

Transparent material in THz region

Feb. 28, 2018

Material	Visible Transparency	Ref. Index	Bulk Loss	Shrinkage	Machinability	Price	Comment
○ LDPE	No	Low	Low	NA	High	Low	Inexpensive material
● HDPE	No	Low	Low	High	High	Low	Inexpensive material
● PTFE	No	Low	Medium	High	Medium	Low	Chemical stability
○ TPX	Good	Low	Low	High	Medium	Medium	Visible transmission
● Tsurupica [®]	Good	Low	Low	Low	High	Medium	Visible, High precision machining
● HR Silicon	No	High	Super Low		High	Med~High	Low absorption, High precision
○ Ge	No	High	Medium		High	Medium	High precision
○ GaAs	No	High	Medium		High	Med~High	High precision
Boron Nitride	No	Medium	Medium		High	Med~High	High precision
● Sapphire	Good	High	High		High	Med~High	For high pressure use
● Quartz	Good	Medium	Low		High	Medium	Birefringent material
● Fused Silica	Good	Medium	High		High	Low	
○ Diamond	Good ^{*1}	Medium	Super Low		Low	Super High	Ultimate material for window

- PHLUXi's standard material.
- Limited dimensions available.

*1 Depend on the grade

Ask us for detailed information