

SWIR Filters



Schneider-Kreuznach magnetron sputtered industrial narrow bandpass filters feature steep slopes for sophisticated applications that require a sharp transition between high transmission and deep blocking at stable cut-on and cut-off wavelengths. The layers are applied by means of magnetron sputtering, a special coating process.

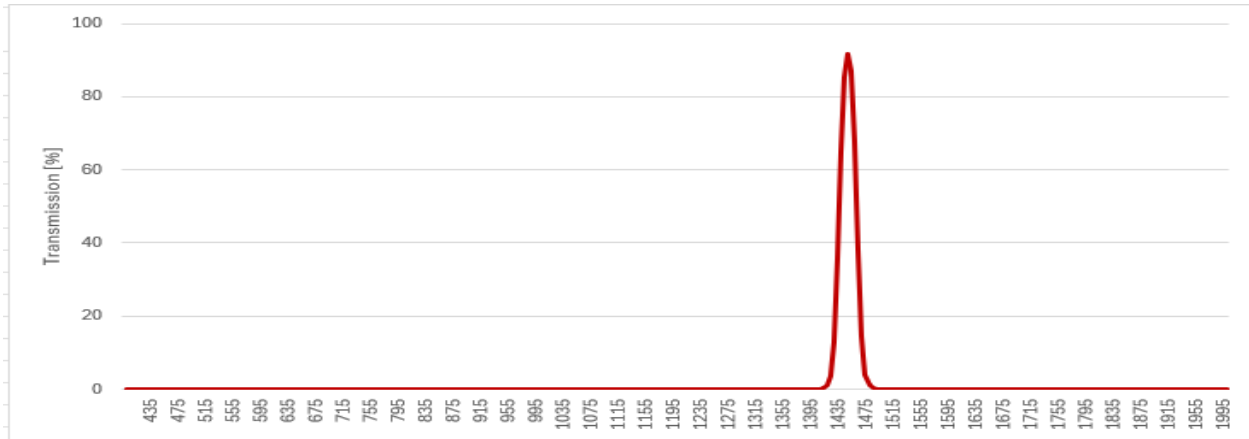
Schneider-Kreuznach narrow bandpass filters are RoHS conform. Custom sizes are available on request.



Key features	Applications
<ul style="list-style-type: none"> • Average transmittance >80% • Steep slopes • Wavelength tolerance +/- 5 nm • Deep blocking / High optical density 	<ul style="list-style-type: none"> • Food and beverage inspection • Agriculture • Mining • Solar inspection • Work of art inspection

Standard Products		available on request	
Name	Description	Name	Description
NBP 1300-25 SWIR	Narrow Bandpass 1287 - 1313 nm		
NBP 1450-25 SWIR	Narrow Bandpass 1437 - 1463 nm		
NBP 1550-35 SWIR	Narrow Bandpass 1532 - 1568 nm		

Narrow Bandpass 1450-25 SWIR



Technical specifications	according to ISO 10110
Angle of incident	0° +/- 8°
Central Wavelength (CWL)	1450 +/- 5nm
Full Width at Half Maximum (FWHM)	25 +/- 5nm
Transmittance	1437 - 1463 nm: T _{abs} > 90%
Blocking	< 1430 nm: T _{abs} < 0.025%
	1470 - 2000 nm: T _{abs} < 0.025%
Wavefront distortion	∅ >18 - 30 mm: 13/ 1(0.25) ∅ >30 - 50 mm: 13/ 1(0.30)
Parallelism	1'
Glass thickness tolerance	1.1 mm +/- 0.08mm

Mounted Industrial Filter [IF]			Unmounted Industrial Filterglass [IFG]		
Mount	Thickness	ID	Diameter	Thickness	ID
CMT	1.1 mm	1110167	22.0 mm	1.1 mm	ID to be defined
SH 25.5	1.1 mm	1110168	23.0 mm	1.1 mm	ID to be defined
SH 27.0	1.1 mm	1110169	24.0 mm	1.1 mm	ID to be defined
SN1 30.5	1.1 mm	1110170	29.0 mm	1.1 mm	ID to be defined
SH 34.0	1.1 mm	1110171	31.0 mm	1.1 mm	ID to be defined
SH 35.5	1.1 mm	1110172	33.0 mm	1.1 mm	ID to be defined
SH 37.0	1.1 mm	1110173	34.0 mm	1.1 mm	ID to be defined
SH 39.0	1.1 mm	1110174	36.0 mm	1.1 mm	ID to be defined
SH 40.5	1.1 mm	1110175	38.0 mm	1.1 mm	ID to be defined
SH 43.0	1.1 mm	1110176	40.0 mm	1.1 mm	ID to be defined
SH 46.0	1.1 mm	1110177	43.0 mm	1.1 mm	ID to be defined
SH 49.0	1.1 mm	1110178	46.0 mm	1.1 mm	ID to be defined

Custom sizes available on request.

