

Neutral Density Filters



ND filters reduce evenly the transmittance of light over the entire VIS spectrum. They decrease the brightness of an image without changing the depth of field (DoF). They attenuate light by absorbing a part of the energy of the VIS wavelength, without influence on the color balance. ND filters are used to control the intensity of light going through an optical system to avoid overexposure, blooming on imaging sensors and prevent damages on light sensitive measuring sensors.

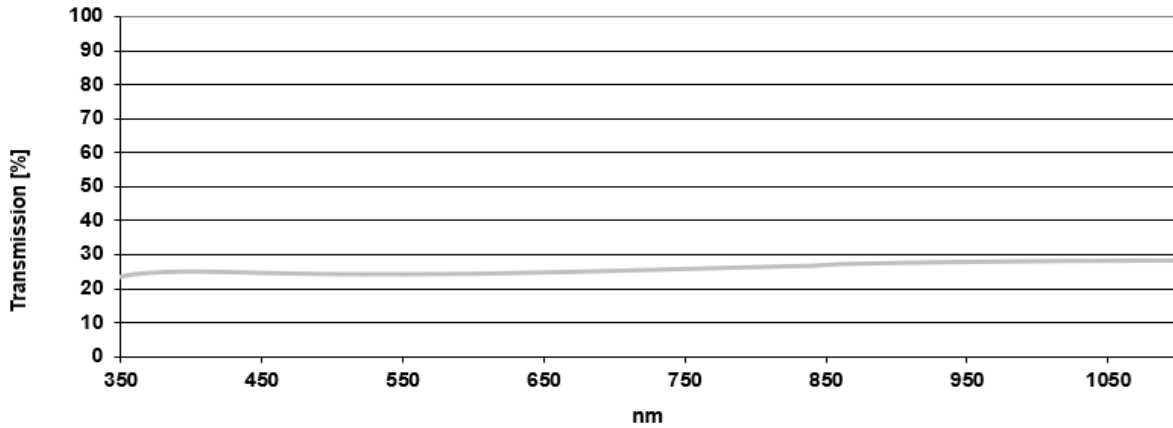


Key features	Applications
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- | | |
|---|--|
| <ul style="list-style-type: none"> • Insensitive to angle of incidence • Decrease brightness without changing DoF • Stackable, combine ND-filters to achieve OD • Even attenuate avoid effects on color balance | <ul style="list-style-type: none"> • Welding • Measuring Instruments • R&D • Laser Measurement |
|---|--|

Standard Products		available on request	
Name	Description	Name	Description
ND 0.6	OD 0.6	ND 102	OD 0.6
ND 0.9	OD 0.9	ND 103	OD 0.9
ND 1.8	OD 1.8	ND 106	OD 1.8
ND 3.0	OD 3.0	ND 110	OD 3.0

ND 0.6



Technical specifications	according to ISO 10110
Optical Density	0.6
Transmittance average	25%
Glass Thickness	1.3 +/- 0.2 mm

Mounted Filter			Unmounted Filterglass		
IF 802 Mount Thickness			IFG 802 Diameter thickness		
Mount	Thickness	ID	Diameter	Thickness	ID
CMT	1.3mm	ID to be defined	22.0 mm	1.3mm	ID to be defined
SH 25.5	1.3mm	ID to be defined	23.0 mm	1.3mm	ID to be defined
SH 27.0	1.3mm	ID to be defined	24.0 mm	1.3mm	ID to be defined
SN1 30.5	1.3mm	ID to be defined	29.0 mm	1.3mm	ID to be defined
SH 34.0	1.3mm	ID to be defined	31.0 mm	1.3mm	ID to be defined
SH 35.5	1.3mm	ID to be defined	33.0 mm	1.3mm	1088941
SH 37.0	1.3mm	ID to be defined	34.0 mm	1.3mm	1089305
SH 39.0	1.3mm	ID to be defined	36.0 mm	1.3mm	1088942
SH 40.5	1.3mm	ID to be defined	38.0 mm	1.3mm	1088943
SH 43.0	1.3mm	ID to be defined	40.0 mm	1.3mm	1088944
SH 46.0	1.3mm	ID to be defined	43.0 mm	1.3mm	1088945
SH 49.0	1.3mm	ID to be defined	46.0 mm	1.3mm	1088946

