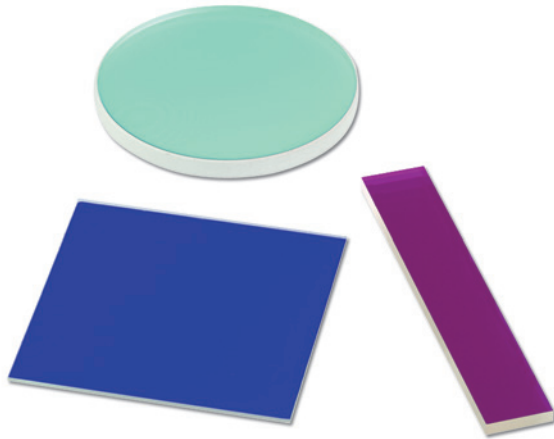


Colored-Glass Alternative Filters



- **Patented Stabilife® coatings**
- **RoHS compliant (unconditional)**
- **Wavelength stability in any environment**
- **Cut-on wavelength availability: 300 - 1000 nm**
- **Low autofluorescence**
- **Qualified for high humidity - MIL-STD-810E, Method 507.3, Procedure III, 30 cycles**
- **High transmission: >90% average (typical)**
- **Excellent blocking >5 OD**

Newport's Colored-Glass Alternative (CGA) Filters were developed to provide solutions for applications requiring long wave pass filters where the requirements of the application could not be achieved using colored-glass filters. Several product performance and construction attributes have been considered including RoHS compliance, chemical resistance, ultraviolet exposure resistance, autofluorescence, humidity resistance, temperature sensitivity, size & thickness limitations, and availability of cut-on wavelengths. From this list, RoHS compliance and cut-on wavelength availability were most often identified as limitations to be addressed.

CGA Filters are manufactured using our patented Stabilife® coating technology which employs only RoHS fully compliant materials. As such, these filters do not depend on the 4-year temporary exemption granted to allow manufacturers of colored-glass filters to continue to supply filters containing Lead and Cadmium compounds in their formulation.

Wavelength availability using an optical coating manufacturing process is virtually unlimited. This feature allows us to provide alternatives for colored-glass filters that have been discontinued.

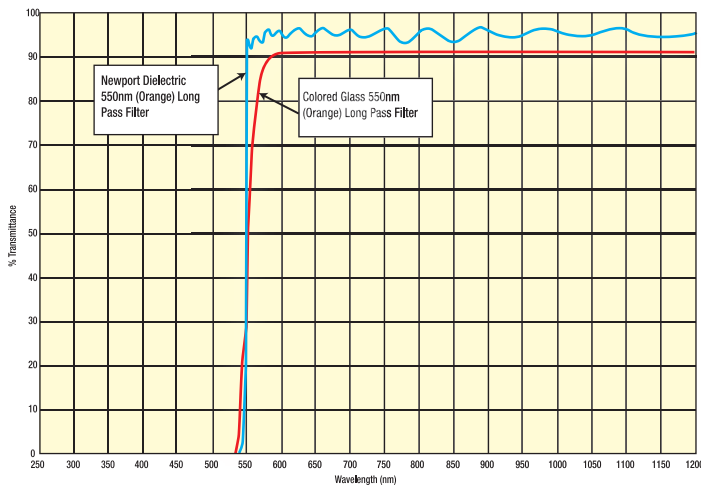
Chemical resistance, ultraviolet exposure resistance, autofluorescence, humidity resistance, and temperature sensitivity are all performance attributes that benefit from Stabilife® optical coatings. Stabilife® films exhibit very low sensitivity to thermal variation. They provide excellent resistance to damage due to handling, extreme nuclear and optical radiation, and severe environmental conditions. In the most severe applications, such as autoclave immersed nuclear reactor monitoring, Stabilife® filters have demonstrated spectrally stable performance lifetimes exceeding 8,000 hours. Stabilife® filters have been qualified for telecommunications applications per the requirements of Telcordia GR-2883. CGA Filters have been classified as having stain resistance of 1.0 (SR Class 1.0) when tested per ISO 8424. Through careful selection of coating and substrate materials, and the use of reflection as the primary means of obtaining optical rejection, autofluorescence is significantly reduced, particularly when compared to filters that rely primarily upon absorption to provide optical rejection.

