



Q-FLEX

www.q-flex.fi info@q-flex.fi

+358 2 4894 500

Welcome to Optical Filters...



Specialists in the design and manufacture of display enhancement solutions for electronic displays and enclosures

We are a world leader in the design and manufacture of display enhancement products.

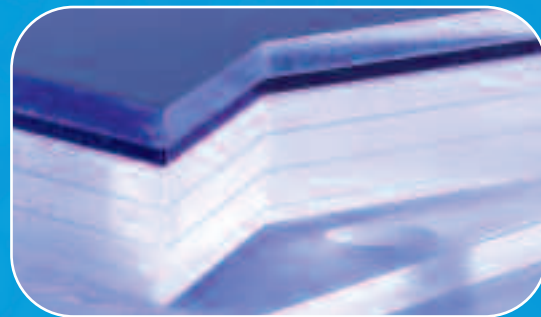
Improving the interface between your equipment and your customer is at the core of our business.

We have the proven ability to help you optimize your displays and enhance your customer's experience with your product.

Optical Filters' expertise in optical lamination, emi and mechanical design coupled with our advanced materials and production resources ensures that we deliver quality product, on-time.

Our unique capability in both glass and plastic means that we can offer the right solution for your application.

Whether you are a display manufacturer or an equipment user, our manufacturing sites in Europe and North America are well placed to meet the global requirements of your organisation.



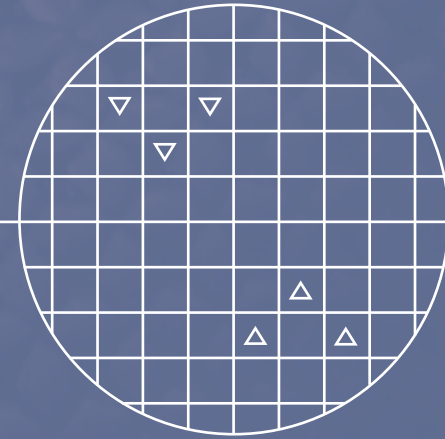
Display Enhancement Solutions

- EMI Shielded Displays
- Transparent Heated Windows
- Ruggedized Displays
- Sunlight Readability
- EMC Rooms and Enclosures
- Proven Global Capability

Optical Filters
Display Enhancement Solutions
EMI Shielded Displays
Transparent Heated Windows
Ruggedized Displays
Sunlight Readability
EMC Rooms & Enclosures



EMI Shielded Displays...

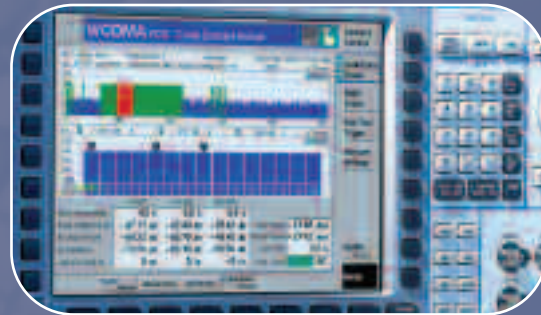


Optimum optical performance with maximum shielding effectiveness

The growing number of electronics in our environment gives rise to an increasing need to shield critical equipment from electro-magnetic emissions (emi-shielding).

Optical Filters has a variety of emi windows specially designed to cover a wide range of shielding requirements whilst providing the best optical performance from its coated glass to fine blackened mesh.

Optical Filters emi-shielded windows are a proven solution used in many applications from test and measurement equipment to military displays and medical apparatus.