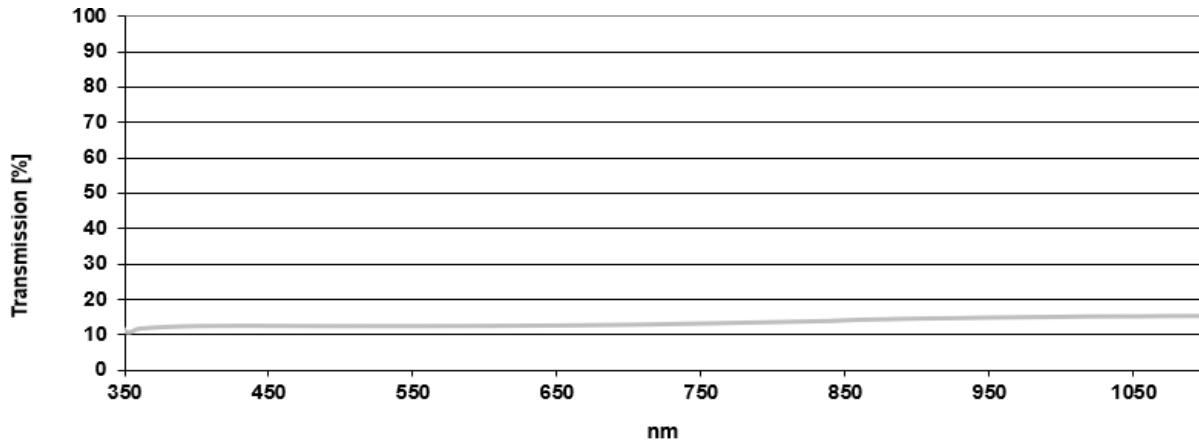
Custom sizes are available on request.

Example: IF 802 SH25.5 1.3

Custom sizes are available on request.

Example: IFG 802 SH25.5 1.3

ND 0.9



Technical specifications	according to ISO 10110
Optical Density	0.9
Transmittance average	12.5 %
Glass Thickness	1.3 +/- 0.2 mm

Mounted Filter			Unmounted Filterglass		
IF 803 Mount Thickness			IFG 803 Diameter thickness		
Mount	Thickness	ID	Diameter	Thickness	ID
CMT	1.3mm	ID to be defined	22.0 mm	1.3mm	ID to be defined
SH 25.5	1.3mm	ID to be defined	23.0 mm	1.3mm	ID to be defined
SH 27.0	1.3mm	ID to be defined	24.0 mm	1.3mm	ID to be defined
SN1 30.5	1.3mm	ID to be defined	29.0 mm	1.3mm	ID to be defined
SH 34.0	1.3mm	ID to be defined	31.0 mm	1.3mm	ID to be defined
SH 35.5	1.3mm	ID to be defined	33.0 mm	1.3mm	1088959
SH 37.0	1.3mm	ID to be defined	34.0 mm	1.3mm	1089306
SH 39.0	1.3mm	ID to be defined	36.0 mm	1.3mm	1088960
SH 40.5	1.3mm	ID to be defined	38.0 mm	1.3mm	1088961
SH 43.0	1.3mm	ID to be defined	40.0 mm	1.3mm	1088962
SH 46.0	1.3mm	ID to be defined	43.0 mm	1.3mm	1088963
SH 49.0	1.3mm	ID to be defined	46.0 mm	1.3mm	1088964

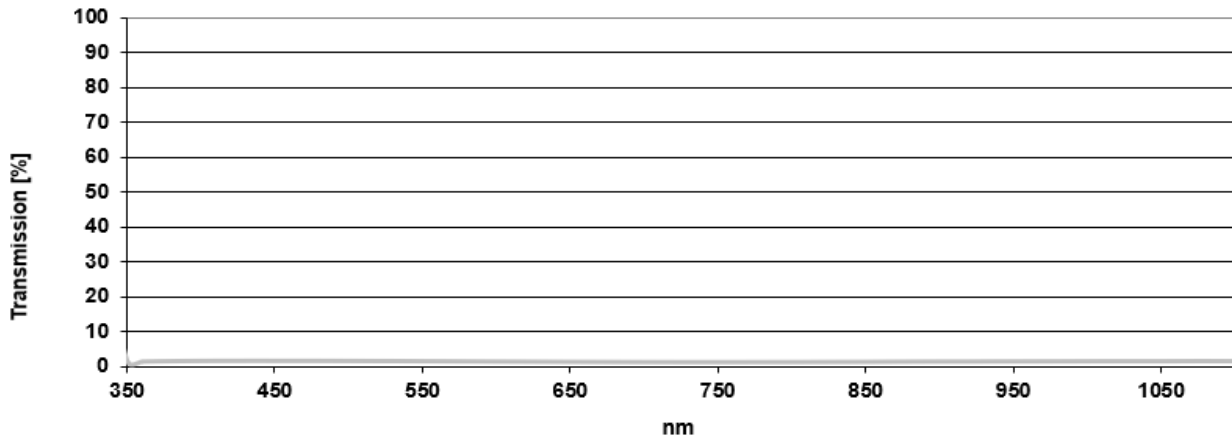
Custom sizes are available on request.

