

# TECHNICAL NOTE

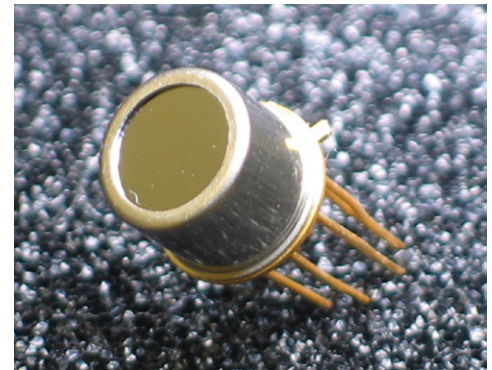
## PERMANENT AND REMOVABLE IR AND THz WINDOWS FOR OUR QS PYROELECTRIC DETECTORS



For some applications, it may be useful to use an IR or THz window with our broadband (0.1  $\mu\text{m}$  to 3000  $\mu\text{m}$ ) pyroelectric detectors. The windows we offer are typically 0.5 mm thick. In the photo on the left, it is possible to see the components that make up our QW quartz "removable window". This technical note will give you more information about these components.

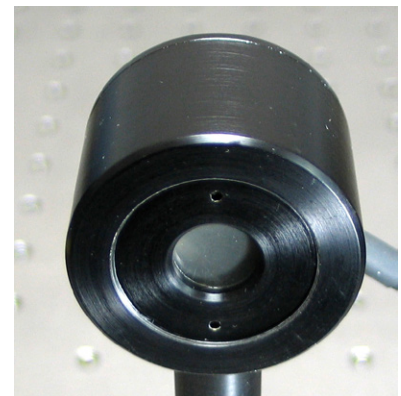
### PERMANENT WINDOWS

The permanent windows can be used with any product of our QS series of discrete and hybrid pyroelectric detectors. There are two sizes available, one for TO5 (x5) detectors and one for TO8 (x8) detectors. The permanent windows are glued into a TO can and then bonded to the TO header of the detector. In the photo on the right, it is possible to see a **S5** silicon window combined with one of our detectors.



### REMOVABLE WINDOWS

The removable windows can be used with any of our pyroelectric UM-B, THz-B and THz-I-BNC detectors. They are mounted in a 25 mm holder, are designed to be inserted into the front bezel of these detectors with the appropriate spacer, and are held in place by the front aperture plate. In the photo on the right, it is possible to see a **TPXW** window added to our THZ9B-BL-DZ detector.