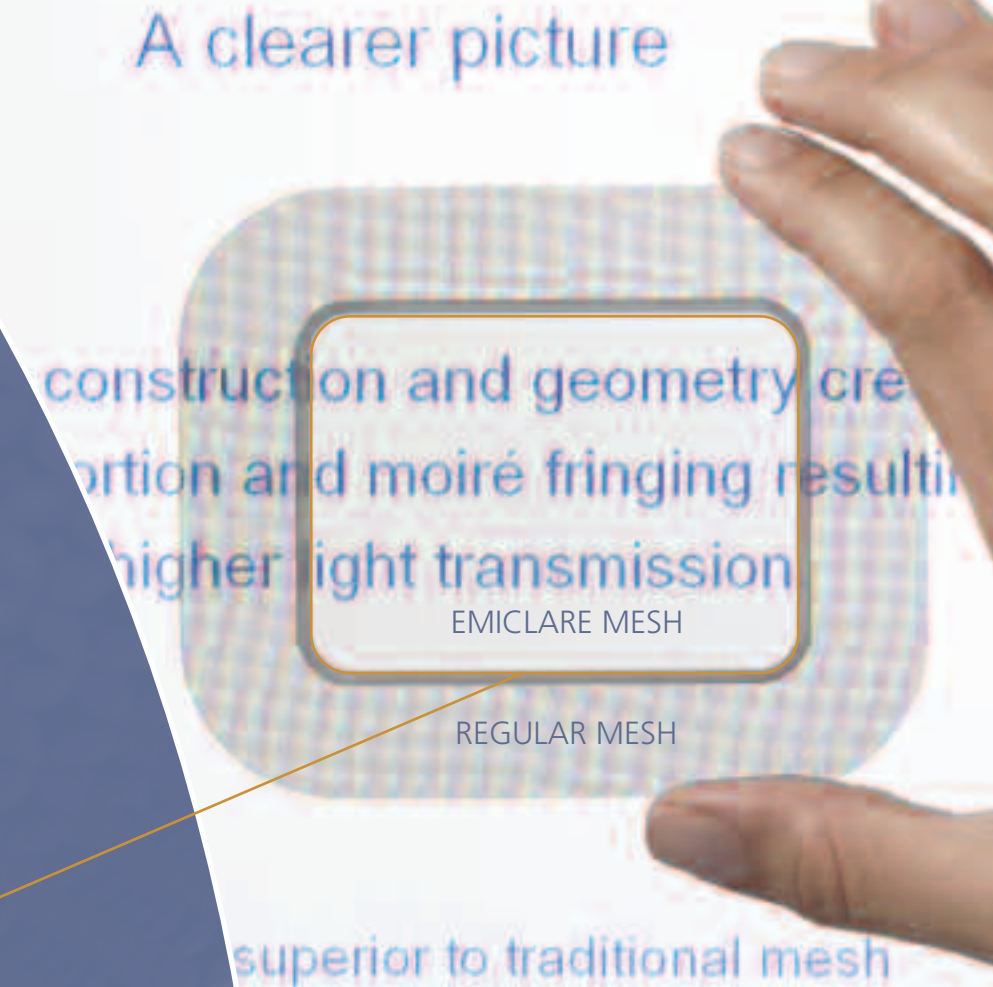


Display Enhancement Solutions

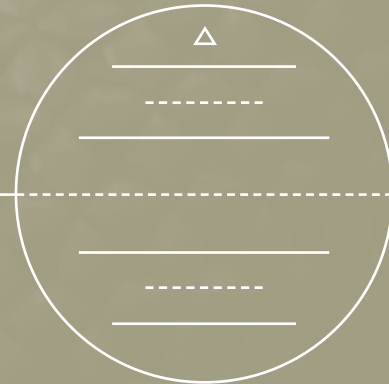
EMICLARE

EmiClare mesh is a unique solution offered by Optical Filters. The result of an extensive development programme, EmiClare mesh is the only mesh designed specifically for use on electronic displays. EmiClare provides less image distortion (moiré fringing) and higher light transmission than other similar products whilst maintaining excellent emi-shielding effectiveness.

A clear example of how our EmiClare EMI mesh compares to regular mesh is shown in this demonstration sample. The image is noticeably clearer through the centre EmiClare section compared with the darker distorted regular mesh of the outer frame.



Transparent Heated Windows...



