

Polarizers

Polarizers

Natural light and most light sources emit unpolarized light. Polarizers are an excellent solution in applications that require glare reduction due to reflected light. They are also used in several optical instruments.

Unpolarized light passing a linear polarizing filter will be linear polarized afterwards in the orientation of the polarizing axis of the filter. A circular polarizer is a combination of a linear polarizer and a quarter wave retarder. Crossing the axes (or left handed with right handed, when using circular) blocks nearly all light. Circular polarizers are recommended if optics as mirrors are within the optical path from filter to sensor.

Schneider polarizers are designed to fulfill industrial requirements. They are made of dichroic laminated polarizing polymers cemented between 2 slides of protective glass. Polarizers are sensitive to humidity, therefore we recommend our unmounted filters as edge sealed version.

Linear and circular polarizers are available as glass filters, unmounted in sizes 10 mm to 80 mm diameter and mounted with common thread sizes M 25.5 to M 67 or as film up to 426 x 1270 mm size and 0.3 or 0.8 mm thick. Custom sizes on request.



Key Features

- Reduce reflections, increase contrast
- High extinction ratio
- Linear and circular polarizer available
- Glass filters and polarizing films available
- Sizes 8 mm to 80 mm diameter.
- Mounted with common thread sizes M 25.5 to M 67 available
- Standard Polarizing Films in 0.8mm and 0.3mm thickness and high extinction in 0.4mm thickness available
- Edge sealed available on request

Applications

- Scientific Research
- QA
- 3D
- Traffic
- Food & Beverage Inspection
- Mechanical Stress Test
- Automotive
- LCD Technology

Technical Specifications

Filter types	IF AUF, IF MIK, IF AUC, IF AUCR, IFK P-W76 IFK, IFK P-W64 0.4, IFK ZN/L, IFK ZN/R
Surface ¹	5/3 × 0.16
Wave front distortion ¹	13/2 (0.4 – 0.6)
Diameter tolerance	+0 - 0.3 mm

¹ Specification according to ISO 10110

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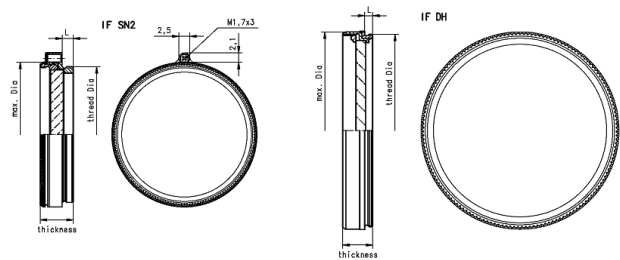
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Linear Glass Polarizers (IF AUF)

Linear Glass Polarizer

Schneider polarizers are designed to fulfill industrial requirements. They are made of dichroic laminated polarizing polymers cemented between 2 slides of protective float glass. Unpolarized light passing a linear polarizing filter will be linear polarized afterwards in the orientation of the polarizing axes of the filter. Crossing the axis blocks nearly all light. Polarizers are sensitive to humidity, therefore we recommend our unmounted filters as edge sealed version.

Linear polarizers are available unmounted in sizes 10 mm to 80 mm diameter and mounted with common thread sizes M 25.5 to M 67. Next to a standard polarizer mount, we offer a special industrial mount with locking screw to fix the position of the polarizer. Custom sizes on request.



Please call us to discuss your OEM and custom requirements.

Key Features

- Extinction Ratio $\geq 20.000:1$
- Uncoated or with MRC AR coating available
- Unmounted or mounted in standard DH or in industrial SN2 mount with locking screw
- Sizes 18 mm to 80 mm diameter.
- Mounted with common thread sizes M 25.5 to M 67 available
- Edge sealed on request