Example: IF 803 SH25.5 1.3

Custom sizes are available on request.

Example: IF G803 SH25.5 1.3

ND 1.8



Technical specifications	according to ISO 10110
Optical Density	1.8
Transmittance average	1.6 %
Glass Thickness	1.3 +/- 0.2 mm

Mounted Filter			Unmounted Filterglass		
IF 806 Mount Thickness			IFG 806 Diameter thickness		
Mount	Thickness	ID	Diameter	Thickness	ID
CMT	1.3mm	<i>ID to be defined</i>	22.0 mm	1.3mm	<i>ID to be defined</i>
SH 25.5	1.3mm	<i>ID to be defined</i>	23.0 mm	1.3mm	<i>ID to be defined</i>
SH 27.0	1.3mm	<i>ID to be defined</i>	24.0 mm	1.3mm	<i>ID to be defined</i>
SN1 30.5	1.3mm	<i>ID to be defined</i>	29.0 mm	1.3mm	<i>ID to be defined</i>
SH 34.0	1.3mm	<i>ID to be defined</i>	31.0 mm	1.3mm	<i>ID to be defined</i>
SH 35.5	1.3mm	<i>ID to be defined</i>	33.0 mm	1.3mm	1088977
SH 37.0	1.3mm	<i>ID to be defined</i>	34.0 mm	1.3mm	1089307
SH 39.0	1.3mm	<i>ID to be defined</i>	36.0 mm	1.3mm	1088978
SH 40.5	1.3mm	<i>ID to be defined</i>	38.0 mm	1.3mm	1088979
SH 43.0	1.3mm	<i>ID to be defined</i>	40.0 mm	1.3mm	1088980
SH 46.0	1.3mm	<i>ID to be defined</i>	43.0 mm	1.3mm	1088981
SH 49.0	1.3mm	<i>ID to be defined</i>	46.0 mm	1.3mm	1088982

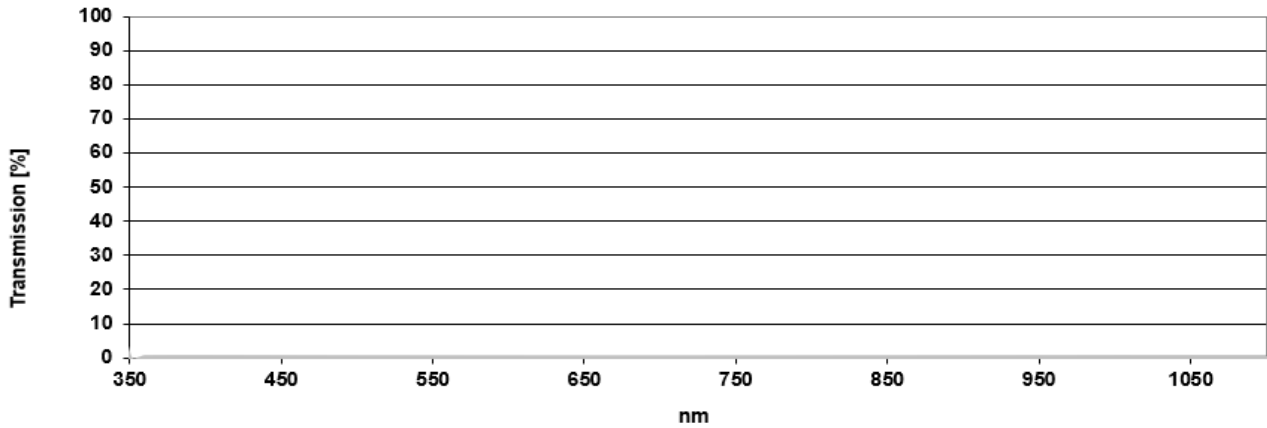
Custom sizes are available on request.

