

UV & UVA/UVB/UVC FILTERS

- ▶ Fully blocked from UV to Far IR
- ▶ Designed to transmit prominent emission wavelength of mercury lamps

UV filters are optimized to work with mercury discharge lamps to isolate the major prominences of the lamps output. The UVA/UVB/UVC filters are designed to function with a range of UV light sources and permits separation of the three bands of UV radiation.

APPLICATIONS:

- ▶ Absorbance Analysis
- ▶ Forensics
- ▶ Process Analysis
- ▶ Air Quality Monitoring
- ▶ Phototherapy
- ▶ Waste Water Analysis

UV Filters

Center Wavelength (nm)	Full Width Half Max or Bandwidth	Transmission (Peak)	Description
185	10% of CWL	≥ 20%	185BP19
195	10% of CWL	≥ 20%	195BP20
214	5% of CWL	≥ 15%	214BP11
214	10% of CWL	≥ 20%	214BP21
253.7	5% of CWL	≥ 15%	253.7BP12
253.7	10% of CWL	≥ 20%	253.7BP25
265	5% of CWL	≥ 15%	265BP13
265	10% of CWL	≥ 20%	265BP26
280	5% of CWL	≥ 15%	280BP14
280	10% of CWL	≥ 20%	280BP28

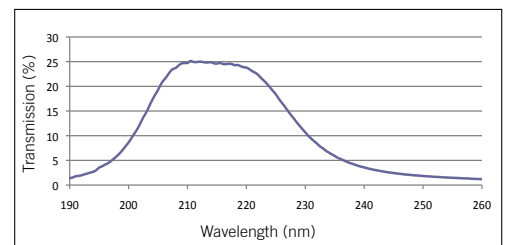
UVA/UVB/UVC Filters

Center Wavelength (nm)	Bandwidth (nm)	Transmission (Peak)	Product
250	30	≥ 20%	UVC
300	30	≥ 20%	UVB
360	50	≥ 60%	UVA

Specifications

Physical	Size	12.5, 25 and 50 mm
	Thickness	< 6.7 mm
Blocking	Average ≥ OD 4, from UV - 1150 nm	
Surface Quality	F/F per MIL-C-48497A	
Filter Construction	Multiple substrate protected coating	

XUV214-11 – actual representation



▶ CUSTOM CONFIGURATIONS AVAILABLE UPON REQUEST

UV CAPABILITIES

We currently offer **UV bandpass filters** from 185 nm to 400 nm as triple-cavity MDM (metal dielectric metal) coatings, providing extremely high out-of-band attenuation and transmission, as high as the thin film coating materials will allow. Our UV filter offer also includes metal shortpass filters with long wavelength attenuation. A filter with OD 4 from the visible and through the IR can pass 30% of the shortest UV.

MDM interference filters are often the most efficient in the UV when high S/N is required, due to the long wavelength response of typical detectors. Our UV/MDM filters are typically OD5 to OD 8 on average. Filters are typically manufactured in single to four cavity FP Fabry Perot' designs with precise rectangular passbands.

Our UV filter range includes high-performance dielectric UV coatings as well. These coatings are particularly efficient in throughput and provide precise feature wavelength location as well as very sharp transmission slope. Bandpass, edge filters (longpass and shortpass) and beamsplitters are among our standard capabilities.

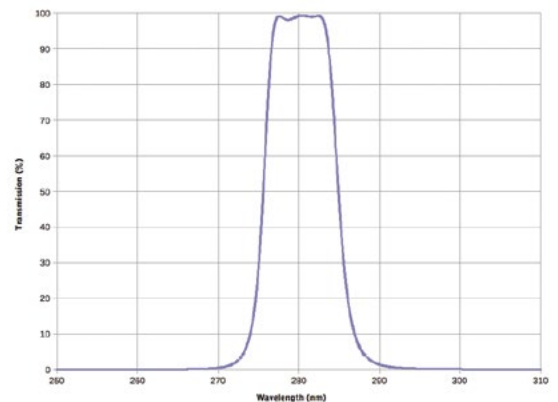
UV Longpass and Shortpass (edge filters) are currently manufactured using our proprietary **ALPHA** coating technology (see page 20). Most commonly used in Raman studies, these edge filters typically exhibit peak transmission at > 80% with steep, precisely placed edges, blocking the laser in excess of OD4 within a few nanometers of an emission region.

A common approach for the UV/MDM is to use as a pre-filter for an all-dielectric passband filter of a few to 10nm in HBW (Half bandwidth). With nearly no loss in the dielectric the resulting transmission is that of the metal filter. This combination gives very low background signal. For ultimate performance in the UV a reflection filter will be selected. These filters can pass greater than 90% of a UV band, yet attenuate the longer wavelengths to OD 4, throughout the longer wavelength regions. Reflection filters must be "designed in" solutions, as multiple reflective surfaces are required.

From protected/overcoated Aluminum mirrors, to the most effective wide band reflector for the atmospheric window, to efficient dielectric selective mirrors, our capabilities in this region are broad. Selective reflectors can be built as stop-bands with $< \pm 10$ nm bandwidth, to wider bands up to 60 nm in width. These coatings can be used at normal incidence or at any angle required. Polarization and angle sensitivity are important considerations in the design of these products.

This product line will see improvements with the introduction of UV interference filters manufactured with sputter coating technology; QuantaMAX™ produced on our Leybold Helios systems. Our initial offering will begin with UV filters from 290 nm to 400 nm and we expect to produce filters closer to 250 nm.

UV Bandpass Filter (280BP10) - Transmission Curve



Whatever your requirement is, large or small, please contact us for assistance.