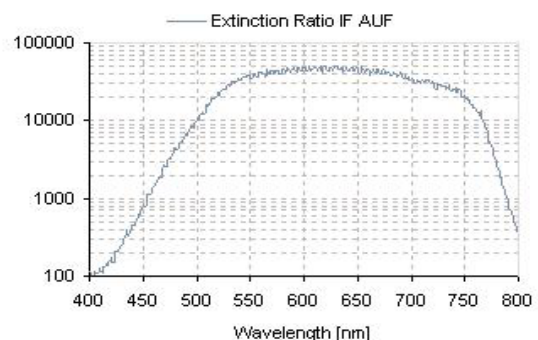
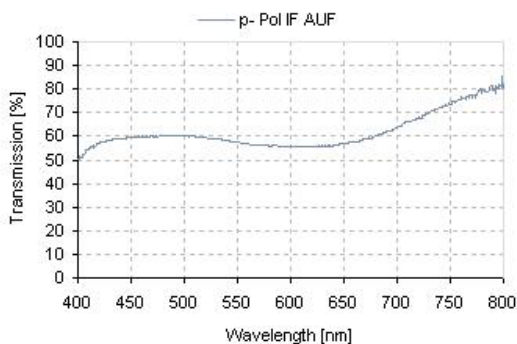
Applications

- Scientific Research
- QA
- 3D
- Traffic
- Food & Beverage Inspection
- Mechanical Stress Test
- Factory Automation

Technical Specifications

Filter type	IF AUF		
Transmittance	$> 50\%$	Wave front distortion ¹	18 - 30mm:13/2 (0.4) 31 - 50mm:13/2 (0.5) 51 - 80 mm:13/2 (0.6)
Extinction Ratio	$\geq 20\,000:1$	Surface ¹	5/2 \times 0.16
Wavelength range	420 nm - 780 nm	Diameter	18 - 80 mm
Thickness	2.7 mm \pm 0 - 0.25 mm	Temperature Range	-20°C – +50°C

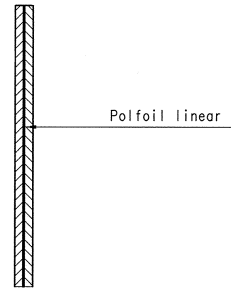
¹ Specification according to ISO 10110 - 13/2 (0.25) on request



Linear Glass Polarizers (IF MIK)

Linear Glass Polarizer

Schneider polarizers are designed to fulfill industrial requirements. They are made of dichroic laminated polarizing polymers cemented between 2 slides of protective glass. Unpolarized light passing a linear polarizing filter will be linear polarized afterwards in the orientation of the polarizing axes of the filter. Crossing the axis blocks nearly all light. IF MIK polarizers feature a high extinction ratio needed for microscopy and metrology applications. Please call us to discuss your OEM and custom requirements.



Key Features

- Extinction Ratio 40.000:1
- 12.5 mm, 16 mm and 46 mm diameter
- F6 glass substrate

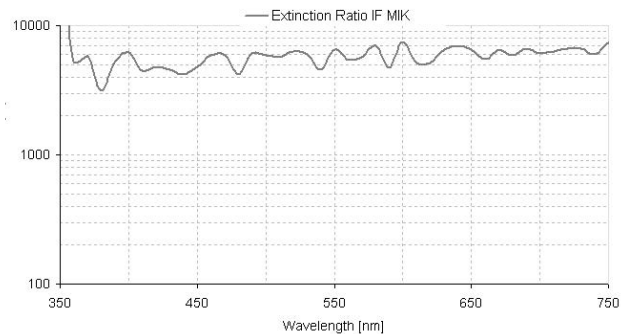
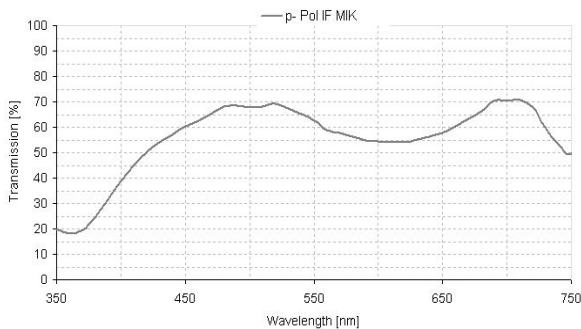
Applications