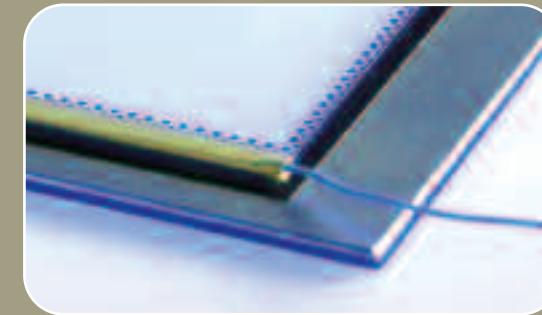
Maintaining optimum operating temperature and visibility for displays in extreme conditions

ThermoClare is Optical Filters' transparent heated filter that prevents the display from slowing down and not operating in sub-zero temperatures. The heat produced is sufficient to defrost a frozen screen for rapid start-ups and maintain the required temperature. ThermoClare also prevents moisture and condensation on windows and sensors.

The wire free construction uses high quality coated glass for very even hot spot free heating and consistent performance from batch to batch. Power is reliably applied via a proprietary wire and busbar termination. ThermoClare is an extremely rugged solution that is a result of extensive research and development in military

applications where it has been proven to be critical for safe continued operation in the most challenging conditions.

ThermoClare transparent heaters can now be found in a wide variety of displays from naval flight deck equipment and aircraft to materials handling equipment and heavy agricultural machinery.



ThermoClare provides a tough insulated heater construction that can be combined with EMI shielding, sunlight readability and ruggedized laminated solutions to meet your specific application demands.

THERMOCLARE

Ruggedized Displays...

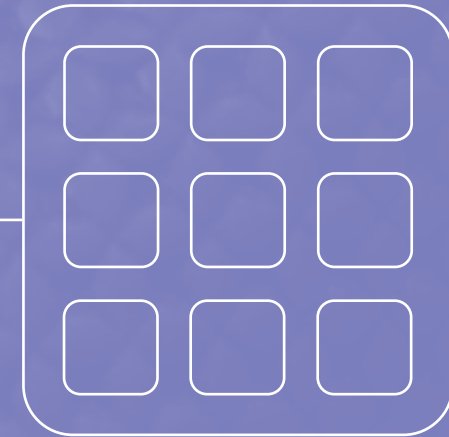
Protecting your display from impact damage in public, hazardous or tough environments

Broken displays cost money, can affect your efficiency and are a danger to the user. Optical Filters can protect your displays from impact damage and abuse in the extreme environments in which they must operate.

Our experience has shown that glass or hard coated polycarbonates are the ideal substrates for this requirement when combined with Optical Filter's full optical lamination.

Using our special production process, if the window is broken, the lamination means that the window remains intact minimising the risk of damage to the display or injury to the user

Multi-layer laminates can be incorporated to offer additional functionality such as emi-shielding and sunlight readability.



Display Enhancement Solutions

Optical Filters armoured touch screens are strong enough to survive the most arduous applications such as this military tablet.

Our solutions increase strength and durability reducing failures and breakages in the field.

ATM's, ticketing, gaming and public information systems can all benefit from our experience in producing tough screens for tough conditions.



Sunlight Readability...



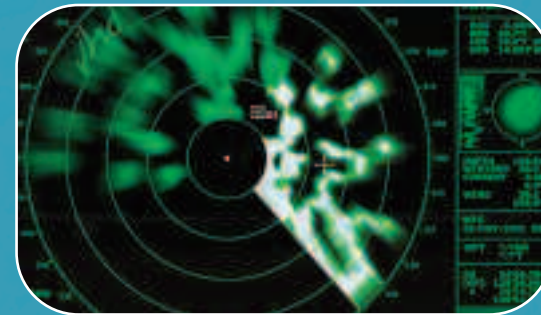
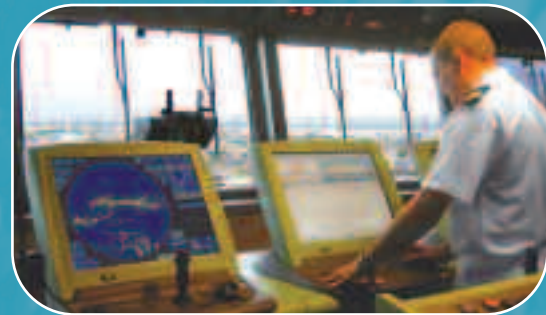
Improving display screen readability in sunlight conditions and outdoor environments

For a display to be readable in sunlight, the brightness of the display must exceed the ambient light level.

