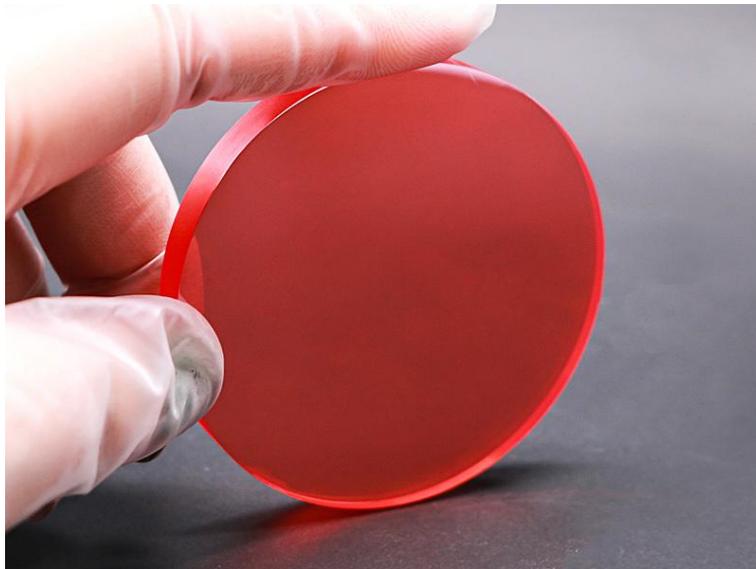


IR Polished KRS5 Thallium Bromide Iodide

Window 13mm Ø x 2mm



● Product Description

KRS5 deep infrared material has a high refractive index and is widely used in ATR prisms, windows and lenses for spectroscopy. In combination with germanium, KRS5 can also be used in heat-free IR imaging systems. KRS-5 is grown using sealed Stockbarger crystal growth technology. The highest purity starting material is selected to ensure the absence of anionic absorption bands between 2 μm and 16 μm , and all crystals are checked



for quality by using a path length of 120mm. Caution: Thallium salts are considered toxic and should be handled with care.

● Product features

High numerical aperture, excellent collection efficiency、 Compact single lens design、 Diffraction limited design、 RoHS certified

● Part Number

MP-OPW-KRS5-C13-2-IR

● Application area

Deep infrared spectroscopy 、 UV laser transmission 、 X-ray detection 、 Infrared optics 、 Epitaxial substrates

● Core parameters

Wavelength	Reflective index	Size
0.6-40um	2.371@10um	13mmΦx2mm

● General Parameters

Parameter

Transmission wavelength range:	0.6 to 40 μm
Refractive index:	2.371 at 10 μm (1)(3)
Reflection loss:	28.4% at 10 μm (2 surfaces)
Absorption coefficient:	n/a
Reststrahlen Peak:	n/a
dn/dT:	$-235 \times 10^{-6} / ^\circ\text{C}$
dn/dμ = 0:	7 μm
Density:	7.371 g/cc (3)
Melting point:	414.5 $^\circ\text{C}$ (3)
Thermal conductivity:	0.544 $\text{Wm}^{-1} \text{K}^{-1}$ at 293K
Thermal expansion:	$58 \times 10^{-6} / ^\circ\text{C}$ (2)
Hardness:	Knoop 40.2 (2)
Specific heat capacity:	200 $\text{J Kg}^{-1} \text{K}^{-1}$ at 273K
Dielectric constant:	32.5
Youngs Modulus (E):	15.85 GPa (2)
Shear modulus (G):	5.79 GPa (2)
Volume modulus (K):	19.78 GPa (2)
Elastic modulus:	$C_{11}=331$; $C_{12}=13.2$; $C_{44}=5.79$
Apparent elastic limit:	26.2 MPa (2)
Poisson's ratio:	0.369
Solubility:	0.05g/100g water at 293K