- Scientific Research
- Microscopy
- Metrology
- Photometry

Technical Specifications

Filter type	IF MIK		
Transmittance	> 50 %	Wave front distortion ¹	13/3 (0.25)
Extinction Ratio	> 4 0000:1	Parallelism	2 arc minute
Wavelength range	420 nm - 750 nm	Diameter	12.5 mm 16mm 46 mm
Thickness	4.3 mm	Temperature Range	-20°C – +70°C
Surface ¹	5/2 × 0.16	Substrate	F6

¹ Specification according to ISO 10110



Circular Glass Polarizers (IF AUCL IF AUCR)

Circular Polarizer

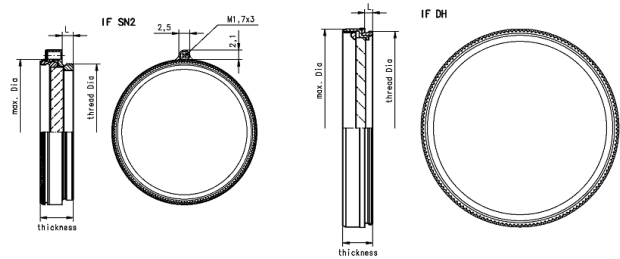
Schneider polarizers are designed to fulfill industrial requirements. They are made of dichroic laminated polarizing polymers cemented between 2 slides of protective glass.

A circular polarizer is a combination of a linear polarizer with a quarter wave retarder. Crossing left handed IF AUCL with right handed IF AUCR blocks nearly all light. Circular polarizers are recommended if optics as mirrors are within the optical path from filter to sensor.

Polarizers are sensitive to humidity, therefore we SK recommends our unmounted filters as edge sealed version.

Circular polarizers are available unmounted in sizes 10 mm to 80 mm diameter and mounted with common thread sizes M 25.5 to M 67. Next to a standard polarizer mount, we offer a special industrial mount with locking screw to fix the position of the polarizer. Custom sizes on request.

Please call us to discuss your OEM and custom requirements.



Key Features

- left and right handed polarizer available
- Extinction Ratio $\geq 20000:1$
- Uncoated or with MRC AR coating available
- Unmounted or mounted in standard DH mount or in industrial SN2 mount with locking screw
- Sizes 10 mm to 80 mm diameter.
- Mounted with common thread sizes M 25.5 to M 67 available
- Edge sealed on request

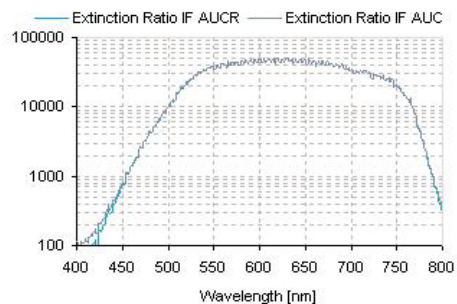
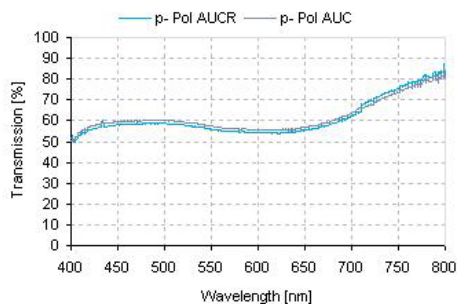
Applications

- Scientific Research
- QA
- 3D
- Traffic
- Food & Beverage Inspection
- Mechanical Stress Test
- Factory Automation
- Microscopy

Technical Specifications

Filter type	IF AUCL, IF AUCR		
Transmittance	$> 50\%$	Wave front distortion ¹	10 - 30mm:13/2 (0.4) 31 - 50mm:13/2 (0.5) 51 - 80 mm:13/2 (0.6)
Extinction Ratio	$\geq 20000:1$	Surface ¹	$5/3 \times 0.16$
Wavelength range	420 nm - 780 nm	Diameter	10 - 80 mm
Thickness	2.7 mm+0 - 0.25 mm	Temperature Range	-20°C - +50°C

¹ Specification according to ISO 10110 - 13/2 (0.25) on request



Linear Polarizing Film (IFK P-W 76, IFK P-W 64)

Linear Polarizing Films

Polarizing Films consist of long chain polymers, which are aligned by a stretching process to produce the polarization effect. The polarizing film is covered on both sides with cellulose triacetate (TAC) for protection and is therefore mechanically stable.