Order nomenclature

IF NBP 1450-25 SWIR [Mount] [Thickness]

Example: IF NBP 1450-25 HT SH 25.5 1.1

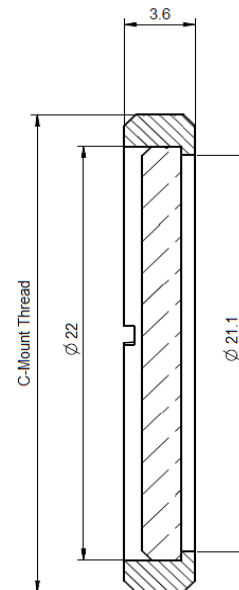
C-Mount

Defined by 1" (25.4mm) diameter and 32 turns per inch pitch, the C-Mount thread is a popular camera mount in machine vision industry. Schneider-Kreuznach offers a CMT mount option for most filters. So filters fit in any C-Mount based mechanics, including the C-Mount thread of a camera. The extension of the back flange distance has to be considered for imaging applications.

Key features	Applications
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|---|---|
| <ul style="list-style-type: none"> • Fits in C-Mount cameras • Robust • Black anodized brass | <ul style="list-style-type: none"> • Mounted in C-Mount camera threads • In vision systems based on C-Mount mechanics |
|---|---|

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



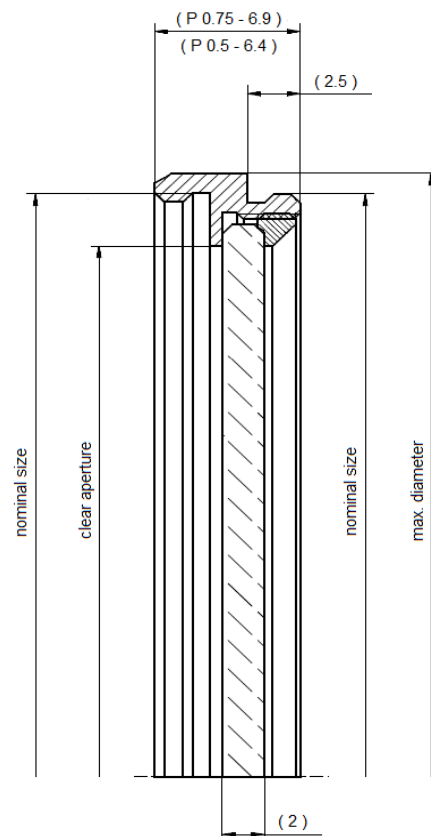
SH-Mount

SH-Mount is the standard thread mount when high flexibility and stability is required. The filter glass is held in place by a retainer ring. SH-Mounts are extremely robust, 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"> • Stackable • Robust • Black anodized brass | <ul style="list-style-type: none"> • Mounted on lenses • Mounted on measurement instruments |
|---|---|

Thread	Diameter	Clear Aperture	Thickness
M 25.5x0.5	27.0 mm	20.8mm	6.4 mm
M 27.0x0.5	28.5 mm	21.8 mm	6.4 mm
M 34.0x0.5	36.0 mm	28.8 mm	6.4 mm
M 35.5x0.5	37.0 mm	30.8 mm	6.4 mm
M 37.0x0.75	39.0 mm	31.8 mm	6.9 mm
M 39.0x0.5	40.5 mm	33.8 mm	6.4 mm
M 40.5x0.5	42.0 mm	35.8 mm	6.4 mm
M 43.0x0.75	45.0 mm	37.8 mm	6.9 mm
M 46.0x0.75	48.0 mm	40.8 mm	6.9 mm
M 49.0x0.75	51.0 mm	43.8 mm	6.9 mm
M 52.0x0.75	54.0 mm	46.8 mm	6.9 mm
M 55.0x0.75	57.0 mm	49.8 mm	6.9 mm
M 58.0x0.75	60.0 mm	52.8 mm	6.9 mm
M 62.0x0.75	64.5 mm	56.8 mm	6.9 mm
M 67.0x0.75	69.5 mm	61.8 mm	6.9 mm

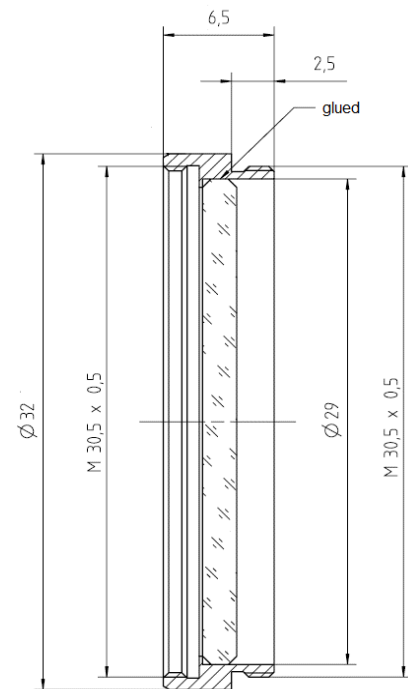


SN1-Mount

The SN1-Mount was designed for the 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. So it is secured 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
<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 • Mounted on measurement instruments

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



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