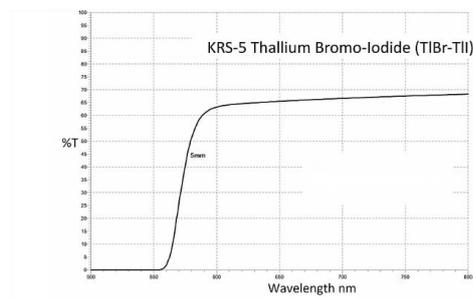
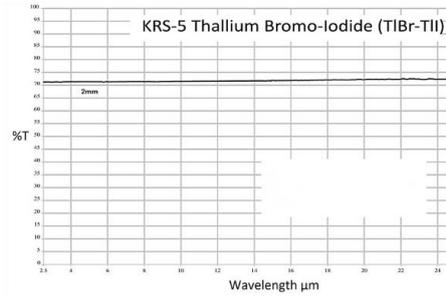
Molecular weight:	42 mole% TlBr; 58 mole% TlI
Class/structure:	Cubic,CsCl structure, Pm3m, No cleavage (3)

Note 1: Warning: Thallium salts are toxic and should be handled with caution.

No = Ordinary Ray

μm	No	μm	No	μm	No
0.54	2.68059	1.00	2.44620	1.50	2.40774
2.00	2.39498	3.00	2.38574	4.00	2.38204
5.00	2.37979	6.00	2.37797	7.0	2.37627
8.0	2.37452	9.0	2.37267	10.0	2.37069
11.0	2.36854	12.0	2.36622	13.0	2.36371
14.0	2.36101	15.0	2.35812	16.0	2.35502
17.0	2.35173	18.0	2.34822	19.0	2.34451
20.0	2.34058	21.0	2.33643	22.0	2.33206
23.0	2.32746	24.0	2.32264	25.0	2.31758
26.0	2.31229	27.0	2.30676	28.0	2.30098
29.0	2.29495	30.0	2.28867	31.0	2.28212
32.0	2.27531	33.0	2.26823	34.0	2.26087
35.0	2.25322	36.0	2.24528	37.0	2.23705
38.0	2.22850	39.0	2.21965	40.0	2.21047

Transmission curve



Original factory PN# example

PN#	Dimension(D×L)(mm)	diameter (D)	Thickness(L)	S/D	Material Grade
MP-OPW-KRS 5-C10-2-IR	10.0mm×2.0mm	+0.2/-0.0 mm	±0.1mm	60/40	IR
MP-OPW-KRS 5-C12-2-IR	12.0mm×2.0mm	+0.2/-0.0 mm	±0.1mm	60/40	IR

MP-OPW-KRS 5-C13-2-IR	13.0mm × 2.0mm	+0.2/-0.0 mm	±0.1mm	60/40	IR
MP-OPW-KRS 5-C20-2-IR	20.0mm × 2.0mm	+0.2/-0.0 mm	±0.1mm	60/40	IR
MP-OPW-KRS 5-C25-2-IR	25.0mm × 2.0mm	+0.2/-0.0 mm	±0.1mm	60/40	IR
MP-OPW-KRS 5-C25-4-IR	25.0mm × 4.0mm	+0.2/-0.0 mm	±0.1mm	60/40	IR
MP-OPW-KRS 5-C32-3-D-IR	32.0mm × 3.0mm Punched	+0.2/-0.0 mm	±0.1mm	60/40	IR
MP-OPW-KRS 5-C32-3-IR	32.0mm × 3.0mm Not punched	+0.2/-0.0 mm	±0.1mm	60/40	IR
MP-OPW-KRS 5-C35-2-IR	35.0mm × 2.0mm	+0.2/-0.0 mm	±0.1mm	60/40	IR
MP-OPW-KRS 5-C42-3-IR	42.0mm × 3.0mm	+0.2/-0.0 mm	±0.1mm	60/40	IR
MP-OPW-KRS 5-C50-4-IR	50.0mm × 4.0mm	+0.2/-0.0 mm	±0.1mm	60/40	IR