



News Release

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New NVG Lighting Filter Technology Combines the Benefits of Glass and Polymers

Consolite Technology is delighted to announce the introduction of a major new development in NVG compatible filter technology named "NS Glass".

NS Glass is a joint development between Korry of Seattle, USA and Consolite in the UK. It consists of a sandwich construction of Korry *Nightshield*[®] polymeric filter material at the core, with thin layers of glass on the front and rear faces.

This construction combines the benefits of both glass and polymeric filters without the downside of either.

Polymer filters offer particular versatility as their constituent parts can readily be tailored to match the spectral transmission to the required application. Colour correction, contrast ratio and NVG compatibility can all be optimised by changing the mix, and this can be accomplished in a laboratory rather than a glass foundry. The transmission characteristics are very consistent. On the other hand, polymers are less resistant than glass to scratching and surface abrasion, and the range of surface coating types that can be applied is more limited.

Glass filters are hard and durable and can take a full range of coating types, such as multi-layer anti-reflection coatings and transparent, electrically conductive ITO coatings. However, the range of spectral transmission properties that can easily be introduced is more limited and is not always completely consistent.

So, NS Glass offers durability, the ability to carry a full range of surface coatings, and the scope for considerable flexibility in design of filter spectral performance characteristics, combined with great repeatability.

The filter construction uses no adhesive and does not rely on conventional lamination techniques. Consequently, filters have considerable mechanical integrity and have been successfully tested for use in aircraft cockpit applications.

Korry has provided the expertise in polymeric filter design and manufacture and has developed the process for combining the glass layers with the polymer core. Consolite has supplied the launch customer and has developed the techniques for successfully cutting the filters to shape.

The launch application has been for an avionic instrument LED display. The specified performance characteristics were particularly demanding, especially on contrast ratio and transmission peak wavelength and width. No glass filter, or combination of glasses, could be found to provide the necessary parameters with sufficient consistency. Furthermore, the filter had to carry a highly specified anti-reflection coating and had to pass an arduous programme of environmental testing, ruling out the use of a simple polymer filter.

NS Glass has solved the problem completely and, after a short development period, filters have been delivered to the customer and are in ongoing full production.

For more information contact Luis Benito at Korry or Nick Rice at Consolite.

Korry (www.korry.com) is the worlds leading manufacturer of electro-optical cockpit and display solutions, and employs more than 600 people as a wholly owned subsidiary of Esterline Corporation (www.esterline.com). "Korry" and "*Nightshield*" are registered trademarks of Korry Electronics Co. and Esterline Technologies Corporation.