

**Special Filter Glasses  
for sun beds  
Advanced Materials  
SCHOTT**

# What kind of filter glasses can you obtain from us?

- uncoated filters

## blue filter glasses

- M - UG 6
- M - UG 2
- UVISOL 95

We recommend combining our uncoated blue filter glasses with a clear filter glass of our product range.

## clear filter glasses

- Type 316
- Soladur
- Type 320
- Filter 322
- Filter 324
- Filter 326

## What kind of filter glasses can you obtain from us?

- coated filters

Make your choice between blue and clear filter glasses!

### blue filter as base glass

- M - UG 2 V1
- UVISOL 95 V1
- UVISOL 95 BL 11

### clear filter as base glass

- Suntanning filter V59
- Suntanning filter V71

Discuss also with us your requirements for your specific coating design!

## What are the characteristic properties of our filter glasses?

### **M - UG 6**

The special filter glass M-UG 6 is a dark violet tinted silicate glass. Its main feature is a very high UV-B transmittance and an excellent absorption in the visible and IR region.

### **M - UG 2**

The special filter glass M-UG 2 is a deep dark violet tinted silicate glass. Its main feature is a defined UV transmittance and an very excellent absorption in the visible and IR region.

### **UVISOL 95**

The special filter glass Uvisol 95 is a blue violet tinted silicate glass. Its main feature is a defined high transmittance in the UV-A range and a very low transmittance in the UV-B range.

### **Clear filter glasses**

Transparent filter glasses with defined edge wavelength and extremely narrow edge wavelength tolerances

## What are the differences of our coated filter glasses?

### **M - UG 2 V1 / UVISOL 95 V1**

dark violet tinted / blue violet tinted silicate glass with one-sided mirror coating V1

### **UVISOL 95 BL 11**

blue violet tinted silicate glass with one-sided IR coating (reduction of the IR transmittance)

### **Suntanning filter V59**

one-sided coated clear filter with defined edge wavelengths.

Due to coating design V 59 the clear filter becomes a bluish special filter glass (blue in transmission/silver in reflection).