Films with standard and high extinction ratio are available. For standard film 0.8mm and 0.3 mm thickness can be chosen.

Please call us to discuss your OEM and custom requirements.

Key Features

- Standard and high Extinction available
- Standard Film in 0.3 and 0.8mm thickness
- Extinction Ratio up to 40.000:1 for linear
- Sizes up to 438 x 1270 mm

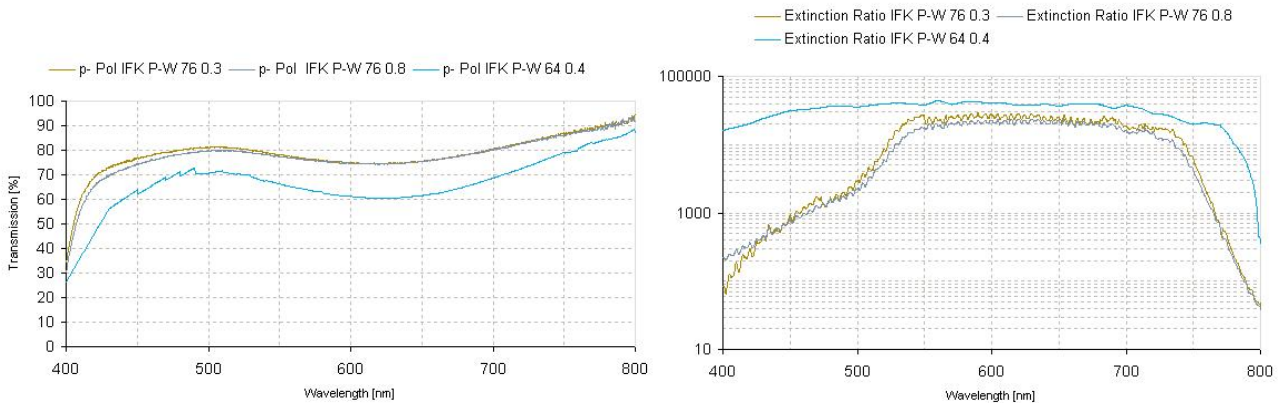
Applications

- Scientific Research
- QA
- 3D
- Traffic
- Food & Beverage Inspection
- Mechanical Stress Test
- Factory Automation
- Illumination

Technical Specifications

Filter type	IFK P-W 76 0.8	IFK P-W 76 0.3	IFK P-W 64 0.4		
Wavelength range	430 nm - 780 nm			Temperature Range	-50°C to + 70 °C
Extinction Ratio	>10.000:1	>10.000:1	~ 40.000:1	Substrate	Cellulose Triacetate (TAC)
Thickness	0.8 mm	0.3 mm	0.4 mm	Transmittance	> 30%
Max Size (mm)	431 x 1270	426 x 1270	559 x 914		

¹ Specification according to ISO 10110



Circular Polarizing Film (IFK ZN/L, IFK ZN/R)

Linear Polarizing Films

Polarizing Films consist of long chain polymers, which are aligned by a stretching process to produce the polarization effect. Combined with a quarter wave retarder, a circular polarizer is achieved. The polarizing film is covered on both sides with cellulose triacetate (TAC) for protection and is therefore mechanically stable.

Films with 0.9 mm and 0.3 mm thickness can be chosen.

Please call us to discuss your OEM and custom requirements.



Key Features

- Standard Film in 0.3 and 0.9 mm thickness
- Extinction Ratio 10.000:1
- Sizes up to 615 x 650 mm