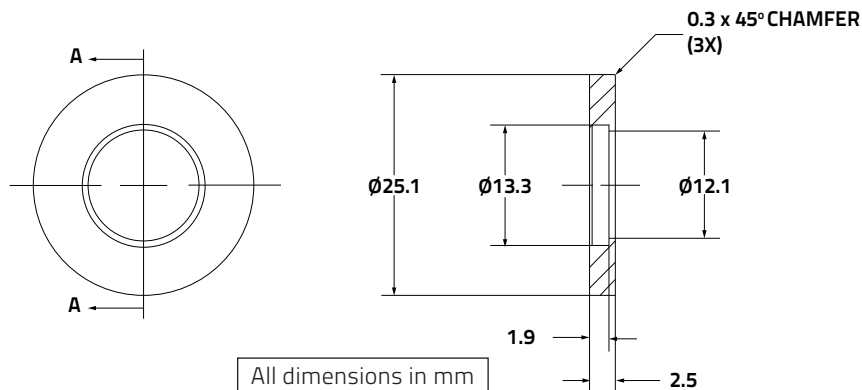


# TECHNICAL NOTE

TABLE 1: LIST OF ALL AVAILABLE WINDOWS

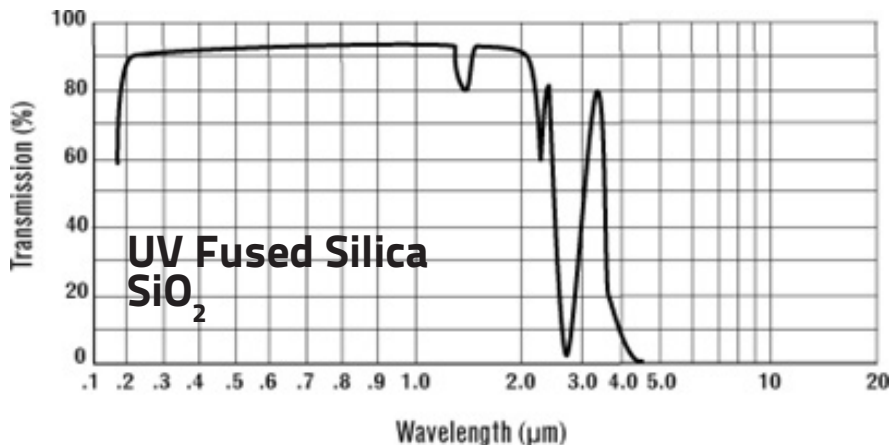
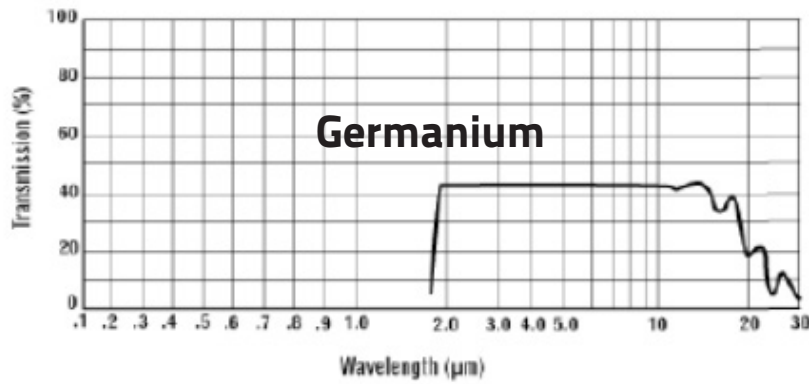
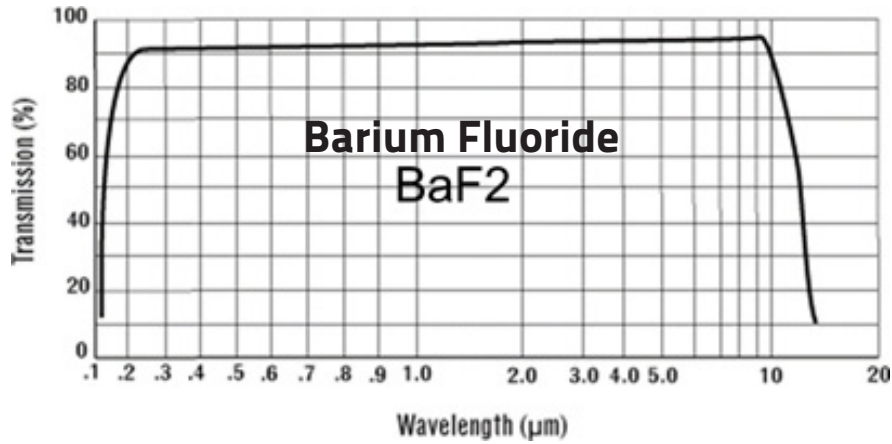
PERMANENT	REMOVABLE	MATERIAL	SPECTRAL RANGE (TYP.)
B5 or B8	BW	Barium Fluoride	0.2 – 17.5 $\mu\text{m}$
G5 or G8	GW	Germanium	8 – 14 $\mu\text{m}$
Q5 or Q8	QW	UV Grade Quartz	0.25 – 3.0 $\mu\text{m}$
S5 or S8	SW	Sapphire	0.1 – 7 $\mu\text{m}$
Si5 or Si8	SiW	Silicon ( $\text{OC}_2$ )	1.1 – 9 $\mu\text{m}$ and 50 – 1000 $\mu\text{m}$
Z5 or Z8	ZW	Zinc Selenide	0.6 – 22 $\mu\text{m}$
	SCQW	Single Crystal Quartz	0.2 to 3 $\mu\text{m}$ and 50 – 3000 $\mu\text{m}$
	PEW	High Density Polyethylene	10 – 1000 $\mu\text{m}$
	TPXW	Rexolite	50 – 2000 $\mu\text{m}$
	HRSFW	Silicon (HRSF)	30 – 1000 $\mu\text{m}$