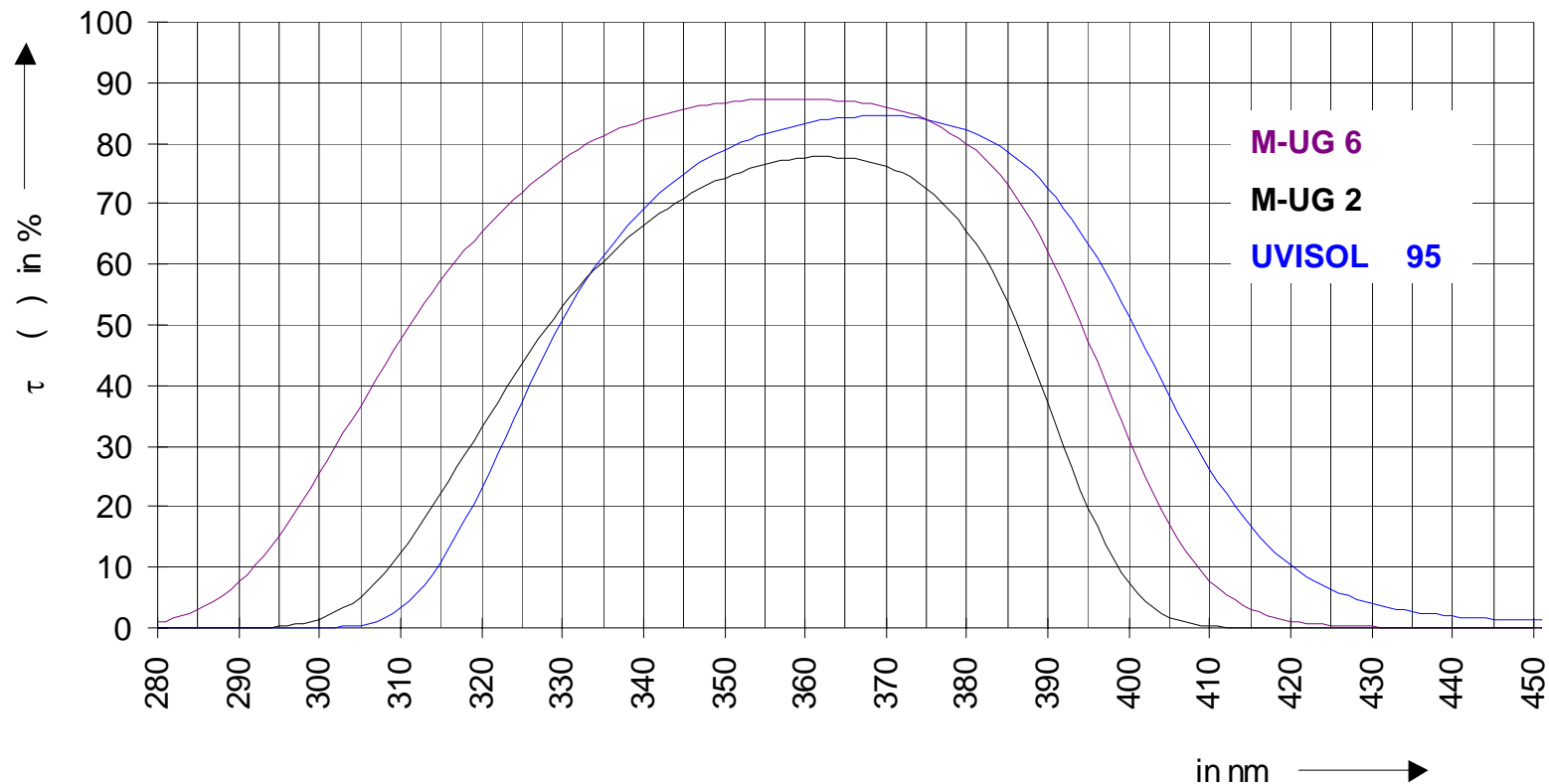
### **Suntanning filter V71**

one-sided coated clear filter with defined edge wavelengths.

Due to coating design V 71 the clear filter becomes a violet special