

## KO | BRINGING QUALITY INTO FOCUS

[www.knightoptical.com](http://www.knightoptical.com) | Tel: +1 401 583 7846 | Fax: +1 401 583 7851  
Knight Optical (USA) LLC | 1130 Ten Rod Road, Suite D102 | North Kingsdown RI 02852 USA  
[www.knightoptical.com](http://www.knightoptical.com) | Tel: +44 (0) 1622 859444 | Fax +44 (0) 1622 859555  
Knight Optical (UK) Ltd | Roebuck Business Park | Harrietsham | Kent ME17 1SB UK

### $\lambda$ /10 Mirrors for Government Testing for Aerospace

**Knight Optical** can offer you stock and custom lambda/10 mirrors for use in government testing for aerospace, in a range of materials such as BK7 or equivalent, Zerodur, Quartz, UV Fused Silica and many more.

Mirrors are made from low expansion glass for optimum stability to maintain the lambda/10 flatness. The mirrors help produce high quality images and can be coated with a variety of coatings to ensure that the perfect quality image in the wavelength you require is achieved:

- Enhanced aluminium 94%R for visible applications.
- 99.9% dielectric for laser use in visible applications.
- UV aluminium for UV applications down to 180nm.
- 98.5% dielectric for laser use in the NIR applications.
- Ion plated silver for NIR-2000nm applications.
- Protected gold for 750nm to far infra-red applications

**Lambda/10 mirrors** are used in the aerospace environment due to the vibration, temperatures and pressure through which they are exposed. The higher flatness means that the operator of the equipment has higher control over the signal quality being produced by the mirror, resulting in a higher quality imaging.

Knight Optical can provide **lambda/10 mirrors** on a convex, concave and plano surface either from stock or custom. Send over the details of your requirement and we can see how we can help.

#### Typical specs for Plane lambda/10 stock items held:

**Material:** Soda lime float glass

**Diameter:** +0 / -0.2 mm

**Length/width:**  $\pm 0.1$ mm

**Thickness:** +0.1 / -0.2mm

**Surface quality:**  $\leq 40:20$  scratch/dig

**Flatness:**  $\lambda/10$  over 90% of mirror aperture (Rear is commercial polish)

**Mirror coatings:**

**UV applications:**

[Ali/MgF<sub>2</sub>, R.avg>85%@180-650nm, AOI= 0°-45°](#)

**Visible applications:**

[Enhanced Ali, R.avg>94%@450-650nm, AOI=0°-45°](#)

[All-Dielectric, R.avg>99%@450-700nm, AOI=0°-45°](#)

**NIR applications:**

[All-Dielectric, R.avg>98%@700-1064nm, AOI=0°-45°](#)

[Ion-Plated Silver, R.avg>96%@450-2000nm, AOI=0°-45°](#)

**NIR/ FIR applications:**

[Protected Gold, R.avg>97%@750-FAR IR, AOI=0°-45°](#)

**All our lambda/10 mirrors are checked for quality in our state-of-the-art** Metrology laboratory using our Fisba Interferometer, Starret AV300 Video Imaging Device and Zygo Verifire XPZ Interferometer System, allowing us to work to the highest [QA standards](#) and meet the tolerance specifications on these **precision components**.

[Contact our technical sales team](#) to discover how Knight Optical's high quality L/10 Mirrors and superior service can improve your instrumentation and supply chain experience.

UK, Europe, Asia & RoW: E-Mail [info@knightoptical.co.uk](mailto:info@knightoptical.co.uk) Tel +44 (0)1622 859444

USA & Canada: E-Mail [usasales@knightoptical.com](mailto:usasales@knightoptical.com) Tel +001 401-583-7846

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