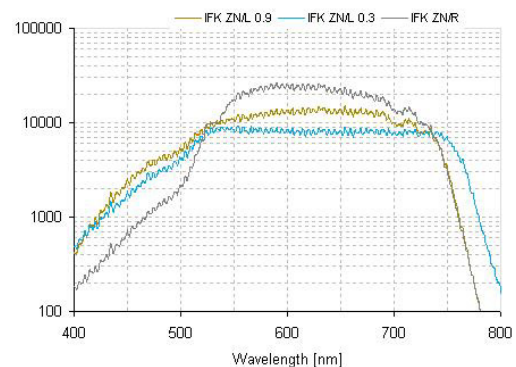
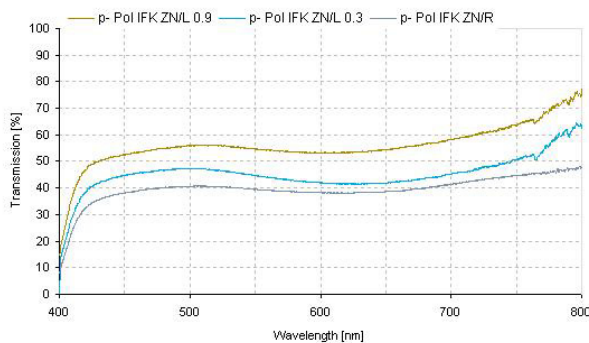
Applications

- Scientific Research
- QA
- 3D
- Traffic
- Food & Beverage Inspection
- Mechanical Stress Test
- Factory Automation
- Illumination

Technical Specifications

Filter type	IFK ZN/L 0.9	IFK ZN/L 0.3	IFK ZN/R 0.3		
Wavelength range	430 nm - 780 nm			Temperature Range	-50°C to + 70 °C
Extinction Ratio	>10.000:1	~10.000:1	>10.000:1	Substrate	Cellulose Triacetate (TAC)
Thickness	0.9 mm	0.3 mm	0.3 mm	Transmittance	> 40 %
Max Size (mm)	406 x 558	615 x 650	615 x 650		

¹ Specification according to ISO 10110



Order Instructions:																										
Mounted filter:	IF																									
Unmounted filter glass:	IFG																									
Film:	IFK																									
Type:	AUF, MIK, AUC, AUR (glass filter) P-W76, P-W64, ZN/L, ZN/R (film)																									
Coating:	MRC (Multi resistant Coating for glass filters)																									
Mount:	DH (standard M- thread mounts) SN2 (industrial M- thread mounts with set screw)																									
Size:	Thread of mount for mounted filters (IF) or In mm for unmounted glass (IFG) and film (IFK)																									
Examples:	<table border="0"> <tr> <td>IFx</td> <td>type</td> <td>coating</td> <td>mount</td> <td>size</td> </tr> <tr> <td>IFK</td> <td>P-W76</td> <td>0.8</td> <td></td> <td>431 x 635</td> </tr> <tr> <td></td> <td>Polarizing Film,</td> <td>linear thickness 0.8,</td> <td></td> <td>431 mm x 635 mm</td> </tr> <tr> <td>IFG</td> <td>AUF</td> <td>MRC</td> <td>SN2</td> <td>35.5</td> </tr> <tr> <td>Mounted Filter</td> <td>linear polarizer</td> <td>MRC AR Coated</td> <td>in M35.5 industrial mount</td> <td></td> </tr> </table>	IFx	type	coating	mount	size	IFK	P-W76	0.8		431 x 635		Polarizing Film,	linear thickness 0.8,		431 mm x 635 mm	IFG	AUF	MRC	SN2	35.5	Mounted Filter	linear polarizer	MRC AR Coated	in M35.5 industrial mount	
IFx	type	coating	mount	size																						
IFK	P-W76	0.8		431 x 635																						
	Polarizing Film,	linear thickness 0.8,		431 mm x 635 mm																						
IFG	AUF	MRC	SN2	35.5																						
Mounted Filter	linear polarizer	MRC AR Coated	in M35.5 industrial mount																							

Part Number	Description	Part Number	Description
1006543	IF AUF DH 025.5	1010313	IF AUF SN2 025.5
1003225	IF AUF DH 027.0	1010314	IF AUF SN2 027.0
1006544	IF AUF DH 030.5	1011655	IF AUF SN2 030.5
1006980	IF AUF DH 035.5	1054941	IF AUF SN2 035.5
1006545	IF AUF DH 037.0	1054942	IF AUF SN2 037.0
1003336	IF AUF DH 040.5	1019304	IF AUF SN2 040.5
1008985	IF AUF DH 043.0	1054943	IF AUF SN2 043.0
1007691	IF AUF DH 046.0	1054944	IF AUF SN2 046.0
1003337	IF AUF DH 049.0	1054945	IF AUF SN2 049.0
1007671	IF AUF DH 052.0	1054120	IF AUF SN2 052.0
1009114	IF AUF DH 058.0	1054946	IF AUF SN2 058.0
1003338	IF AUF DH 067.0	1054947	IF AUF SN2 067.0