Example: *IF 806 SH25.5 1.3*

Custom sizes are available on request.

Example: *IFG 806 SH25.5 1.3*

ND 3.0



Technical specifications	according to ISO 10110
Optical Density	3.0
Transmittance average	0.15 %
Glass Thickness	1.3 +/- 0.2 mm

Mounted Filter			Unmounted Filterglass		
IF 810 Mount Thickness			IFG 810 Diameter thickness		
Mount	Thickness	ID	Diameter	Thickness	ID
CMT	1.3mm	<i>ID to be defined</i>	22.0 mm	1.3mm	<i>ID to be defined</i>
SH 25.5	1.3mm	<i>ID to be defined</i>	23.0 mm	1.3mm	<i>ID to be defined</i>
SH 27.0	1.3mm	<i>ID to be defined</i>	24.0 mm	1.3mm	<i>ID to be defined</i>
SN1 30.5	1.3mm	<i>ID to be defined</i>	29.0 mm	1.3mm	<i>ID to be defined</i>
SH 34.0	1.3mm	<i>ID to be defined</i>	31.0 mm	1.3mm	<i>ID to be defined</i>
SH 35.5	1.3mm	<i>ID to be defined</i>	33.0 mm	1.3mm	1088996
SH 37.0	1.3mm	<i>ID to be defined</i>	34.0 mm	1.3mm	1089309
SH 39.0	1.3mm	<i>ID to be defined</i>	36.0 mm	1.3mm	1088997
SH 40.5	1.3mm	<i>ID to be defined</i>	38.0 mm	1.3mm	1088998
SH 43.0	1.3mm	<i>ID to be defined</i>	40.0 mm	1.3mm	1088999
SH 46.0	1.3mm	<i>ID to be defined</i>	43.0 mm	1.3mm	1089000
SH 49.0	1.3mm	<i>ID to be defined</i>	46.0 mm	1.3mm	1089001

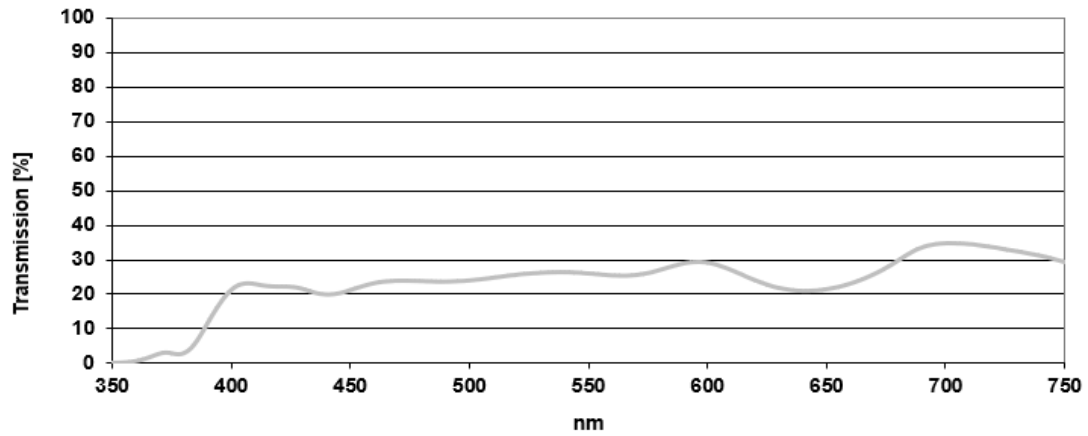
Custom sizes are available on request.

Example: *IF 810 SH25.5 1.3*

Custom sizes are available on request.

