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

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

Applications

- Food and beverage inspection
- Agriculture
- Mining
- Solar inspection
- Work of art inspection

Standard Products

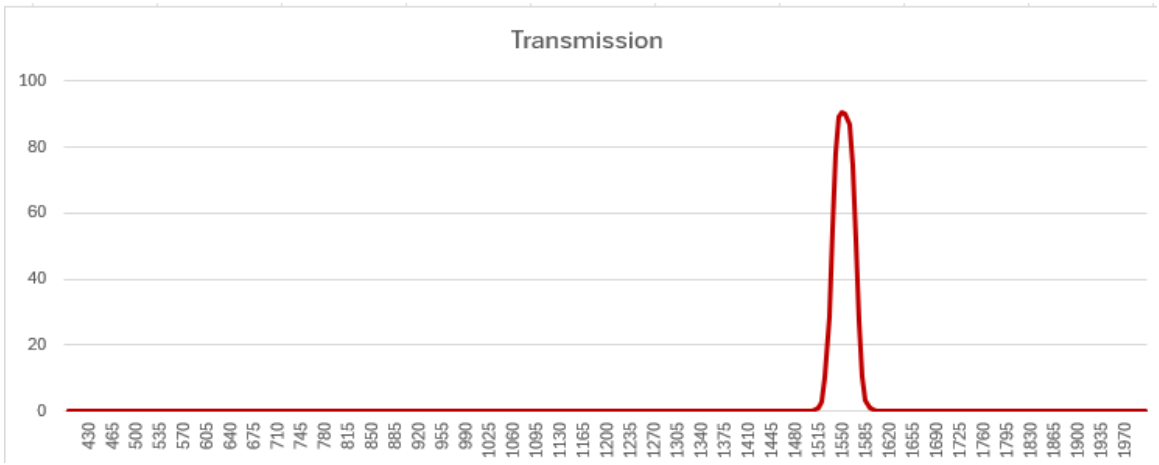
Name	Description
NBP 1300-25 SWIR	Narrow Bandpass 1287 - 1313 nm
NBP 1450-25 SWIR	Narrow Bandpass 1437 - 1463 nm
NBP 1550-35 SWIR	Narrow Bandpass 1532 - 1568 nm

available on request

Name	Description

© Jos. Schneider Optische Werke GmbH | 06/2023 | Jos. Schneider Optische Werke GmbH is certified ISO 9001.
We accept no responsibility for any errors and reserve the right of modification without further notice.

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	Ø >18 - 30 mm: 13/ 1(0.25) | Ø >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	1110179	22.0 mm	1.1 mm	*ID to be defined*
SH 25.5	1.1 mm	1110180	23.0 mm	1.1 mm	*ID to be defined*
SH 27.0	1.1 mm	1110181	24.0 mm	1.1 mm	*ID to be defined*
SN1 30.5	1.1 mm	1110182	29.0 mm	1.1 mm	*ID to be defined*
SH 34.0	1.1 mm	1110183	31.0 mm	1.1 mm	*ID to be defined*
SH 35.5	1.1 mm	1110184	33.0 mm	1.1 mm	*ID to be defined*
SH 37.0	1.1 mm	1110185	34.0 mm	1.1 mm	*ID to be defined*
SH 39.0	1.1 mm	1110186	36.0 mm	1.1 mm	*ID to be defined*
SH 40.5	1.1 mm	1110187	38.0 mm	1.1 mm	*ID to be defined*
SH 43.0	1.1 mm	1110188	40.0 mm	1.1 mm	*ID to be defined*
SH 46.0	1.1 mm	1110189	43.0 mm	1.1 mm	*ID to be defined*
SH 49.0	1.1 mm	1110190	46.0 mm	1.1 mm	*ID to be defined*

Custom sizes available on request.

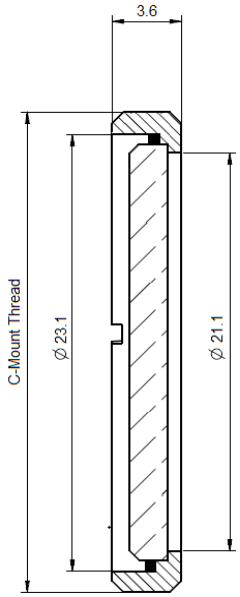
Order nomenclature
IF NBP 1550-35 SWIR [Mount] [Thickness]
Example: IF NBP 1550-35 HT SH 25.5 1.1

© Jos. Schneider Optische Werke GmbH | 06/2023 | Jos. Schneider Optische Werke GmbH is certified ISO 9001.
We accept no responsibility for any errors and reserve the right of modification without further notice.