filter glass (violet in transmission/silver in reflection).

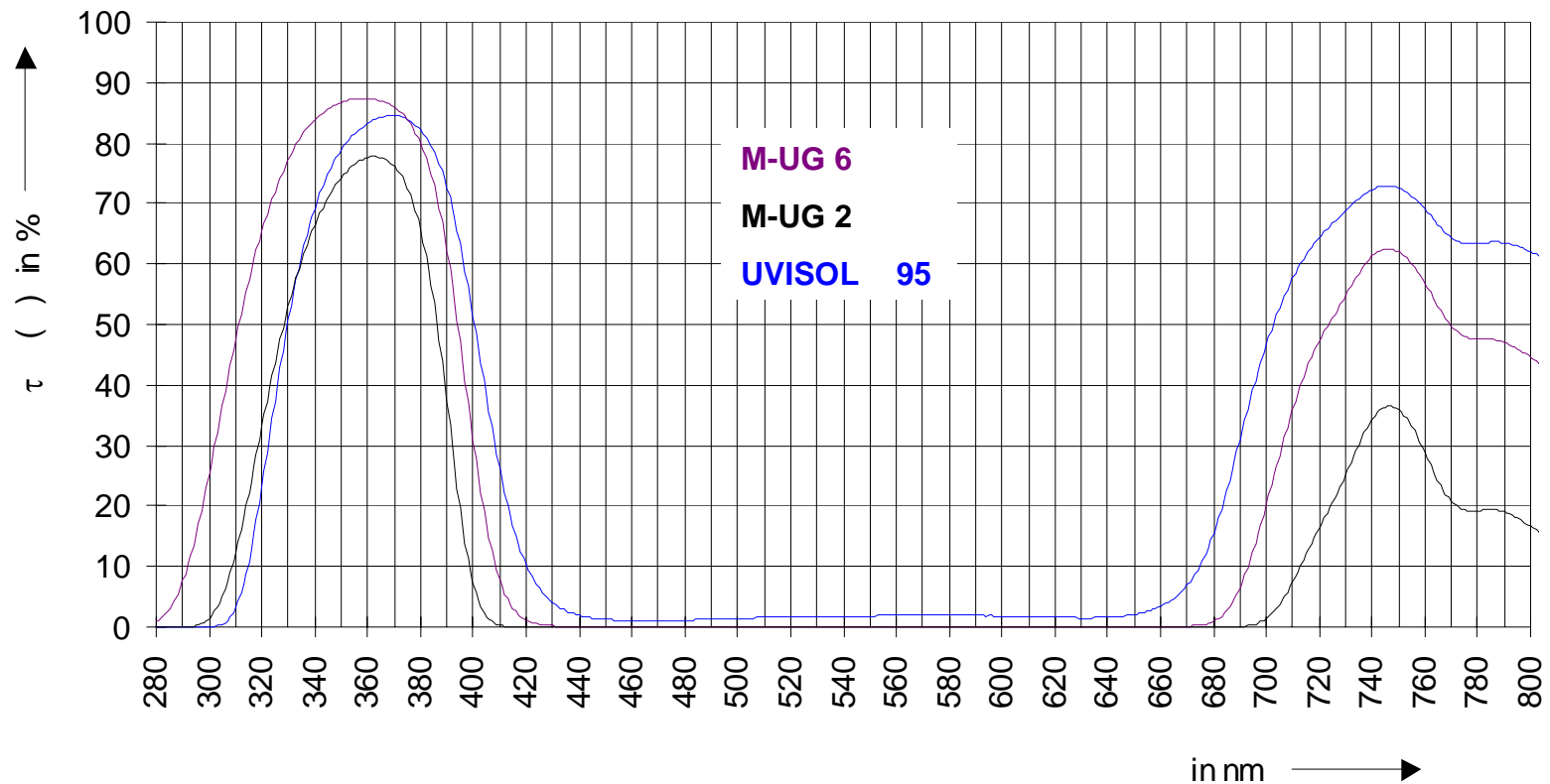
## How does the spectral transmittance of the uncoated blue filter glasses look like in the UV - range?