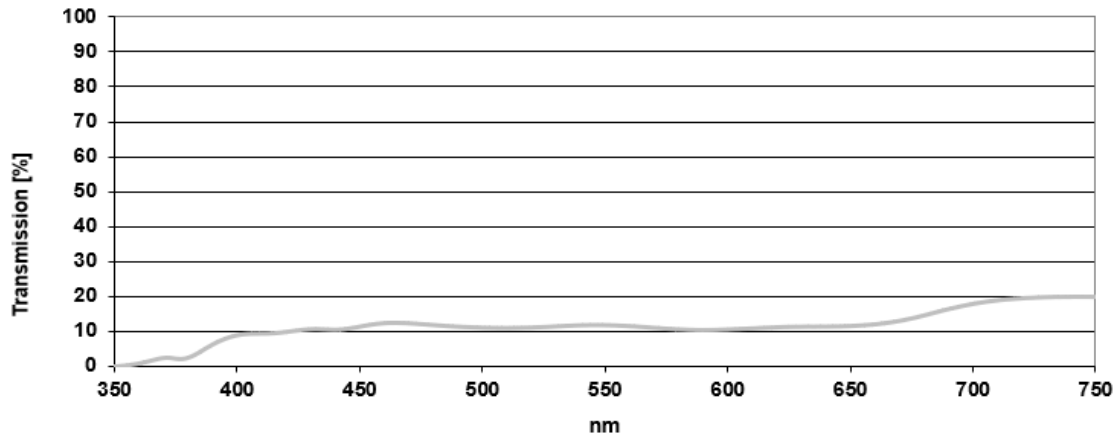
Example: *IFG 810 SH25.5 1.3*

ND 102 - on request



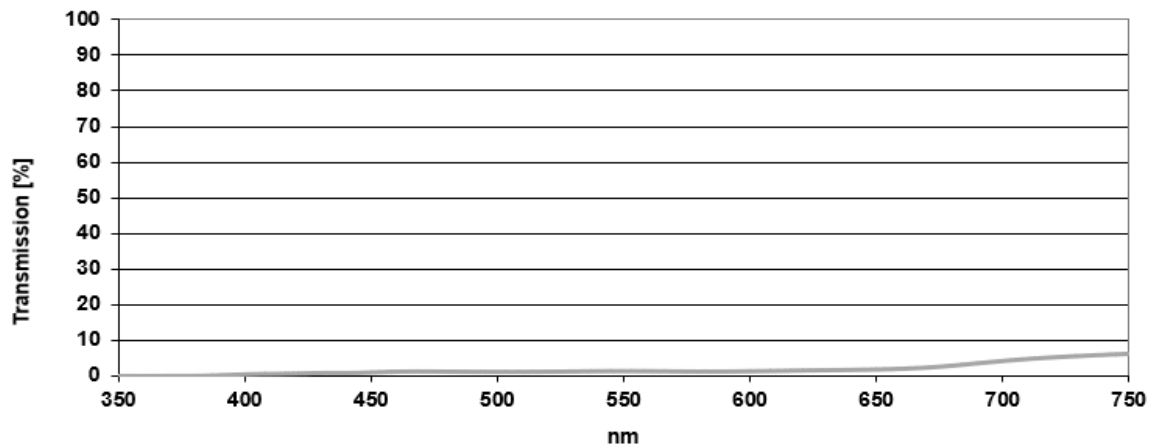
Technical specifications	according to ISO 10110
Optical Density	0.6
Transmittance average	25%
Glass Thickness	2.3 +/- 0.05 mm

ND 103 - on request



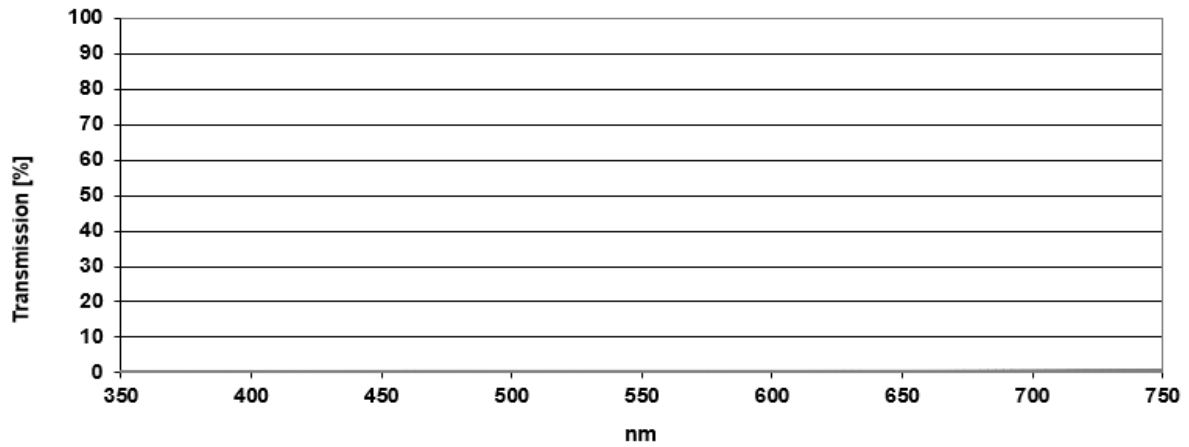
Technical specifications	according to ISO 10110
Optical Density	0.9
Transmittance average	12.5 %
Glass Thickness	1.65 +/- 0.05 mm