Mounts

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.

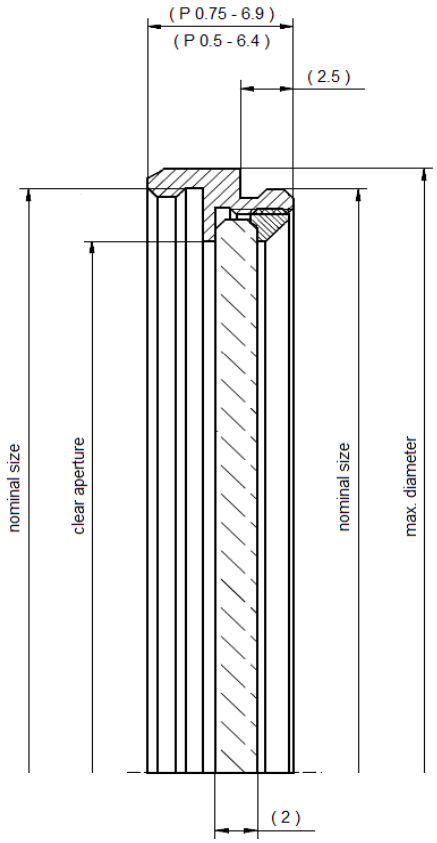


Key features	Applications
• Fits in C-Mount cameras • Robust • Black anodized brass	• Mounted in C-Mount camera threads • In vision systems based on C-Mount mechanics

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 hold 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
• Stackable • Robust • Black anodized brass	• Mounted on lenses • Mounted on measurement instruments

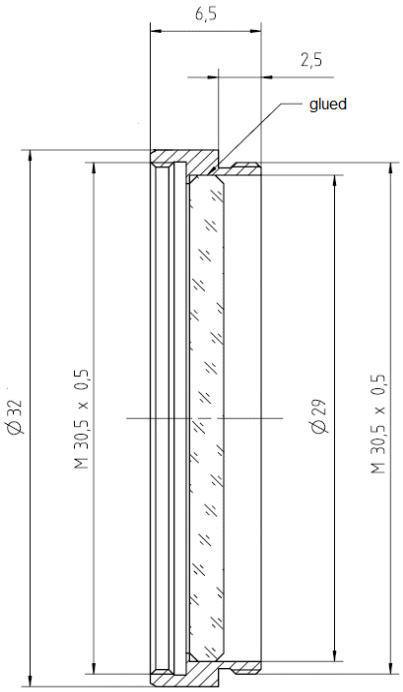
Thread	Diameter	Clear Aperture	Thickness
M 25.5x0.5	27.0 mm	20.8mm	6.4 mm
M 27.0x0.5	28.5 mm	21.8 mm	6.4 mm
M 34.0x0.5	36.0 mm	28.8 mm	6.4 mm
M 35.5x0.5	37.0 mm	30.8 mm	6.4 mm
M 37.0x0.75	39.0 mm	31.8 mm	6.9 mm
M 39.0x0.5	40.5 mm	33.8 mm	6.4 mm
M 40.5x0.5	42.0 mm	35.8 mm	6.4 mm
M 43.0x0.75	45.0 mm	37.8 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

© Jos. Schneider Optische Werke GmbH | 06/2023 | Jos. Schneider Optische Werke GmbH is certified ISO 9001.
We accept no responsibility for any errors and reserve the right of modification without further notice.

Mounts

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
• Maximum clear aperture • No vignetting • Stackable • Robust • Black anodized brass	• Mounted on lenses • Mounted on measurement instruments

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

© Jos. Schneider Optische Werke GmbH | 06/2023 | Jos. Schneider Optische Werke GmbH is certified ISO 9001.
We accept no responsibility for any errors and reserve the right of modification without further notice.

Contact

Headquarters Europe

Jos. Schneider Optische Werke GmbH
Ringstraße 132
55543 Bad Kreuznach
+49 671 601 205
isales@schneiderkreuznach.com
www.schneiderkreuznach.com

Offices Worldwide

America
+1 800 645 7239 (East Coast)
+1 800 228 1254 (West Coast)
info@schneideroptics.com

Asia
+86 755 8832 1170
info@schneider-asiapacific.com

© Jos. Schneider Optische Werke GmbH | 06/2023 | Jos. Schneider Optische Werke GmbH is certified ISO 9001.
We accept no responsibility for any errors and reserve the right of modification without further notice.