Spectral transmittance refers to nominal thickness, untoughened, unsolarized and measured at room temperature



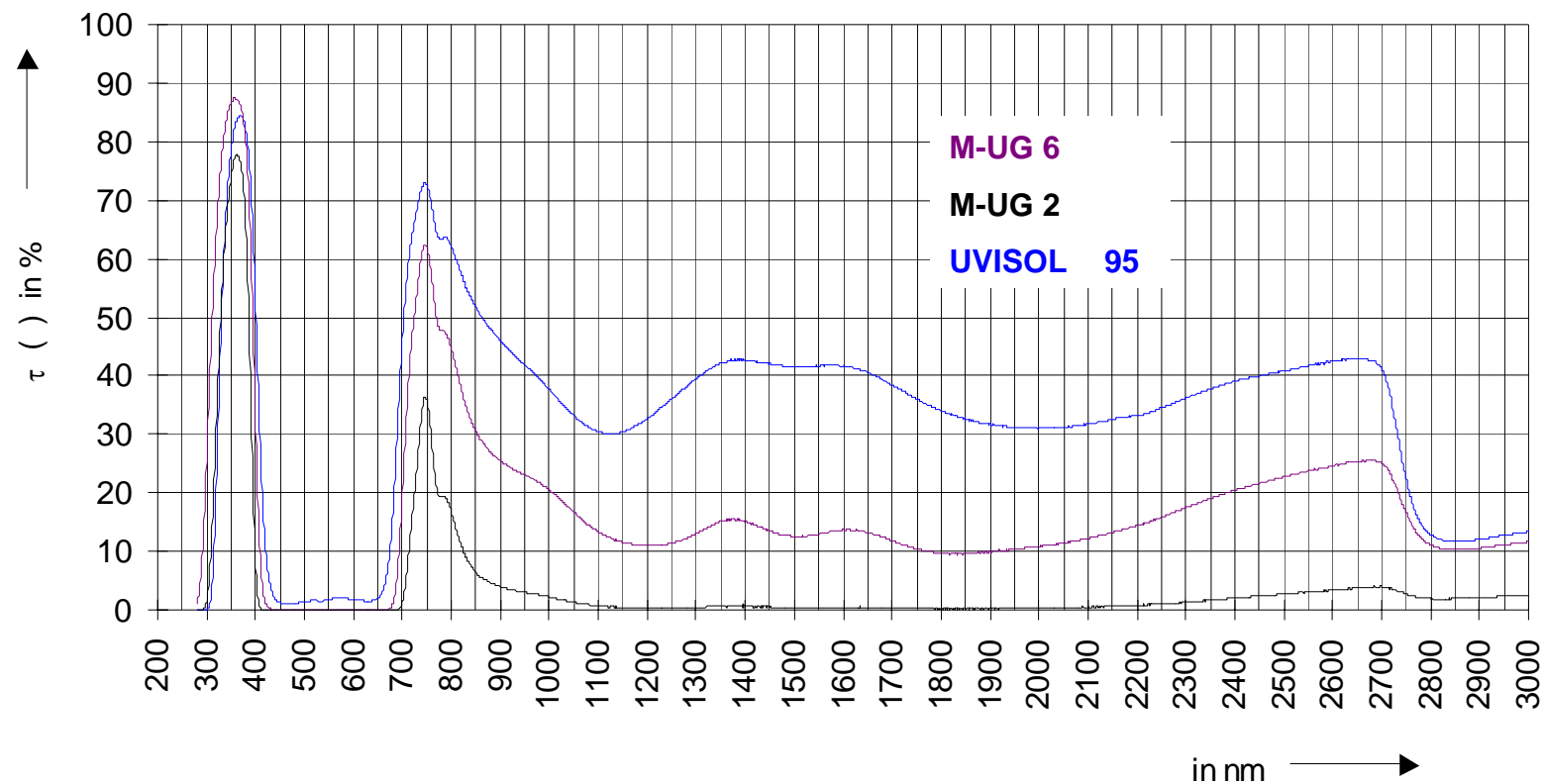
## How does the spectral transmittance of the uncoated blue filter glasses look like in the UV/VIS - range?

