



# Why a Polymer Optic?

## Industrial Environments Require Industrial Materials

When Exiscan™ evaluated the infrared (IR) window market, it was evident that most solutions were still utilizing optics that were better suited for the controlled environments of research laboratories. The dominant crystal technology that is perfect for short wave (SWIR) R&D cameras, is mostly non-transmissive in the long wave (LWIR) spectrum where today's maintenance and reliability cameras are tuned. The laboratory crystals are also ill-suited to withstand the harsh environments of industrial / facilities maintenance applications. Simply put, industrial applications require industrial solutions.

Exiscan elected to use a proprietary polymer optic -- an HDPE derivative that has been proven over two decades of full-exposure use in industrial, office and outside applications.

### Longevity

The impact resistant optic is thermoformed from a polymer with a proven track record of excellent resistance to the effects of moisture, humidity, vibration, UV, and a broad spectrum of acids and alkalis. In the extreme conditions of the desert or a paper mill, the optic's mechanical and transmission stability make Exiscan's™ optic uniquely qualified to stand the test of time. Exiscan's™ Lifetime Warranty ensures that only resilient materials are used: materials that won't need to be replaced.

### Accuracy

Polymer is a giant step forward for LWIR temperature accuracy. The relatively flat LWIR transmission curve, and the stability of the transmission rate over time make polymer the choice for accurate temperature calculations. Articles on these topics are available at [www.Exiscan.com](http://www.Exiscan.com).

### Specifications:

- ❑ **Camera Compatibility:**  
Exiscan™ optic is compatible with all brands and models of IR cameras
- ❑ **Chemical Resistance:**  
Broad Spectrum Acids / Alkalis
- ❑ **Moisture Resistance:** Excellent
- ❑ **UV Resistance:** Excellent
- ❑ **Vibration:** Unaffected
- ❑ **Indoor / Outdoor:** Yes
- ❑ **Operating Temperature:**  
-40°C (-40°F) to 150°C (300°F)
- ❑ **Impact & Load Resistance:**  
ANSI/IEEE C37.20.2 (A.3.6), and UL 746C
- ❑ **Flame Resistance:** UL 746C
- ❑ **LWIR Transmittance:** 68%

