

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
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- Average transmittance >80%
- Steep slopes
- Wavelength tolerance +/- 5 nm
- Deep blocking / High optical density

- 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 - 1312 nm		
NBP 1450-25 SWIR	Narrow Bandpass 1437 - 1462 nm		
NBP 1550-35 SWIR	Narrow Bandpass 1532 - 1567 nm		

Narrow Bandpass 1550-35 SWIR



Technical specifications	according to ISO 10110
Angle of incident	0° +/- 8°
Central Wavelength (CWL)	1550 +/- 5nm
Full Width at Half Maximum (FWHM)	35 +/- 5nm
Transmittance	1532 - 1568 nm: $T_{abs} > 90\%$
Blocking	< 1530 nm: $T_{abs} < 0.025\%$
	1570 - 2000 nm: $T_{abs} < 0.025\%$
Wavefront distortion	$\varnothing > 18 - 30$ mm: 13/ 1(0.25) $\varnothing > 30 - 50$ mm: 13/ 1(0.30)
Parallelism	1'
Glass thickness tolerance	+/- 0.08mm

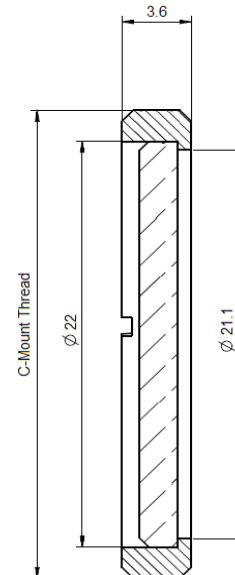
C-Mount

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

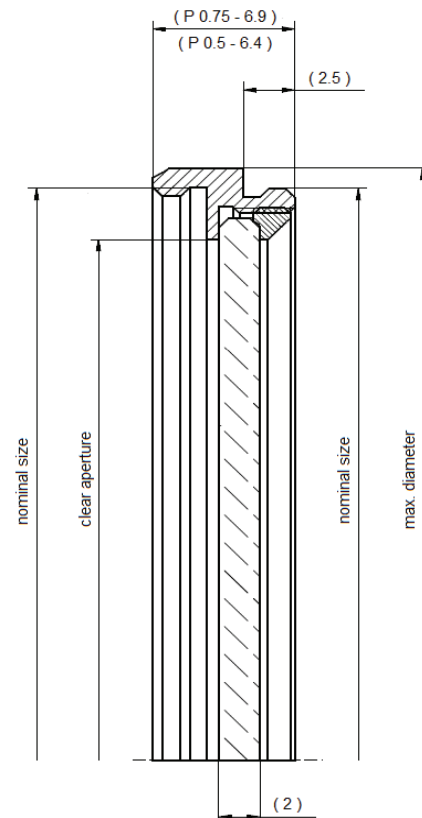
SH-Mount is the standard thread mount when high flexibility and stability is required. The filter glass is held in place by a retainer ring. SH-Mounts are extremely robust, have a female and male M-thread and can be stacked if several filters must be combined.

UV/IR Cut 380 - 650 nm

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	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



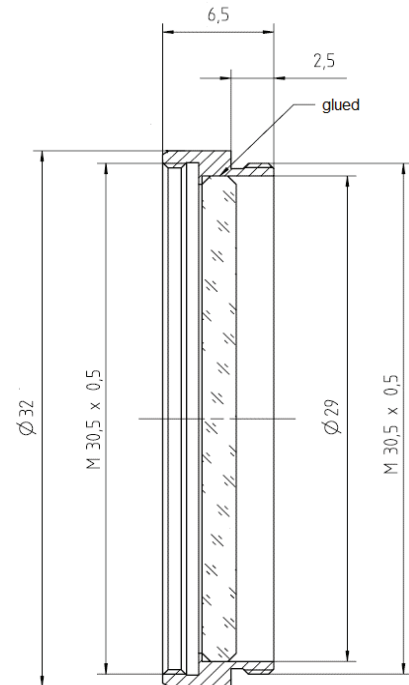
SN1-Mount

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
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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 • Mounted on measurement instruments |
|--|---|

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



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