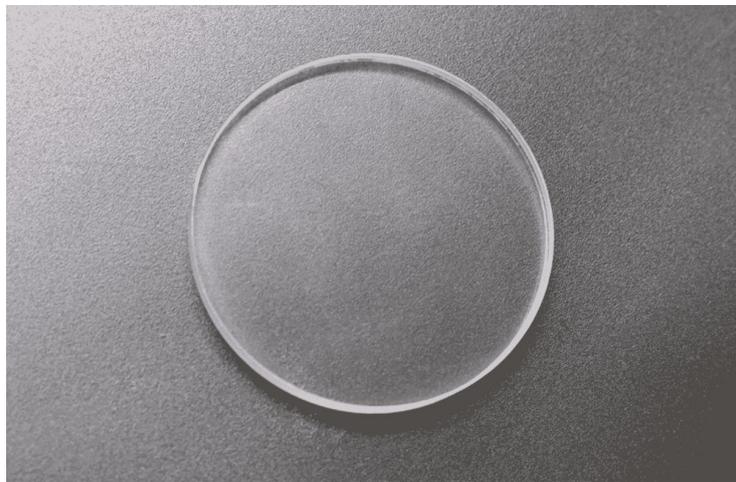


KBr (Potassium Bromide) circular window/crystal 30.0mm x 5.0mm, 0.23-25 μ m



● Product Description

KBr (Potassium Bromide) is one of the most useful materials for general spectral windows and applications where humidity sensitivity is not a significant concern. KBr is the most commonly used spectral material in IR spectrophotometers. Potassium bromide is grown using the Kyropoulos technique. KBr is prone to cracking, but it can be polished to higher standards under humidity-controlled conditions.customer needs.



● Product features

Wide infrared transmission range; Low scattering; Easy to process;

Moisture sensitivity requires protection; High chemical purity

● Part Number

MP-OPW-KBr-C30-5-IR

● Application area

Fourier transform infrared spectroscopy (FTIR) | Gas analysis | Thermal imaging | Laboratory optics | Environmental monitoring

● Core parameters

| Wavelength | Reflective index | Size |
|------------|------------------|-----------|
| 0.23-25um | 1.527@10um | 30mmΦx5mm |

● General Parameters

Technical Parameters

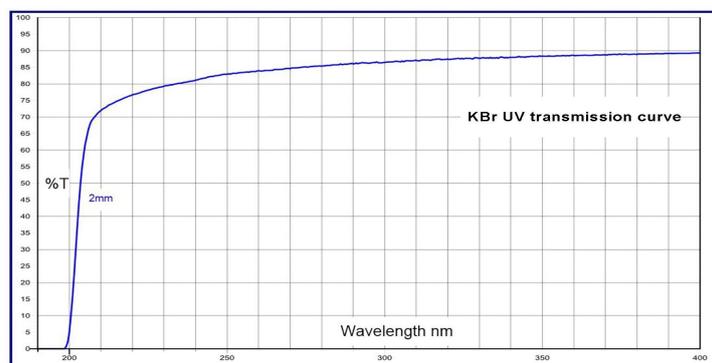
| | |
|------------------------|---|
| Transmission range | 0.23~25μm |
| Refractive index | 1.527μm at 10μm (1) |
| Reflection loss | 8.3% at 10μm |
| Absorption coefficient | 3×10^6 @ 1064nm; $14 \times 10^{-6} \text{cm}^{-1}$ @ 10.6 (7) |
| Absorption peak | 77.6μm |
| dn/dT: | $-40.83 \times 10^{-6} / ^\circ\text{C}$ (1) |
| dn/dμ=0: | 4.2μm |
| Density | 2.753g/cc (2) |
| Melting point | 730°C |
| Thermal conductivity | $4.816 \text{W m}^{-1} \text{K}^{-1}$ @ 319K (3) |
| Thermal expansion | $43 \times 10^{-6} / ^\circ\text{K}$ @ 300K (4) |
| Hardness | In |
| Specific heat capacity | $435 \text{JKg}^{-1} \text{K}^{-1}$ |
| Dielectric constant | 4.9 @ 1MHz (6) |
| Young's modulus (E) | 26.8GPa (4) |
| Shear modulus (G) | 5.08GPa (4) |
| Bulk modulus (K) | 15.03GPa (4) |
| Elastic modulus | $C_{11}=34.5 C_{12}=5.4 C_{44}=5.08$ (5) |
| Fracture modulus | 3.3MPa (475psi) (4) |
| Poisson's ratio | 0.203 |
| Solubility | 53.48g/100g water, 273K |

| | |
|-------------------------|--|
| Molecular weight | 119.01 |
| Class/Structure | Cubic FCC, NaCl, Fm3m, (100) cleavage |

