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## KO | BRINGING QUALITY INTO FOCUS

### Z-Cut Quartz Windows for use in the Security Industry

**Knight Optical** can offer [Z-Cut Quartz Windows](#) for use within the security industry.

We supply a range of Z-Cut Quartz windows for a range of applications – all individually QA checked and metrology tested for quality to ensure parts meet customers’ specifications. What’s more, our Z-Cut Quartz Windows are supplied in a range of sizes and shapes with custom coatings tailored to meet your individual applications.

Knight Optical supply precision optical components to customers within the security industry. Z-Cut Quartz windows can be used in the terahertz region for non-invasive scanning of individuals. These types of scans can detect objects such as weapons and are used in airports and other high-security locations.

Quartz is a birefringent material, which affects the polarisation of light passing through it, and is cut specifically along the Z-axis to maintain polarisation. Z-Cut Quartz is used in applications where quartz is an ideal material; yet changes to polarisation are required.

#### Typical specs:

<b>Material:</b>	Z-Cut Quartz (SiO <sub>2</sub> )
<b>Shape:</b>	Circular windows, square windows
<b>Dimensional Tolerances:</b>	+/- 0.1mm
<b>Parallelism:</b>	< 3 arcminutes
<b>Surface Quality:</b>	<40-20 Scratch/Dig < 0.5 λ PV@ 633nm
<b>Coating:</b>	Anti-Reflective (AR) coatings for application bandwidth (if required)

**All our Z-Cut Quartz Windows are fully inspected on their quality in our ISO 9001-certified, state-of-the-art Metrology laboratory**, using our Zygo Verifire Interferometer and Trioptics PrismMaster. This allows 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 Z-Cut Quartz Windows and superior service can improve your instrumentation and supply chain experience.

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