

Crystal window/ filter for pyroelectric detector

Custom-designed filters or windows are available

Standard crystal windows:

Window / Filter Description	Band Pass Wavelength	Typical peak Transmission	Typical Average Transmission	Standard thickness	Ultra-thin thickness	Environment resistance	Cost
Sapphire	0.3 - 7.0 μm	90%	85%	0.5 mm	0.3 mm	good	Normal
Polycrystalline Spinel	0.3 - 6.0 μm	85%	85%	0.5 mm	0.3 mm	good	cheap
Polycrystalline MgF_2	0.7 - 9.0 μm	85%	85%	0.6 mm	0.4 mm	Normal	cheap
BaF_2 (Barium Fluoride)	0.2 -17.5 μm	91%	91%	0.6 mm	0.4 mm	Normal	Normal
CaF_2 (Calcium Fluoride)	0.2-12.5 μm	90%	90%	0.4 mm	0.2 mm	Normal	cheap
UV Quartz glass	0.15 - 2.6 μm 2.75 - 4.8 μm	85%	70%	0.5 mm	0.1 mm	Normal	cheap
ZnSe (Zinc Selenide)	0.58 - 22 μm	70%	68%	1.0 mm	0.5 mm	Normal	expensive
ZnS (Zinc Sulfide)	1.0 -15 μm	75%	68%	1.0 mm	0.5 mm	Normal	expensive
KBr (Potassium Bromide, protected)	0.2 - 30 μm	90%	90%	0.8 mm	0.4 mm	poor	Normal
CsI (Cesium iodide, protected)	0.3 - 50 μm	80%	80%	0.8 mm	0.4 mm	poor	Normal
Uncoated Ge	1.8 - 30 μm	45%	45%	1.0 mm	0.5 mm	Normal	Normal
8-14 μm Ge (DLC protected)	8 -14 μm	92%	75%	1.0 mm	0.5 mm	good	expensive
8-14 μm ZnSe (DLC protected)	8 -14 μm	95%	90%	1.0 mm	0.5 mm	good	expensive
3-12 μm ZnSe	3 -12 μm	92%	90%	1.0 mm	0.5 mm	Normal	expensive
5-20 μm ZnSe	5 -20 μm	90%	80%	1.0 mm	0.5 mm	Normal	expensive

Standard silicon windows:

Window / Filter Description	Band Pass Wavelength	Typical peak Transmission	Typical Average Transmission	Standard thickness	Ultra-thin thickness	Environment resistance	Cost
Uncoated Si	1.1-9µm 9-300µm	50% 20%	40% 10%	0.5 mm	0.3 mm	Good	cheap
Si ARC 2-5	2-5 µm	95%	95%				Normal
Si ARC 3-14	3-14 µm	80%	75%				
Si LWP 5.3	6-15µm	95%	70%				
Si LWP 6.5	7-14 µm	95%	70%				
Si LWP7.3	8-15 µm	95%	70%				
8-14 µm Si (DLC protected)	8-14 µm	90%	80%				
5-20 µm Si	5-20 µm	70%	60%				

Standard crystal windows in stock:

Sapphire window

Description
Φ2.57 × 0.5 mm
Φ3.80 × 0.5 mm
Φ6.20 × 0.5 mm
Φ6.35 × 1.0 mm
Φ6.50 × 1.5 mm
Φ8.00 × 0.6 mm

Description
Φ9.50 × 0.5 mm
Φ10.5 × 1.0 mm
Φ12.7 × 0.5 mm
Φ12.7 × 1.0 mm
Φ18.0 × 0.4 mm
Φ24.5 × 0.3 mm

Description
Φ25.4 × 0.3 mm
Φ35.0 × 0.3 mm

BaF2 windows

Description

Φ2.57 × 0.4 mm

Φ3.80 × 0.4 mm

Φ6.50 × 0.4 mm

Φ9.00 × 0.4 mm

Description

Φ12.7 × 0.4 mm

Φ19.0 × 0.7 mm

Φ25.4 × 0.7 mm

CaF2 windows

Description

Φ2.57 × 0.4 mm

Φ3.80 × 0.4 mm

Φ6.50 × 0.4 mm

Φ9.00 × 0.4 mm

Description

Φ12.7 × 0.4 mm

Φ19.0 × 0.7 mm

Φ25.4 × 0.7 mm

UV Quartz Windows

Description

Φ2.57 × 0.5 mm

Φ3.80 × 0.5 mm

Φ6.50 × 0.5 mm

Φ9.00 × 0.5 mm

Description

Φ12.7 × 0.5 mm

Φ19.0 × 0.5 mm

Φ25.4 × 0.5 mm

ZnSe windows

Description

Φ2.57 × 1.0 mm

Φ3.80 × 1.0 mm

Φ6.50 × 1.0 mm

Φ9.00 × 1.0 mm

Description

Φ12.7 × 1.0 mm

Φ19.0 × 1.0 mm

Φ25.4 × 1.0 mm

ZnS windows

Description

Φ2.57 × 1.0 mm

Φ3.80 × 1.0 mm

Φ6.50 × 1.0 mm

Φ9.00 × 1.0 mm

Description

Φ12.7 × 1.0 mm

Φ19.0 × 1.0 mm

Φ25.4 × 1.0 mm

KBr windows

Description

Φ2.57 × 0.8 mm

Φ3.80 × 0.8 mm

Φ6.50 × 0.8 mm

Φ9.00 × 0.8mm

Description

Φ12.7 × 0.8 mm

Φ19.0 × 0.8 mm

Φ25.4 × 0.8 mm

CsI windows

Description

Φ2.57 × 0.8 mm

Φ3.80 × 0.8 mm

Φ6.50 × 0.8 mm

Φ9.00 × 0.8mm

Description

Φ12.7 × 0.8 mm

Φ19.0 × 0.8 mm

Φ25.4 × 0.8 mm

Uncoated Ge windows

Description

Φ2.57 × 1.0 mm

Φ3.80 × 1.0 mm

Φ6.50 × 1.0 mm

Φ9.00 × 1.0 mm

Description

Φ12.7 × 1.0 mm

Φ19.0 × 1.0 mm

Φ25.4 × 1.0 mm

Uncoated Si windows

Description

Φ2.57 × 0.5 mm

Φ3.80 × 0.5 mm

Φ6.50 × 0.5 mm

Φ9.00 × 0.5 mm

Description

Φ12.7 × 0.5 mm

Φ19.0 × 0.5 mm

Φ25.4 × 0.5 mm