1019305	IF AUF MRC DH 025.5	1053421	IF AUF MRC SN2 025.5
1008192	IF AUF MRC DH 027.0	1054935	IF AUF MRC SN2 027.0
1061081	IF AUF MRC DH 035.5	1010194	IF AUF MRC SN2 030.5
1017231	IF AUF MRC DH 037.0	1059333	IF AUF MRC SN2 035.5
1008191	IF AUF MRC DH 046.0	1010311	IF AUF MRC SN2 037.0
1005685	IF AUF MRC DH 052.0	1063384	IF AUF MRC SN2 040.5
1009449	IF AUF MRC DH 058.0	1054936	IF AUF MRC SN2 046.0
1009102	IF AUF MRC DH 062.0	1068232	IF AUF MRC SN2 049.0
		1054937	IF AUF MRC SN2 052.0
		1054939	IF AUF MRC SN2 058.0
		1054940	IF AUF MRC SN2 062.0
		1010171	IF AUF MRC SN2 067.0

Part Number	Description	Part Number	Description
44499	IFG AUF 014.0	1036606	IFG AUF MRC 027.0
1054601	IFG AUF 025.0	1012998	IFG AUF MRC 039.0
1005384	IFG AUF 025.4	35036	IFG AUF MRC 045.0
1064961	IFG AUF 027.0	46903	IFG AUF MRC 048.0
1064962	IFG AUF 039.0	46909	IFG AUF MRC 051.0
1064969	IFG AUF 048.0	44811	IFG AUF MRC 054.0
1064651	IFG AUF 058.0	46927	IFG AUF MRC 058.0
1064970	IFG AUF 068.0	46929	IFG AUF MRC 063.0
1064981	IFG AUF 078.0	46940	IFG AUF MRC 068.0
1067842	IFG AUF 124.50	46945	IFG AUF MRC 073.0
		1006466	IFG AUF MRC 100.0
		1006467	IFG AUF MRC 115.0

1007829	IF AUC MRC DH 025.0	1053422	IF AUC MRC SN2 025.5
1012266	IF AUC MRC DH 027.0	1053800	IF AUC MRC SN2 027.0
1007615	IF AUC MRC DH 030.5	1054931	IF AUC MRC SN2 030.5
1007830	IF AUC MRC DH 037.0	1054932	IF AUC MRC SN2 037.0
1007672	IF AUC MRC DH 049.0	1054331	IF AUC MRC SN2 046.0
1003618	IF AUC MRC DH 067.0	1059332	IF AUC MRC SN2 055.0

1068389	IFG AUCL 025.4	1068392	IFG AUCL 025.4
1064660	IFG AUCL 033.0	1064655	IFG AUCL 033.0
1064671	IFG AUCL 042.0	1064653	IFG AUCL 042.0
1064672	IFG AUCL 048.0	1064656	IFG AUCL 048.0
1064673	IFG AUCL 058.0	1064657	IFG AUCL 058.0
1064674	IFG AUCL 068.0	1064658	IFG AUCL 068.0
1064675	IFG AUCL 078.0	1064659	IFG AUCL 078.0
1017747	IFG AUCL 110.0	1068124	IFG AUCL 140.0
1017748	IFG AUCL 130.0		

1068608	IFG MIK 012.5	43267	IFG MIK 046.0
38002	IFG MIK 016.0		

1067174	IFK P-W 76 0.8 230.0 320.0	1066587	IFK P-W 76 0.3 426.0 1270.0
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1006878	IFK P-W 64 0.4 559.0 914.0	1005887	IFK P-W 64 0.4 050.0 050.0
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1066439	IFK ZN/L 0.3 625.0 615.0	1066440	IFK ZN/L 0.9 420.0 600.0
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