Assembly reference for Kbr beam splitter

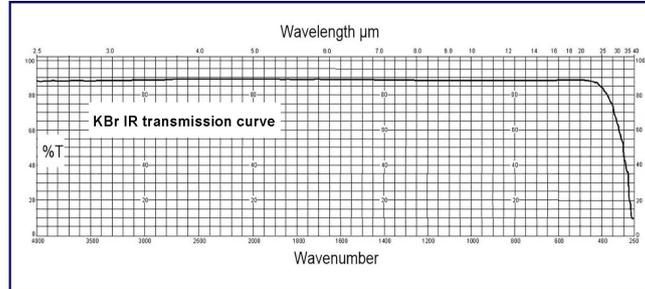


Spectral transmission curve





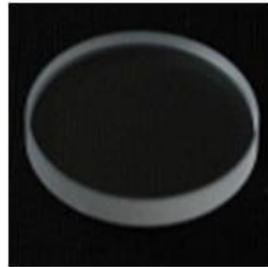
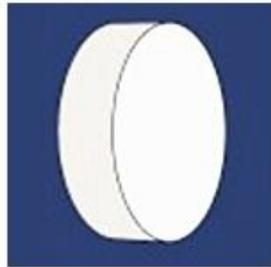
KBr IR transmission curve



Refractive index: (No = Ordinary Ray)

| μm | No | μm | No | μm | No |
|-------|--------|-------|--------|-------|--------|
| 0.405 | 1.5898 | 0.436 | 1.5815 | 0.486 | 1.5718 |
| 0.508 | 1.5684 | 0.546 | 1.5639 | 0.587 | 1.5600 |
| 0.643 | 1.5559 | 0.707 | 1.5524 | 1.014 | 1.5441 |
| 2.440 | 1.5373 | 3.419 | 1.5361 | 4.258 | 1.5352 |
| 6.238 | 1.5329 | 8.662 | 1.5290 | 9.724 | 1.5270 |
| 11.04 | 1.5240 | 14.29 | 1.5150 | 17.40 | 1.5039 |
| 19.91 | 1.4929 | 23.86 | 1.4714 | 25.14 | 1.4632 |
| 28.00 | 1.4423 | 30.00 | 1.4253 | | |

KBr circular window

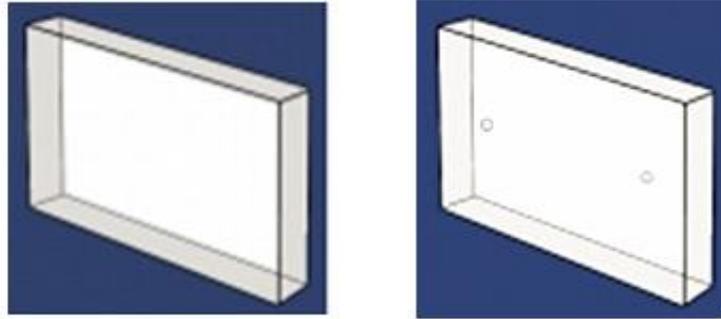


Ordering info

| PN# | Specs (D×L)(mm) | Thickness(L) | S/D | Material grade |
|----------------------|-----------------|--------------|-------|----------------|
| MP-OPW-KBr-C13-2-IR | 13.0mm×2.0mm | ±0.1mm | 60/40 | IR |
| MP-OPW-KBr-C20-2-IR | 20.0mm×2.0mm | ±0.1mm | 60/40 | IR |
| MP-OPW-KBr-C25-2-IR | 25.0mm×2.0mm | ±0.1mm | 60/40 | IR |
| MP-OPW-KBr-C25-4-IR | 25.0mm×4.0mm | ±0.1mm | 60/40 | IR |
| MP-OPW-KBr-C525-5-IR | 25.0mm×5.0mm | ±0.1mm | 60/40 | IR |
| MP-OPW-KBr-C30-5-IR | 30.0mm×5.0mm | ±0.1mm | 60/40 | IR |
| MP-OPW-KBr-C40-5-IR | 40.0mm×5.0mm | ±0.1mm | 60/40 | IR |
| MP-OPW-KBr-C45-5-IR | 45.0mm×5.0mm | ±0.1mm | 60/40 | IR |
| KMP-OPW-KBr-C50-5-IR | 50.0mm×5.0mm | ±0.1mm | 60/40 | IR |



KBr rectangular window



Ordering info

| PN# | Specs(D×L)(mm) | Material grade |
|-------------------------|-----------------------------|----------------|
| MP-OPW-KBr-23-41-5-D-IR | 23.0×41.0×5.0mm Punched | IR polished |
| MP-OPW-KBr-23-41-5-IR | 23.0×41.0×5.0mm Not punched | IR polished |