Spectral transmittance refers to nominal thickness, untoughened, unsolarized and measured at room temperature



## How does the spectral transmittance of the uncoated blue filter glasses look like in the UV/VIS/IR - range?

Spectral transmittance refers to nominal thickness, untoughened, unsolarized and measured at room temperature



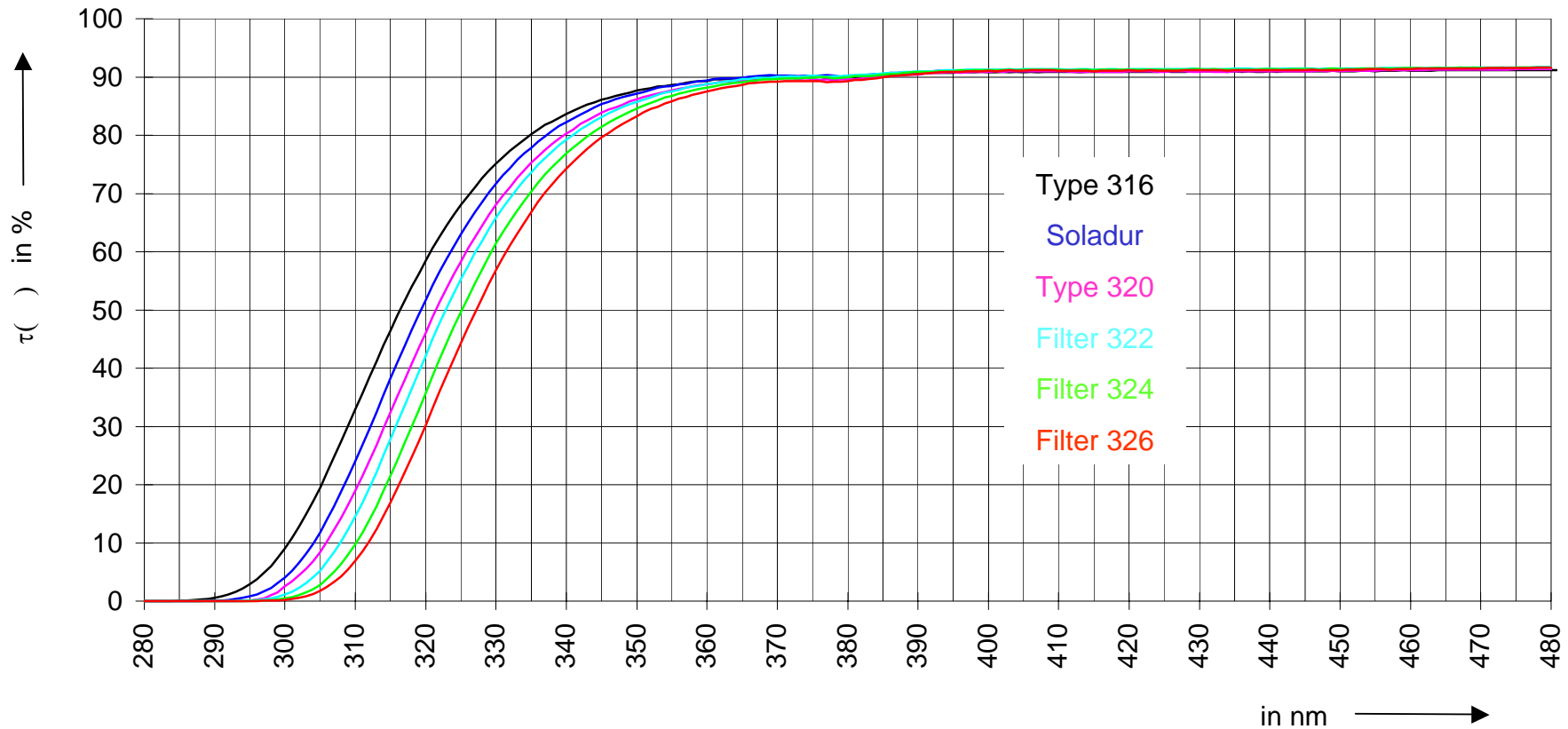
**Choose one of our clear filter glass**  
**– with extremely narrow edge wavelength tolerances –**  
**(in conjunction with a blue filter glass out of our product range)**