ND 106 - on request



Technical specifications	according to ISO 10110
Optical Density	1.8
Transmittance average	1.6 %
Glass Thickness	1.8 +/- 0.05 mm

ND 110 - on request



Technical specifications	according to ISO 10110
Optical Density	3.0
Transmittance average	0.15 %
Glass Thickness	2.15 +/- 0.05 mm

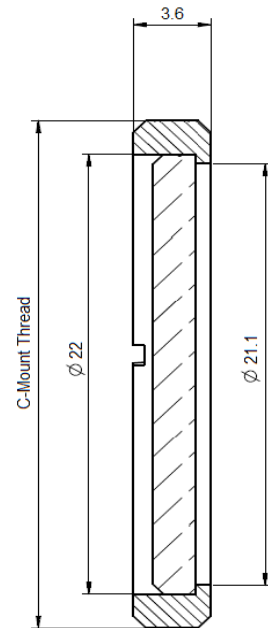
C-Mount

Defined by 1" (25.4mm) diameter and 32 turns per inch pitch, C-Mount thread is a popular camera mount in machine vision industry. Schneider-Kreuznach offers for most filters a CMT mount option. So that filters can go in any C-Mount based mechanics in vision systems. Another popular application, CMT mounts can easily be used for, is placing a filter in front of the sensor into the camera. The extension of the back flange distance has to be considered for imaging applications.

Key features	Applications
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- Fits in C-Mount cameras
- Black Anodized Brass
- To be mounted in C-Mount cameras
- Vision Systems based on C-Mount mechanics

Thread	Diameter	Clear Aperture	Thickness
1" - 32	25.4 mm	21.1 mm	3.6 mm



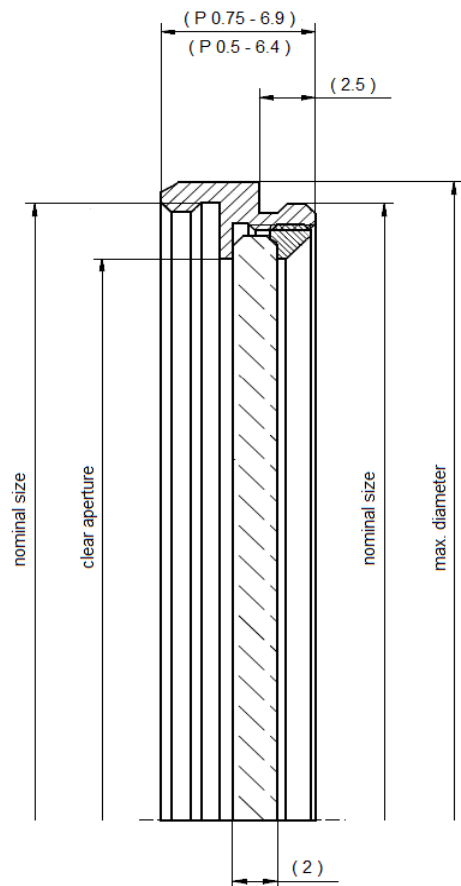
SH-Mount

Schneider-Kreuznach offers a variety of mounts with common thread sizes to fit on most camera lens systems. SH-Mount is the standard, when high flexibility is needed. Filters are held by retainer rings. SH-Mounts are extreme robust. All SH-Mounts have a female and male M-thread, and can be stacked if several filters must be combined.

