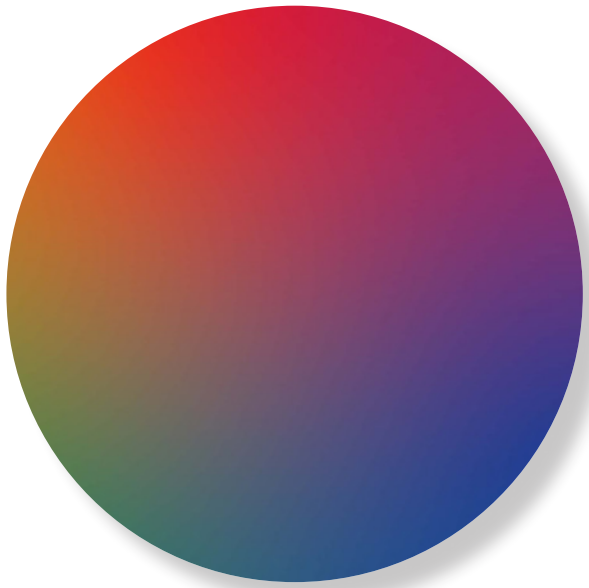


# Macroporous silicon bandpass filters & windows for MWIR and LWIR



## Rule-breaking technology

MAPSI is revolutionizing MWIR and LWIR filtering by introducing a novel silicon-based technology, diverging from conventional multilayer approaches. By integrating our filters, you'll have a more compact, reliable, and less power-consuming product to offer your own customers.

## Enhanced mechanical robustness

Our unique technology provides increased mechanical resilience, making our filters suitable for use in demanding environments characterized by high temperatures and humid conditions.

## Improved optical performance

By employing our innovative approach, we can achieve superior optical response compared to traditional methods, ensuring higher efficiency and accuracy in detection.

## Environmental consciousness

Beyond innovation and performance, we are committed to sustainability. Our eco-friendly manufacturing process reduces environmental impact.

## Customized solutions

MAPSI manufactures custom filters in small batches (if required) at a very competitive price.

## Bringing the infrared detection to a new era.

We are here to change the rules of MWIR and LWIR filtering using novel silicon-based technology, avoiding multilayers.

Our solution is based on the principle of „less is more“. Instead of adding layers above the substrate, we remove part of it with nanometrical holes. This provides greater mechanical robustness for harsh environments, such as high temperatures and high humidity applications. Additionally, we achieve a better optical response.

We address the infrared sensing market, specifically gas detection and thermal vision, which requires reliable, durable, accurate, and user-friendly detection in both common and harsh environments. Furthermore, we reduce environmental impact thanks to our eco-friendly manufacturing process.

At Mapsi Photonics, we are committed to research and innovation. We thrive on being disruptive and finding the most efficient solutions.



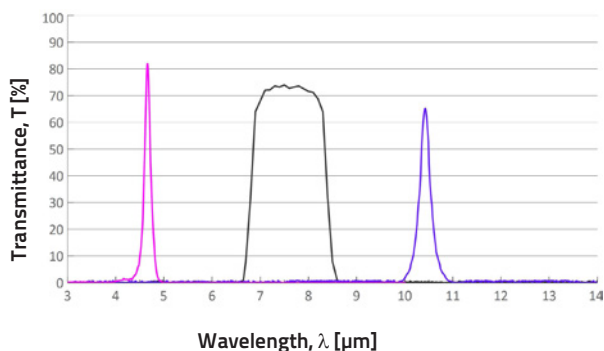
# Macroporous silicon bandpass filters & windows for MWIR and LWIR

## Bandpass filter specification

Part number	CWL [nm]	CWL tolerance	FWHM	FWHM tolerance	Transmittance T [%]	Thickness [mm]
NBP_3400_120	3400	± 25	120	± 15	> 80	1
NBP_3400_160	3400	± 25	160	± 20	> 80	1
NBP_3920_90	3920	± 30	90	± 10	> 80	1
NBP_4250_90	4250	± 20	90			1
NBP_4650_160	4650	± 35	160	± 20	> 75	1
NBP_5300_160	5300	± 40	160	± 20	> 65	1
NBP_7350_200	7350	± 55	200	± 25	> 70	1
WBP_7625_1500	7625	± 60	1500	± 90	> 75	1
NBP_8570_200	8570	± 65	200	± 25	> 60	1
NBP_9650_260	9650	± 75	260	± 35	> 70	1
NBP_10500_250	10500	± 80	250	± 35	> 65	0.3-1

## Bandpass filters references

We offer a wide range of optical filters with precise specifications and strict tolerances, guaranteeing high quality and consistent performance.

