

IR 级抛光氟化钡(BaF₂)平凸正透镜 0.15-12μm 38.0mm Ø



描述

氟化钡能很好应用于光谱组件。氟化钡通常适用于无源 IR 波段 (8~14 μm) 的应用，通常用作热成像的窗片。对于相同厚度，比氟化钙的透射范围进一步延伸到 IR 中大约 1mm。主要用于 IR 应用，并注意到具有 IR 抛光的视窗可能在由低纯度 BaF₂ 晶体制成的 VUV 中具有受限的透射性能。

产品型号

BAF38LENS100

应用领域

快速闪烁体材料

热成像窗片

高能物理实验

核心参数

工作波长	规格尺寸
0.15~12μm	38.0mm Ø

尺寸图



详细参数

适射波段范围:	0.15~12um(注意:IR 级可能在 UV 下的性能受限)
折射率:	1.45 @5um(1)
反射损耗:	6.5% at 5%(2 个表面)

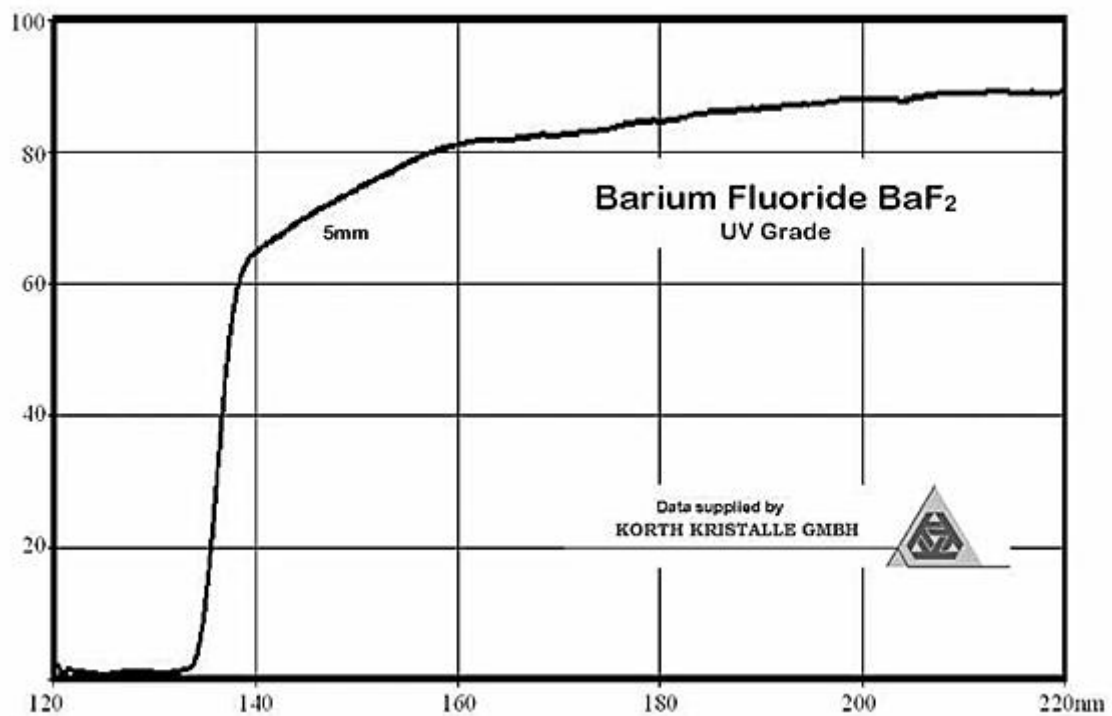
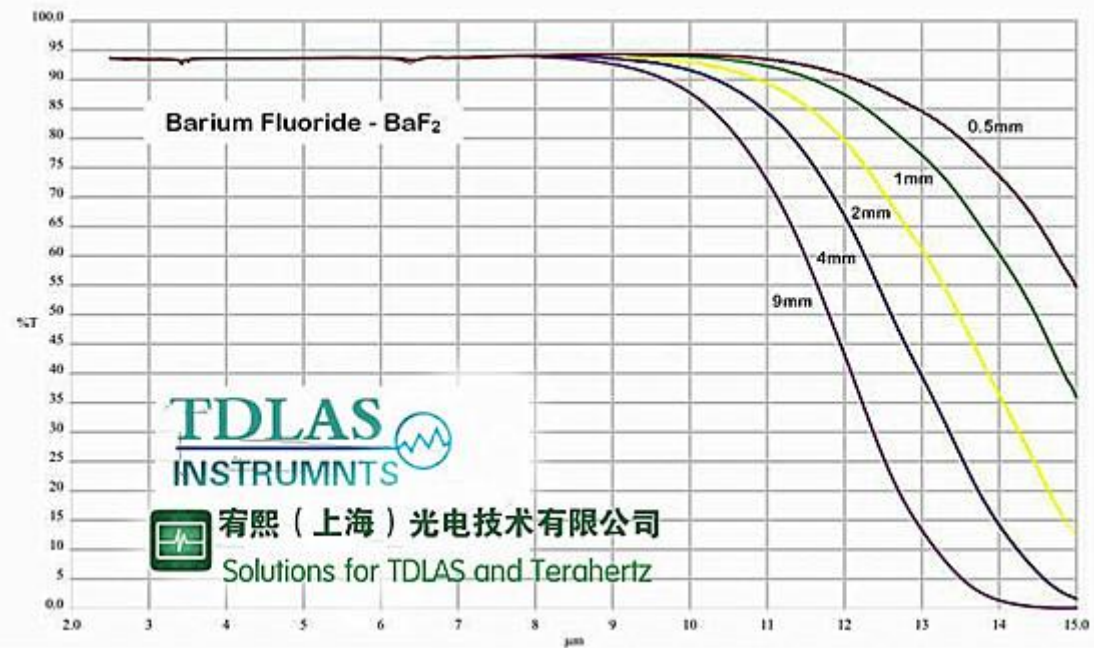
吸收系数:	$3.2 \times 10^{-4} \text{cm}^{-1}$ @6um
吸收峰:	47um
dn / dT:	$-15.2 \times 10^{-6} / ^\circ\text{C}$ (2)
dn / du= 0:	1.95um
密度:	4.89g/ cc
熔点:	1386°C
导热率:	$11.72 \text{W m}^{-1} \text{K}^{-1}$ @286K
热膨胀:	$18.1 \times 10^{-6} / ^\circ\text{C}$ @273K
硬度:	Knoop 82 with 500g indenter (4)
比热容量:	$410 \text{J Kg}^{-1} \text{K}^{-1}$ (3)
介电常数:	7.33 at 1MHz
杨氏模量(E) :	53.07GPa (3)
剪切模量(G) :	25.4GPa(3)
体积模量(K):	56.4GPa