## REMOVABLE WINDOW MECHANICAL DIAGRAM



# TECHNICAL NOTE

## RELATIVE SPECTRAL CURVES FOR IR WINDOWS



# TECHNICAL NOTE

MONITORS

ENERGY DETECTORS

POWER DETECTORS

HIGH POWER DETECTORS

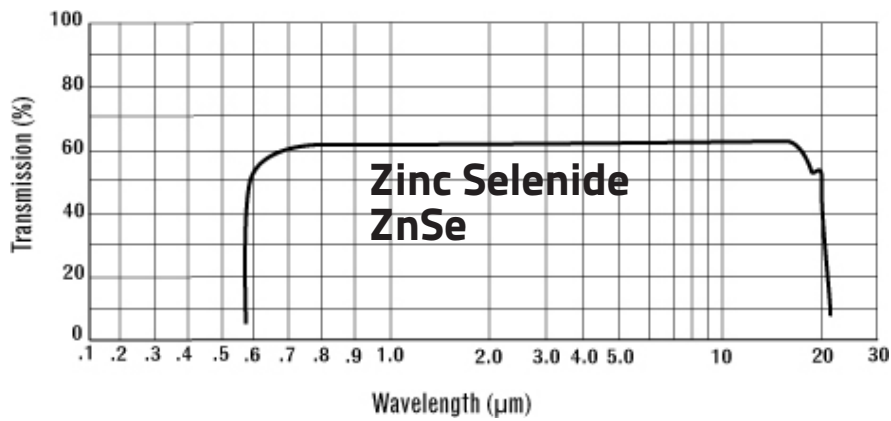
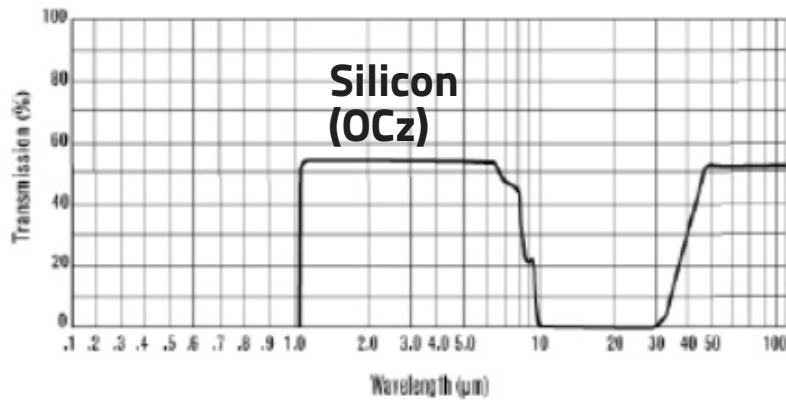
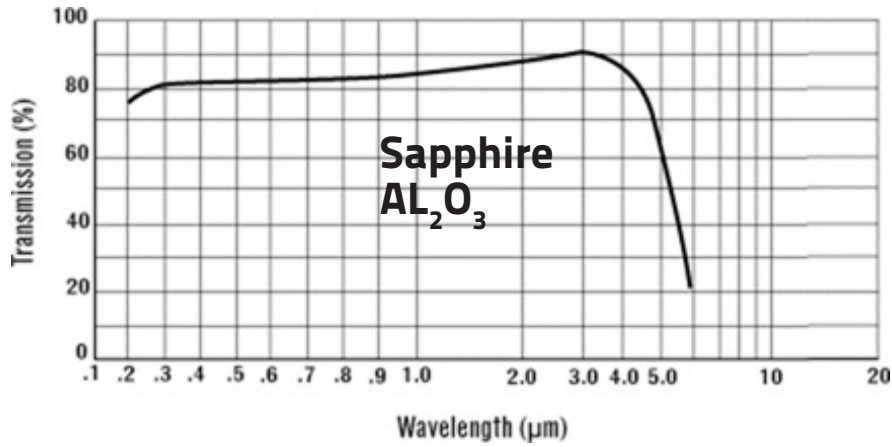
PHOTO DETECTORS