<b>Type 316</b>	$c = 315.5 \text{ nm} \pm 1.5 \text{ nm}$	Thickness 2.75 to 3.25 mm	$UVA = 80.8 \%$	$UVB = 12.5 \%$
<b>Soladur</b>	$c = 318.5 \text{ nm} \pm 1.0 \text{ nm}$	Thickness 3.75 to 4.25 mm	$UVA = 78.5 \%$	$UVB = 8.2 \%$
<b>Type 320</b>	$c = 320.0 \text{ nm} \pm 1.0 \text{ nm}$	Thickness 3.75 to 4.75 mm	$UVA = 77.1 \%$	$UVB = 6.8 \%$
<b>Filter 322</b>	$c = 322.0 \text{ nm} \pm 1.0 \text{ nm}$	Thickness 3.00 to 4.50 mm	$UVA = 75.9 \%$	$UVB = 5.1 \%$
<b>Filter 324</b>	$c = 324.0 \text{ nm} \pm 1.0 \text{ nm}$	Thickness 3.00 to 4.50 mm	$UVA = 73.6 \%$	$UVB = 3.5 \%$
<b>Filter 326</b>	$c = 326.0 \text{ nm} \pm 1.0 \text{ nm}$	Thickness 3.00 to 4.50 mm	$UVA = 71.2 \%$	$UVB = 2.5 \%$

$UVA$  and  $UVB$  values refer to nominal edge wavelength  $\tau$

## How does the spectral transmittance of the uncoated clear filter glasses look like?

Spectral transmittance refers to defined edge wavelength, untoughened, unsolarized and measured at 23 °C



## Our wide product range offers you 18 different filter glass combinations !!!! (non binding information)

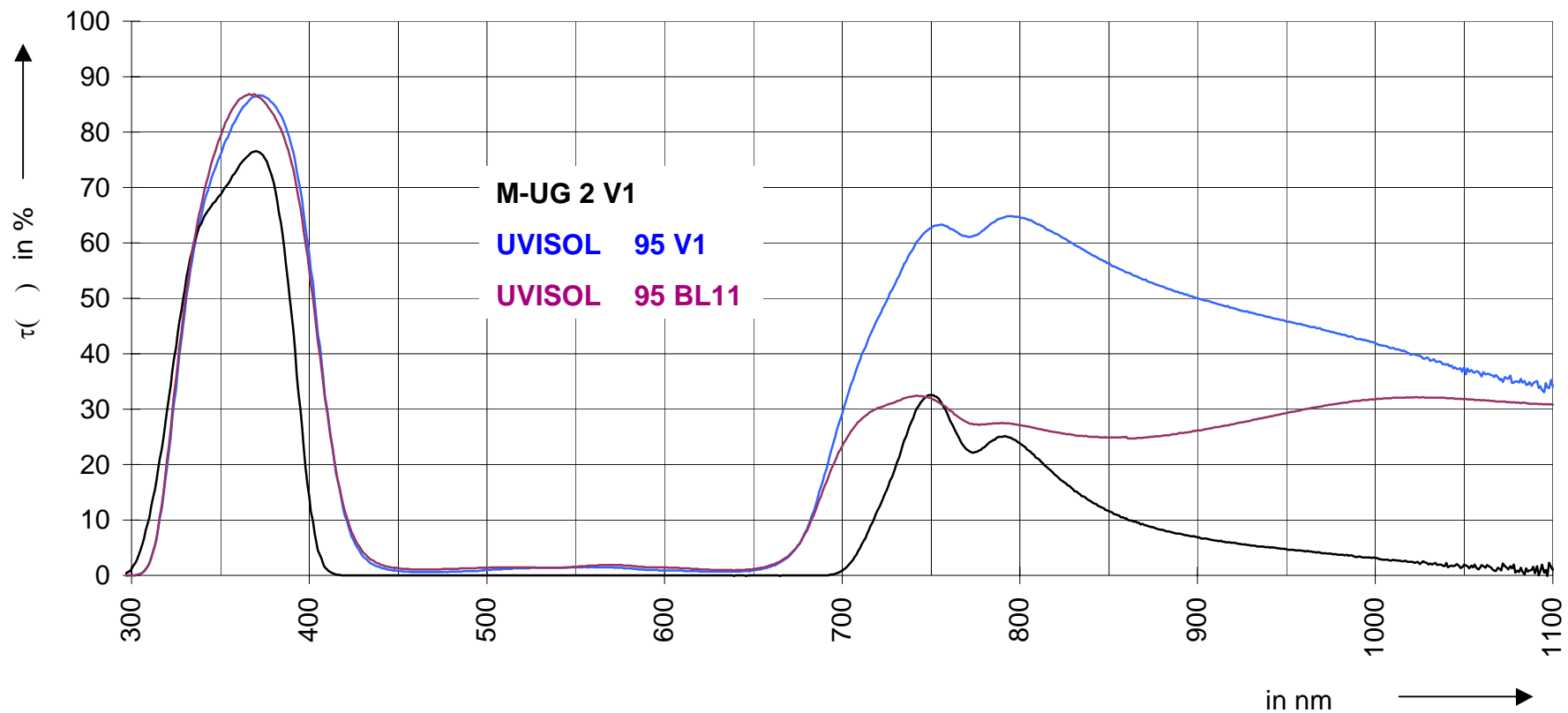
clear filter blue filter		without any clear filter	with Type 316	with Soladur	with Type 320	with Filter 322	with Filter 324	with Filter 326
		<b>M-UG 6</b>	UVA in %	80*	67.1	65.6	64.5	63,0
	UVB in %	21*	5.5	3.9	3.3	2.4	1.6	1.1
<b>M-UG 2</b>	UVA in %	60*	53.7	52.7	52,0	51.1	50.1	49,0
	UVB in %	< 6*	1.5	1.1	0.9	0.7	0.5	0.3
<b>UVISOL 95</b>	UVA in %	68*	56.6	56.1	55,0	54.2	53.1	51.6
	UVB in %	1*	0.6	0.5	0.4	0.3	0.2	0.1