Key features	Applications
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- Stackable
- Robust
- Black Anodized Brass
- Mounted on lenses in imaging applications
- Mounted on measurement instruments

Thread	Diameter	Clear Aperture	Thickness
M 25.5x0.5	29.5 mm	20.8mm	6.4 mm
M 27.0x0.5	31.0 mm	21.8 mm	6.4 mm
M 35.5x0.5	39.5 mm	29.8 mm	6.4 mm
M 37.0x0.75	41.0 mm	31.8 mm	6.9 mm
M 39.0x0.5	43.0 mm	33.8 mm	6.4 mm
M 40.5x0.5	44.5 mm	35.8 mm	6.4 mm
M 43.0x0.75	47.0 mm	37.8 mm	6.9 mm
M 46.0x0.75	50.0 mm	40.8 mm	6.9 mm
M 49.0x0.75	53.0 mm	43.8 mm	6.9 mm
M 52.0x0.75	56.0 mm	46.8 mm	6.9 mm
M 55.0x0.75	59.0 mm	49.8 mm	6.9 mm
M 58.0x0.75	62.0 mm	52.8 mm	6.9 mm
M 62.0x0.75	66.0 mm	56.8 mm	6.9 mm
M 67.0x0.75	71.0 mm	61.8 mm	6.9 mm



SN1-Mount

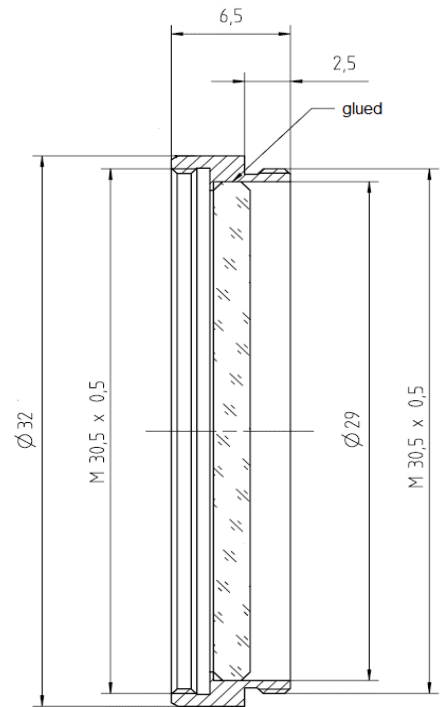
SN1-Mount was designed for in machine vision industry popular M30.5x0.5 thread. With its high clear aperture, vignetting can be avoided, even for wide angle applications. The filter is glued into the mount, in order to secure it against vibrations when integrated into robots or production lines. It is ideal to be used in automated fabrication.

SN1-Mounts have a male and female M-thread, and can be stacked if several filters must be combined.

Key features	Applications
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- | | |
|--|---|
| <ul style="list-style-type: none"> • Maximum Clear Aperture • No vignetting • Stackable • Robust • Black Anodized Brass | <ul style="list-style-type: none"> • Mounted on lenses in imaging applications • Mounted on measurement instruments |
|--|---|

Thread	Diameter	Clear Aperture	Thickness
M 30.5x0.5	32 mm	28 mm	6.5 mm



SN2-Mount

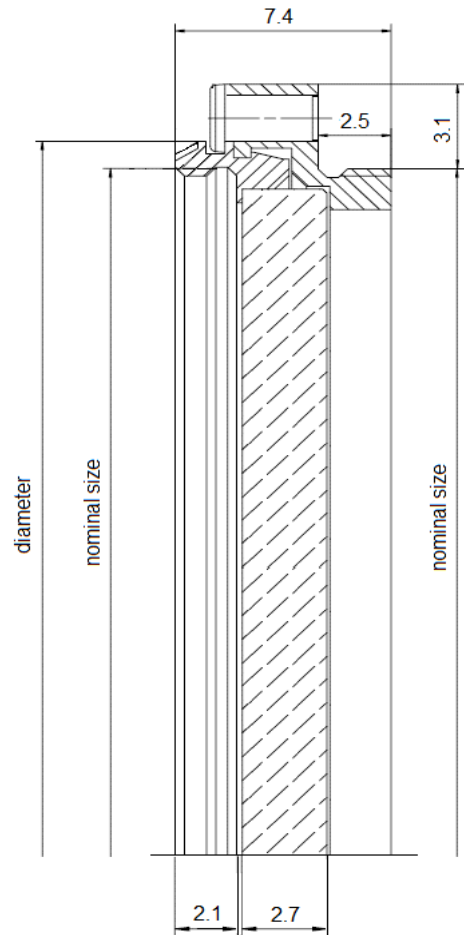
The SN2-Mount is designed for polarizers and achieves highest possible aperture, avoiding vignetting in machine vision systems. Its unique locking mechanism fixes the correct orientation, even in typical industrial environment. The filters are glued into the mount to secure them against vibrations when integrated into robots or production lines. Ideal to be used in automated fabrication.

