gold, silver coatings.
- Visible lamp house 20W, or 50W version with cooling.
- Reticle holder (manual or motorised) giving 6 position.
- Pinholes, slits, special graticules.
- Autocollimator eyepiece to calibrate pointing to far field.
- Temperature stabilisation using invar tie bars.
- High stability pointing systems.
- Larger apertures and customisation.
- Larger field width for black bodies available.

Dimensions										
	Aperture	Focal Length								
Product Code	B	F	A	C	D	E	G	H	J	K
Col/100/600	100	600	230	400	650	200	50	190	42	64
Col/100/750	100	750	230	550	800	200	50	190	42	64
Col/120/750	120	750	230	550	800	200	50	190	42	64
Col/120/1000	120	1000	230	600	1080	200	50	190	42	64
Col/120/1500	120	1500	230	1200	1600	200	50	190	42	64
Col/150/1250	150	1250	230	1000	1350	200	50	190	42	64
Col/150/1500	150	1500	230	1200	1600	200	50	190	42	64
Col/200/1500	200	1500	320	1200	1600	250	90	270	56	64
Col/200/2000	200	2000	320	1500	2100	250	90	270	56	64
Col/240/1500	240	1500	400	1200	1600	300	120	320	56	68
Col/240/2000	240	2000	400	1500	2100	300	120	320	56	68
Col/300/2000	300	2000	500	1500	2100	350	150	350	65	80

**Other products:** Gimbal mounts for 100mm-550mm mirrors.  
 Afocal beam expanders.  
 Custom lens assemblies