\* values of the spec  
PCE (physical and chemical properties)

all values refer to nominal thickness or defined edge wavelength,  
room temperature for the untoughened and unsolarized condition

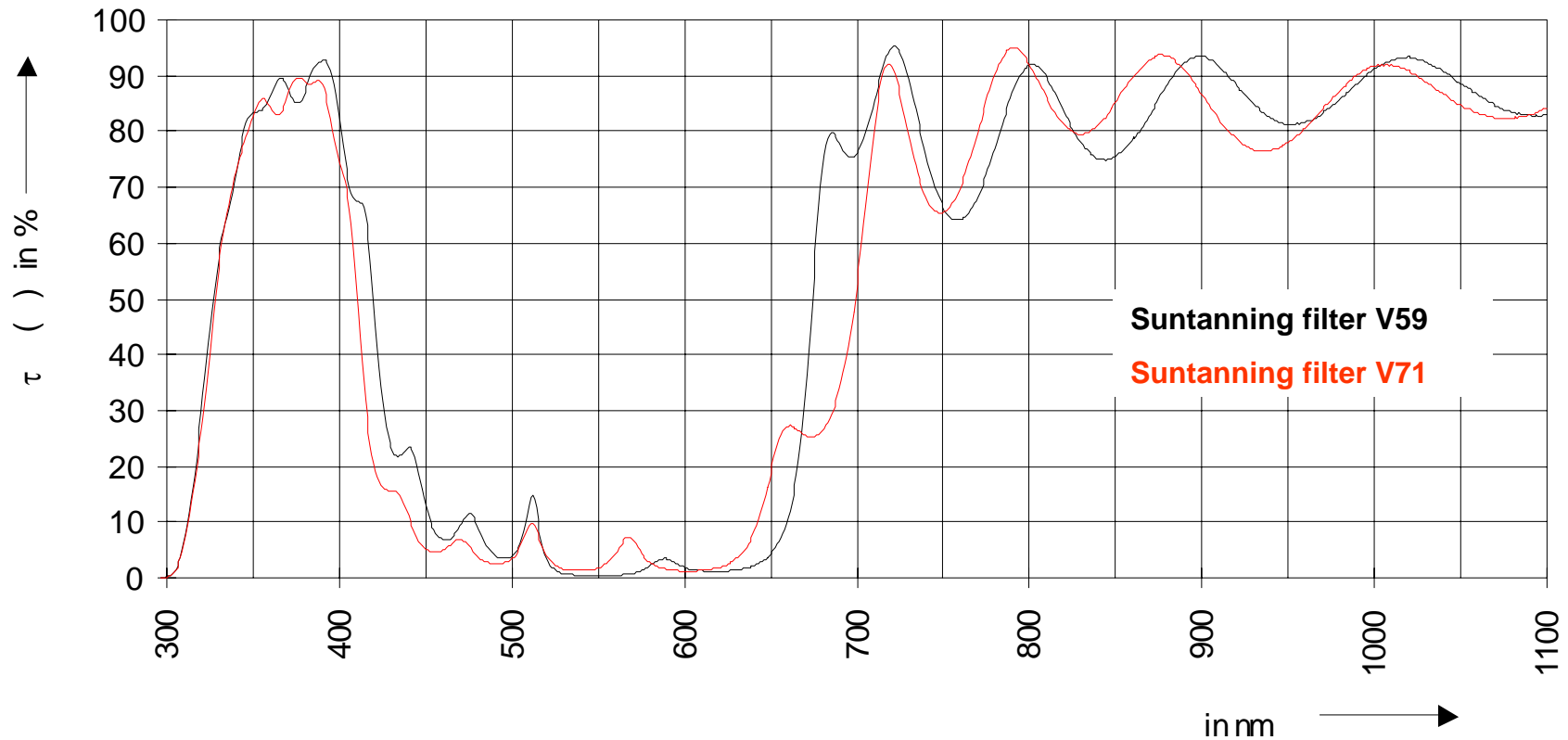
## How does the spectral transmittance of the coated blue filter glasses look like in the UV/VIS/IR - range?