SN2-Mounts have a female and male M-thread, and can be stacked if several filters must be combined.

Key features	Applications
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- | | |
|--|---|
| <ul style="list-style-type: none"> • Rotatable • High clear Aperture • No vignetting • Stackable • Robust • Black Anodized Brass | <ul style="list-style-type: none"> • Mounted on lenses in imaging applications • Mounted on measurement instruments |
|--|---|

Thread	Diameter	Clear Aperture	Thickness
M 25.5x0.5	27 mm	22.7 mm	7.4 mm
M 27.0x0.5	28.5 mm	23.7 mm	7.4 mm
M 30.5x0.5	32 mm	26.7 mm	7.4 mm
M 35.5x0.5	37 mm	31.7 mm	7.4 mm
M 37.0x0.75	38.5 mm	32.7 mm	7.4 mm
M 40.5x0.5	42 mm	36.7 mm	7.4 mm
M 43.0x0.75	44.5 mm	37.7 mm	7.4 mm
M 46.0x0.75	47.5 mm	41.7 mm	7.4 mm
M 49.0x0.75	50.5 mm	44.7 mm	7.4 mm



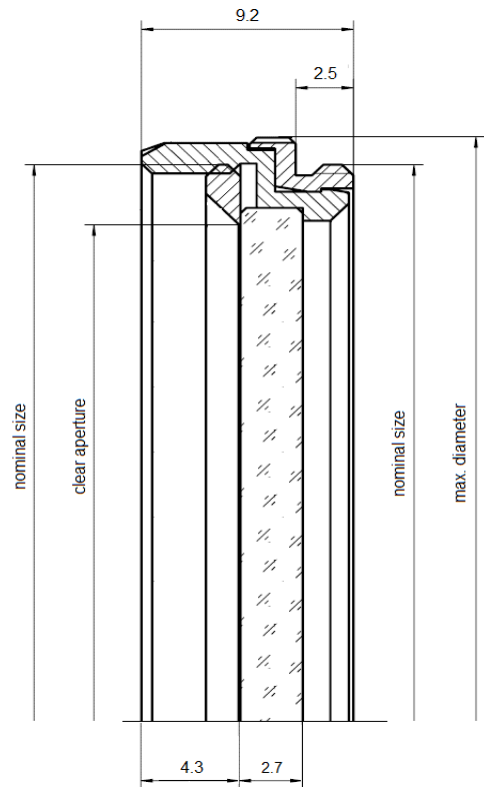
DH-Mount

Schneider-Kreuznach offers a variety of mounts for polarizers with common thread sizes to fit on most camera lens systems. The DH-Mount is rotatable to adjust polarization axis in the required orientation. Filters are held by retainer rings. All DH-Mounts have a female and male M-thread and can be stacked if several filters must be combined.

Key features	Applications
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- Rotatable
- Stackable
- Black Anodized Brass
- Mounted on lenses in imaging applications
- Mounted on measurement instruments

Thread	Diameter	Clear Aperture	Thickness
M 25.5x0.5	27 mm	20.8 mm	9.2 mm
M 27.0x0.5	28.5 mm	21.8 mm	9.2 mm
M 30.5x0.5	32 mm	25.8 mm	9.2 mm
M 35.5x0.5	37 mm	30.8 mm	9.2 mm
M 37.0x0.75	38.5 mm	31.8 mm	9.2 mm
M 40.5x0.5	42 mm	35.8 mm	9.2 mm
M 43.0x0.75	44.5 mm	37.8 mm	9.2 mm
M 46.0x0.75	47.5 mm	40.8 mm	9.2 mm
M 49.0x0.75	50.5 mm	43.8 mm	9.2 mm
M 52.0x0.75	53.5 mm	46.8 mm	9.2 mm
M 55.0x0.75	56.5 mm	49.8 mm	9.2 mm
M 58.0x0.75	59.5 mm	52.8 mm	9.2 mm
M 62.0x0.75	63.5 mm	56.8 mm	9.2 mm
M 67.0x0.75	68.5 mm	61.8 mm	9.2 mm



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