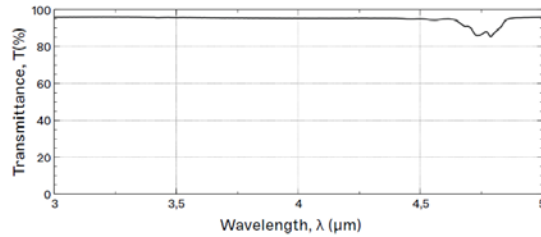


# Macroporous silicon bandpass filters & windows for MWIR and LWIR

## Window specifications

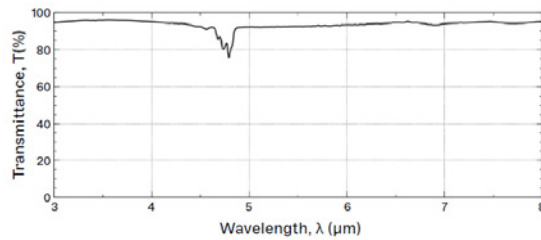
Part number  
BBAR 3\_5

Average transmittance 95%



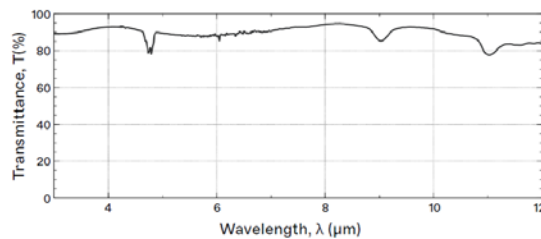
Part number  
BBAR 3\_8

Average transmittance 95%



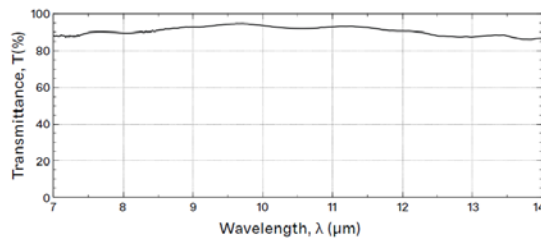
Part number  
BBAR 3\_12

Average transmittance 92%



Part number  
BBAR 7\_14

Average transmittance 92%



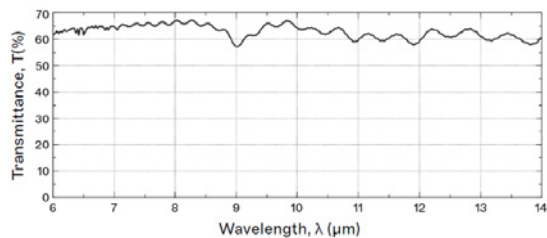
# Macroporous silicon bandpass filters & windows for MWIR and LWIR

## Neutral density filters specification

Part number  
ND\_0.2

Blocking range 4000-25000

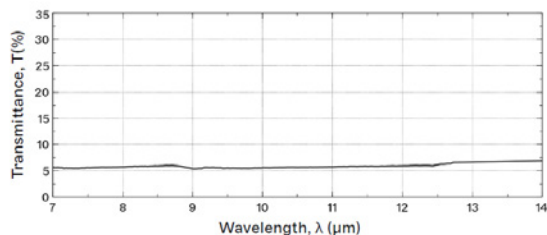
Optical density 0.2



Part number  
ND\_1.3

Blocking range 5500-25000

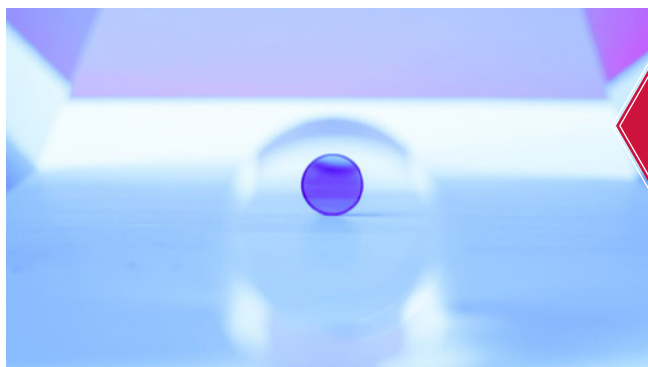
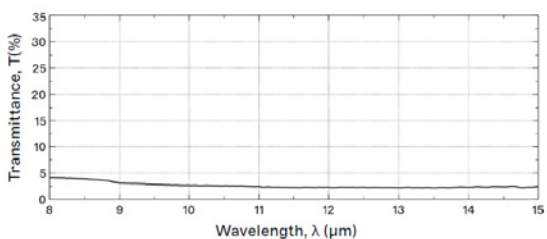
Optical density 1.3



Part number  
ND\_1.6

Blocking range 7000-20000

Optical density 1.6



### Design your own filter

Need more than a standard filter?

We understand your unique requirements.

Draw your custom filter, and MAPSI will design and manufacture it for you!

Contact us.