Spectral transmittance refers to nominal thickness, thermally toughened and unsolarized condition, measured at room temperature

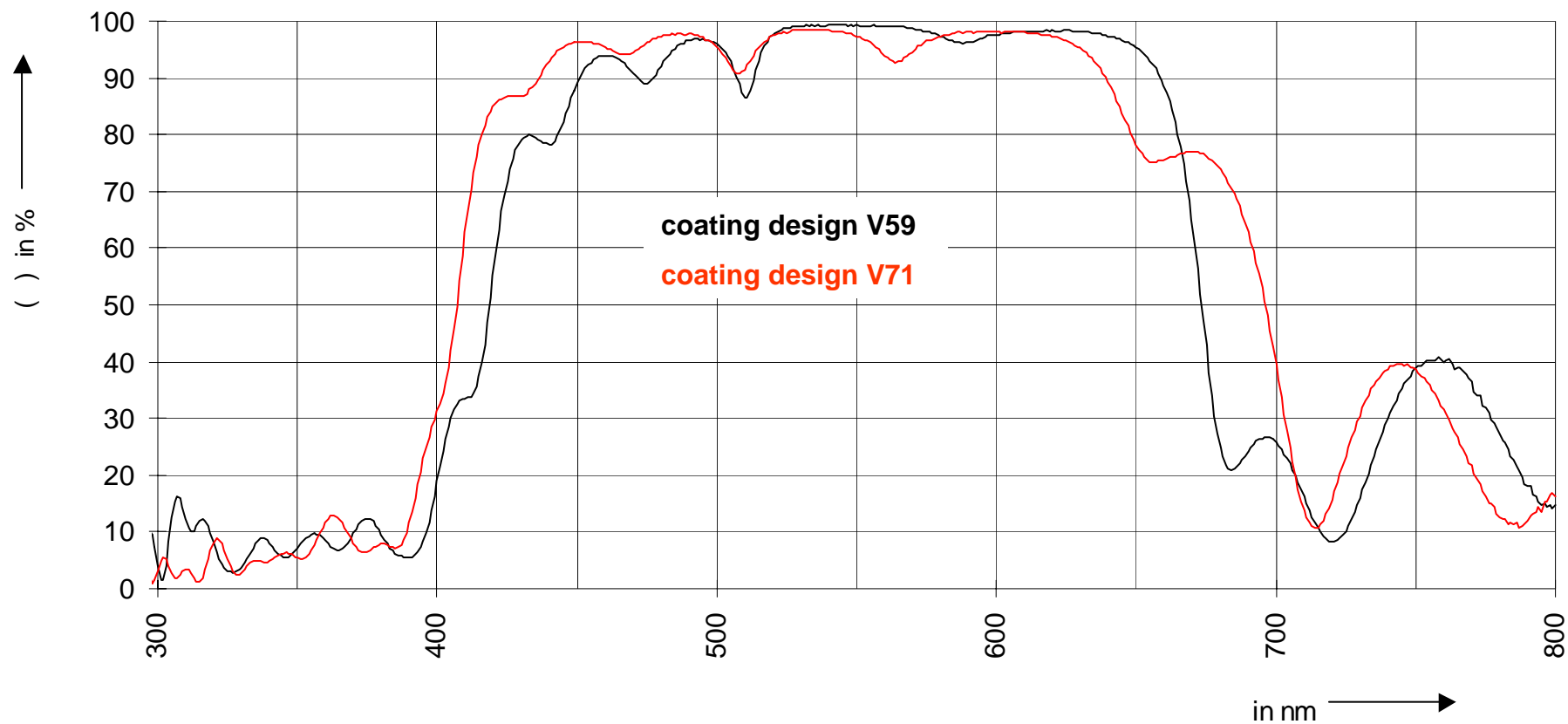


## How does the spectral transmittance of the coated clear filter glasses look like in the UV/VIS/IR - range?

Spectral transmittance refers to thermally toughened and unsolarized condition, measured at room temperature



## Reflection curves of the coating designs V59 and V71

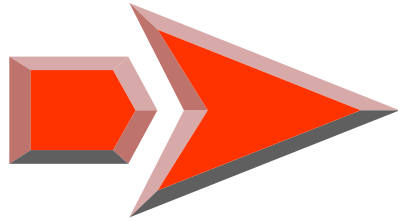


## What UV properties offer our coated clear filters?

clear filter (base glass)		Type 320	Filter 322	Filter 324	Filter 326
		coating design			
<b>V 59</b> (blue in transmission)	$c$ in nm <sup>1)</sup>	320 ± 1	322 ± 1	324 ± 1	326 ± 1
	$c$ in nm <sup>2)</sup>	0.6	0.6	0.6	0.6
	UVA in %	75	73	71	69
	UVB in %	6.0	4.8	3.2	2.4
<b>V 71</b> (violet in transmission)	$c$ in nm <sup>1)</sup>	320 ± 1	322 ± 1	324 ± 1	326 ± 1
	$c$ in nm <sup>2)</sup>	0.6	0.6	0.6	0.6
	UVA in %	75	73	71	69
	UVB in %	6.0	4.8	3.2	2.4

1) base glass only

2) mean shifting of the edge wavelength after the process thermal toughening and coating in the direction of longer wavelength  
all values refer to room temperature and to the unsolarized condition



## We strongly recommend using our filter glasses in thermally toughened condition!

We guarantee the following mechanical properties for thermally toughened filters:

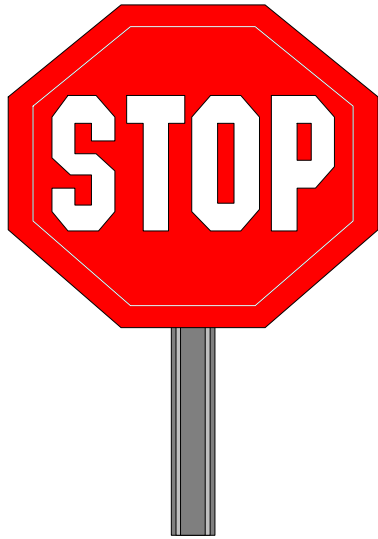
**Bending strength increase  $\sigma_H$  :** **> 100 N/mm<sup>2</sup>**

**Maximum service temperature  $t_{max}$  :** **230 °C / 260 °C**  
(depending on the type of filter glass)

**Thermal shock resistance TWB:** **180 °C**

**Resistance to temperature gradient over pane surface** **150 K**

*for further details please refer to the corresponding specifications*



## Still some further very important notice:

The requirements acc. to IEC-60335-2-27 have to met.

For mechanical reason it is absolutely necessary to use an acrylic panel as cover (between the filter glass and the user) to protect against glass fragments.

The panels neither should be fixed nor fitted under mechanical pressure and stress and there shouldn't be any glass metal contact.

The bed producer has to take care that the bed is immediately switched off if a filter breaks (automatically safety shutdown).

Please take the cleaning instructions for mirror / coated filter glasses into consideration.

**Thermally toughened glass are not allowed to be worked over after toughening.**

**Differentiate your company with  
your logo on the filters!**

**We can print your company's logo  
on the filter glasses**

**Please contact us!**

# Prices on request

**Your contact:**

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**Very important notice:**

***All values of this leaflet are not binding.***

***For binding information please refer to our latest specifications (PCE – physical and chemical properties) which we kindly send you upon request.***

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