Colored-Glass Alternative Filters are available in basically any size within the range of 1 mm to 380 mm. Since these filters do not rely upon thickness-related absorption to provide optical rejection, they can be supplied in a wide range of thicknesses without impacting the optical performance. The typical thickness is approximately 1.1 mm.

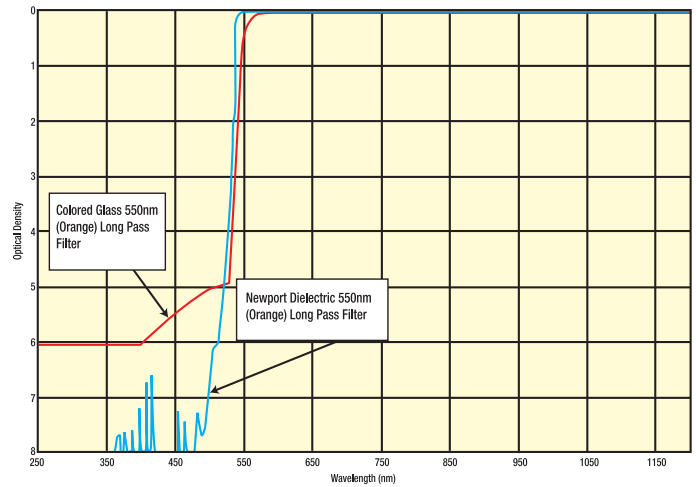
Capability Specifications

RoHS Status Fully compliant (without 4-year exemption granted to non-compliant colored-glass filters)

Passband Transmittance	≥90% average (typical)
Cut-on Wavelength Availability	300 - 1000 nm
Spectral Blocking	≥ 5 OD
Spectral Temperature Sensitivity	<0.0015 nm/°C
Surface Quality	F/F (80/50) per MIL-F-48616 (typical)
Coating Hardness	MIL-C-48497
Coating Abrasion Resistance	MIL-C-48497
Coating Adhesion	MIL-C-48497
Coating Humidity Resistance	MIL-STD-810, Method 507.3, Procedure III, Modified to 40 cycles
Coating Operating Temperature Range	-100 ° C to 400 ° C
Chemical Resistance	SR Class 1.0 per ISO 8424
Filter Size Range	1.0 mm sq. to 380 mm dia.
Filter Thickness	1.1 mm (typical)



Typical transmittance curve of a Colored-Glass Alternative Filter



Typical optical rejection (blocking) curve of a Colored-Glass Alternative Filter

Colored-Glass Alternative Filters are available on a custom basis for OEM applications in sizes and at cut-on wavelengths as required by the application.

Optical Filters & Coatings Technical Sales: 1-508-528-4411 filters.sales@newport.com



Newport Corporation, Global Headquarters
1791 Deere Avenue, Irvine, CA 92606, USA

www.newport.com

PHONE: 1-800-222-6440 1-949-863-3144 FAX: 1-949-253-1680 EMAIL: sales@newport.com
Complete listings for all global office locations are available online at www.newport.com/contact

	PHONE	EMAIL	PHONE	EMAIL
Belgium	+32-(0)0800-11 257	belgium@newport.com	Mtn. View, USA	+1-800-775-5273
China	+86-10-6267-0065	china@newport.com	Netherlands	+31-(0)30 6592111
France	+33-(0)1-60-91-68-68	france@newport.com	United Kingdom	+44-1235-432-710
Italy	+39-02-92-90-921	newport@tin.it	Germany / Austria / Switzerland	+49-(0)6151-708-0
Japan	+81-3-3794-5511	spectra-physics@splasers.co.jp		
Taiwan	+886 -(0)2-2508-4977	sales@newport.com.tw		



Newport Corporation, Irvine, California; Mountain View, California; Tucson, Arizona; Evry and Beaune-La-Rolande, France have all been certified compliant with ISO 9001 by the British Standards Institution or TUV.

© 2008 Newport Corporation. All rights reserved. Spectra-Physics, the Spectra-Physics logo, the Newport logo, and Stabilife are registered trademarks of Newport Corporation.