Knight Optical supply custom and stock precision optical components for the wind monitoring LiDAR systems. These LiDAR systems are used in monitoring wind speeds and directions on proposed and existing wind farm sites. This leads to wind farm optimisations through resulting increases in energy outputs. This gain in performance is achieved from the LiDAR system which can be mounted to the nacelle of wind turbines automating the adjustment of blades to increase energy generations. The adjustments to the blades are due to the Doppler LiDAR system measuring the frequency shift of the backscattered light and thus calculating the wind velocity.

**Lenses**

High precision, AR coated lenses in a range of materials suited for laser alignment and beam shaping in laser receiving and delivery optics.

**Front coated mirrors**

Optimized for maximum reflectivity at 1550nm or other ranges in the visible or NIR spectrum.

**Cover windows**

Designed from tough materials able to withstand impact damage as well as scratches from high grit environments, these windows protect the vital components of the LiDAR system and can be AR coated for improved transmission over LiDAR wavelengths.

**Materials span the visible and NIR spectrum and include:**

- Sapphire
- BK7
- Fused Silica
- Silicon
- Quartz
- Toughened Borosilicate

Our state of the art Metrology and Quality Assurance department ensure that each component is individually inspected and tested to ensure it meets your exact specification.

For more information or to place an order contact our multilingual technical sales team and discover how Knight Optical's high quality LiDAR optics and service can improve your instrumentation and supply chain experience.