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39 mm vacuum chamber window

The Renishaw RLE fibre optic laser encoder uses interferometry to provide high resolution, linear position feedback.

The differential interferometer head (RLD10-X3-DI) is designed to mount onto the vacuum chamber wall. A vacuum chamber window then allows the laser beams to pass between the detector head and the measurement mirror. Vacuum chamber windows can also be used with other interferometer head variants where the RLD is required to measure within a vacuum chamber, such as RVI20 vacuum compatible interferometer.

Renishaw's 39 mm vacuum chamber window has been manufactured to a custom specification to maximise the performance of the RLE system.

Mounting recommendations

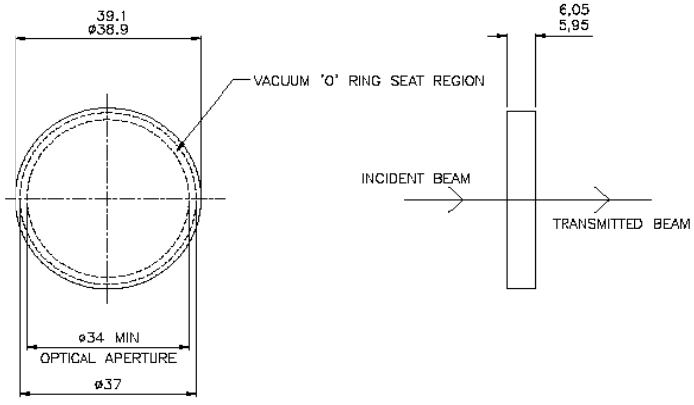
Renishaw recommends the following when mounting the chamber window within the chamber wall.

- The window must not be mounted under tension which could cause the window to distort and the beam to deviate from the nominal.
- An O-ring must be used on at least one side of the chamber window to create and maintain a seal in the vacuum chamber wall.

39 mm vacuum chamber window specification

Incident beam	
Angle of incidence	Normal ± 5°
Operating environment	
Temperature	0 °C to 40 °C
Relative humidity	0% to 95% non-condensing
Vacuum	Suitable up to: x 10^{-7} Torr
Storage environment	
Temperature	-20 ° to 200 °C

General dimensions



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Renishaw reserves the right to change specifications without notice.

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0119 Part No. L-9904-2479-02-A