Two parameters must be controlled – surface reflection and contrast enhancement. It is not always possible to increase the brightness of the screen, but there are several other display enhancement techniques which can be used.

Optical Filters can reduce surface reflections by using non-glare or anti-reflective surface treatments and improve contrast enhancement using specific colour filters, circular polarisers and directional light control film.

Our sunlight readability solutions in single substrates or in multi-layer laminates provide additional benefits such as impact resistance.



Nowhere is more important for excellent screen visibility in all light conditions than the inside of the new Euro Fighter.

Optical Filters manufactures a wide range of display solutions for cockpit applications including stray light control and night vision capable screens.



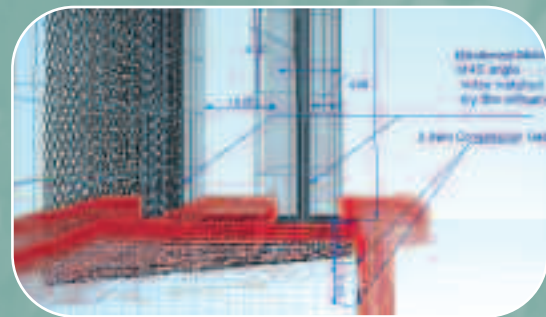
EMC Rooms and Enclosures...

Shielded windows with clear visibility and high quality appearance add value to shielded rooms and enclosures

We have in-depth experience of shielding windows for emc rooms and enclosures. Our solutions optimize visibility whilst providing a high quality appearance and finish combined with excellent shielding effectiveness.

Cosmetic presentation is important as these windows are a highly visible part of the overall unit and need to complement the rest of the room installation.

Our quality standards are second to none. Full optical lamination in glass or polycarbonate is undertaken in clean room conditions with index matched adhesive to ensure the best optical quality and light transmission.



Display Enhancement Solutions

For MRI applications, two layers of laminates are used. These windows are supplied as components or fitted into a custom built frame that is easy to install.

MRI rooms with the high clarity and clear visibility of Optical Filters' 100db shielding windows benefit both the patient and health professional.



Proven Global Capability...



Delivering outstanding optical filters to solve your display enhancement problems

At Optical Filters we have the resources and experience to deliver high quality cost-effective solutions, on time and to budget.

Continual investment in the latest production techniques and machinery, combined with a commitment to people development is an essential part of the innovation programme at Optical Filters.

Customers can tap into our capability for a total design and production solution or choose to use a specific service such as lamination of free-issue parts or machining of materials.

With manufacturing sites in Europe and the USA, Optical Filters has the global reach to offer a local service both for high volume contracts or smaller, specialist projects.



Display Enhancement Solutions

Our breadth of materials knowledge and processing capability covers both glass and plastics from CNC machining to multi-layer optical lamination in clean room conditions.

We are able to produce filters to meet practically every requirement, whatever the size or application.





Optical Filters Ltd
Units 13-14, Thame Park Business Centre
Wenman Road, Thame
Oxfordshire OX9 3XA
United Kingdom
Tel: +44 (0) 1844 260377
Fax: +44 (0) 1844 260355
Email: information@opticalfilters.co.uk
www.opticalfilters.co.uk

Optical Filters USA LLC
13447 South Mosiertown Road
Meadville
Pennsylvania 16335
USA
Tel: 814 333 2222
Fax: 814 333 4338
Email: info@opticalfiltersusa.com
www.opticalfiltersusa.com

Display Enhancement Solutions