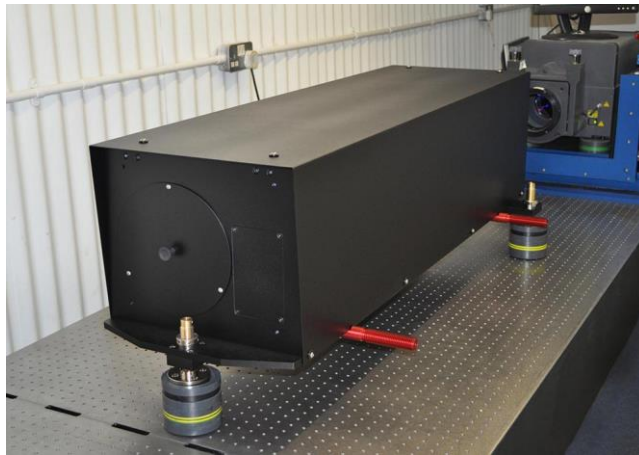




## Novel beam collimator kit for MTF testing of large optical systems

### Optical Surfaces Ltd

has developed a new approach, using a series of **pre-aligned beam collimator sub-assemblies**, for Modulation Transfer Function (**MTF**) testing of large diameter **military optical systems**.



**Image caption:** Fully assembled 250mm aperture beam collimator system (1.5m focal length) on an optical table.

### **MTF is a technique,**

trusted by optical designers, for objectively evaluating the image-forming capability of military optical systems. As reflective beam collimators can be used to replicate a target at infinity or interim distances without parallax, they are the device of choice for performing MTF measurements.

### **However, to test larger diameter military optical systems**

(> 250mm), or those requiring an MTF system delivering longer focal length focusing, traditionally required an extremely large, heavy and expensive reflective beam collimator system.

### **Dr Aris Kouris**

of Optical Surfaces Ltd commented “Drawing upon decades of producing high performance reflective beam collimators our R&D team has come up with a novel way of addressing this



challenge. We can now supply large collimators as sub-assembly kits that include a mounted off-axis parabolic mirror and a mounted folding flat that are easily assembled directly onto a standard optical table. Supplied pre-aligned at our production testing facility, once assembled a fine alignment tool allows the customer to quickly and accurately locate the focal plane and centre of the field. As an option, if required, we can also supply a protective cover to fit over your assembled beam collimator system”.

### **Benefiting from a lightweight compact design**

– Optical Surfaces **beam collimator kits** uniquely combine high stability and high performance, in an elegant solution for testing larger diameter or long focal length military optical systems.

### **The high stability**

and performance of these new reflective beam collimator kits is achieved using a zero-expansion parabolic mirror, manufactured to better than  $\lambda/10$  p-v surface accuracy. The off-axis design of Optical Surfaces modular beam collimators produces no central obscuration thereby ensuring highly efficient transmission is obtained. The all-reflecting design of these beam collimators is achromatic and with aluminium / magnesium fluoride coatings can operate from the UV to the infrared without adjustment.

### **For further information**

on beam collimator kits for testing military optical systems please contact Optical Surfaces Ltd. on +44-208-668-6126 / [sales@optisurf.com](mailto:sales@optisurf.com).

Optical Surfaces Ltd has been producing high precision optical components and systems for nearly 60 years. The company’s ISO 9001-2015 approved manufacturing workshops and test facilities are deep underground in a series of tunnels excavated in solid chalk where temperature remains constant, and vibration is practically non-existent. With such stable conditions testing, particularly with long path lengths, becomes quantifiable and reliable.

-----

### **Worldwide HQ**

**Optical Surfaces Ltd.**  
Godstone Road  
Kenley  
Surrey CR8 5AA



UK

tel. +44-208-668-6126

email [sales@optisurf.com](mailto:sales@optisurf.com)

web <http://www.optisurf.com>