THZ DETECTORS

OEM DETECTORS

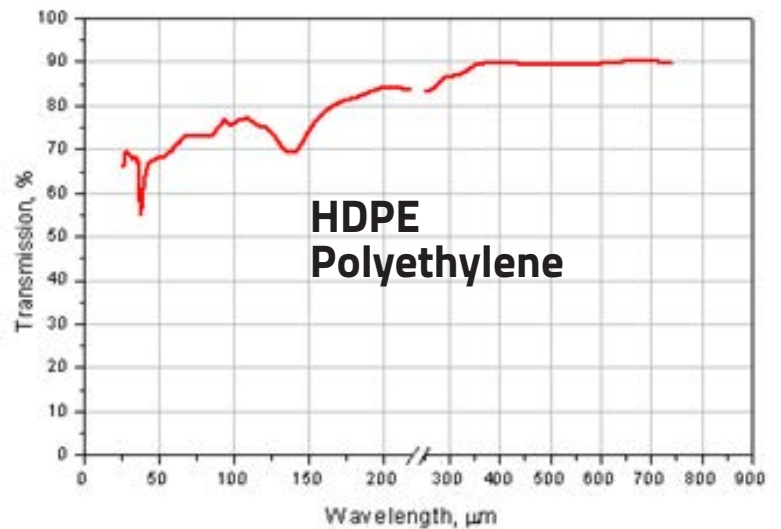
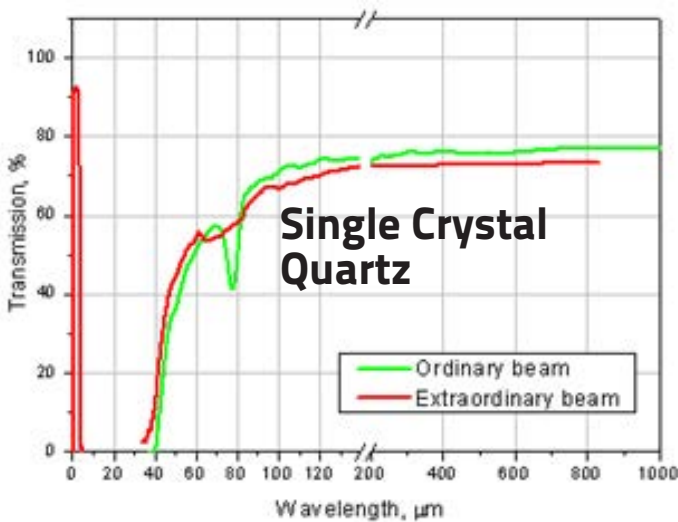
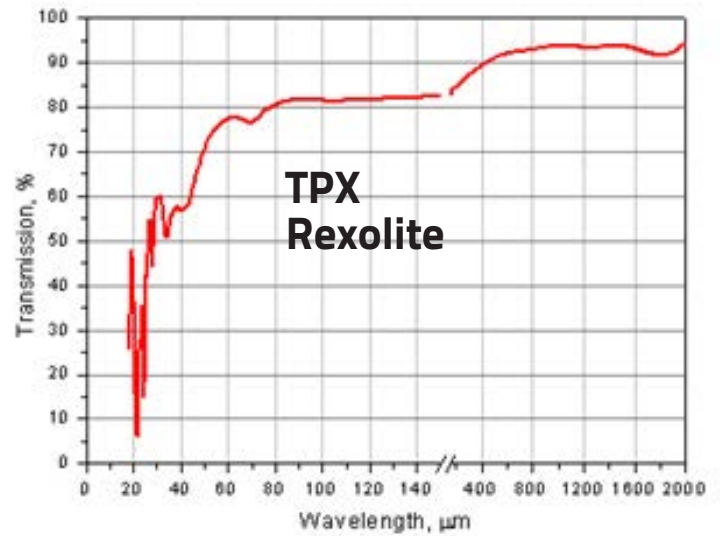
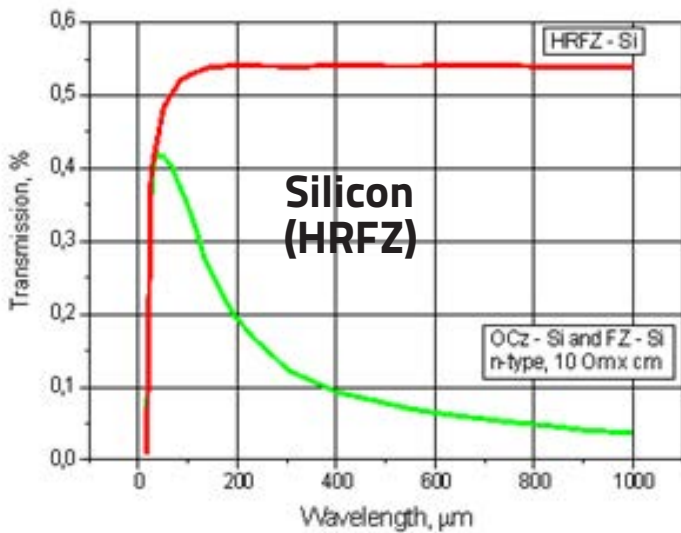
SPECIAL PRODUCTS

BEAM DIAGNOSTICS



# TECHNICAL NOTE

## RELATIVE SPECTRAL CURVES FOR THZ WINDOWS



### NOTE:

The relative spectral transmission values presented in this technical note are approximate values. They will vary depending on window thickness and material quality.

References: [www.tydex.ru](http://www.tydex.ru) and [www.rmico.com](http://www.rmico.com)