弹性系数:	$C_{11} = 89.2$ $C_{12} = 40.0$ $C_{44} = 25.4$ (2)
表观弹性极限:	26.9MPa (300psi)(4)
泊松比:	0.343
溶解性:	0.17g /100g water, 23°C
分子量:	175.36
类型/结构:	立方 CaF_2 , $\text{Fm}3\text{m}$, (111) 裂解

折射率:(No = Ordinary Ray 普通射线)

μm	No	μm	No	μm	No
0.1408	1.8150	0.1452	1.7820	0.1477	1.7670
0.1500	1.6780	0.2000	1.557	0.2652	1.5122
0.2803	1.5066	0.2893	1.5039	0.2967	1.5019
0.3021	1.5004	0.3130	1.4978	0.3254	1.4952
0.3403	1.4925	0.3466	1.4915	0.3610	1.4894

0.3663	1.4887	0.4046	1.4844	0.5461	1.4759
0.5893	1.4744	0.6438	1.4730	0.6563	1.4727
0.7065	1.4718	0.8521	1.4699	0.8944	1.4694
1.0140	1.4685	1.1287	1.4678	1.3673	1.4667
1.5295	1.4661	1.6810	1.4656	1.7012	1.4655
1.9701	1.4647	2.3254	1.4636	2.6738	1.4623
3.2434	1.4602	3.4220	1.4594	5.1380	1.4501
5.5490	1.44732	6.2380	1.4422	6.6331	1.4390
7.0442	1.4353	7.2680	1.4331	9.7240	1.4051
10.346	1.3936				



订购信息

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订购型号	规格	曲率	焦距	材料等级	参数
BAF17L ENS30	17mm Ø	14.0 (+0.25/0 mm)	30mm @ 3µm	IR 平凸	BARIUM FLUORIDE PLANO-CONVEX IR GRADE LENS MATERIAL: Infrared Grade BaF ₂ Diameter: 17.0mm (+0.1/-0.1mm) Edge thickness: 2.0mm (+0/-0.1mm) Radius of Curvature 1: 14.0 (+0.25/-0.25mm) Radius of Curvature 2: Plano Centre Thickness: 5.0mm nominal S/D: 60/40 BACK FOCAL LENGTH: 30mm (+/-5%) @ 3 microns
BAF24L ENS400	24mm Ø	134.0; -500	400mm @ 5µm	IR 凹凸	BARIUM FLUORIDE MENISCUS IR GRADE LENS Positive Meniscus (MSC) MATERIAL: Infrared Grade BaF ₂ Diameter: 24.0mm (±0.1mm) Edge thickness: 2.3mm (±0.1mm) Radius of Curvature 1: 134.0mm Test Plate Radius of Curvature 2: -500.0mm Test Plate Centre Thickness: 2.6mm nominal S/D: 40/20 FOCAL LENGTH: 400mm (+/-5%) @ 5 microns
BAF25.4 LENS25	25.4mm Ø	23.20 (+0.25/0 mm)	25mm @ 3µm	UV 双凸	BARIUM FLUORIDE BI-CONVEX IR GRADE LENS MATERIAL: Infrared Grade BaF ₂ Diameter: 25.4mm (+0.0/-0.1mm) Edge thickness: 2.00mm nominal Radius of Curvature 1: 22.00 (±0.1mm) Radius of Curvature 2: 22.00 (±0.1mm) Centre Thickness: 10.00mm (±0.1mm) S/D: 60/40 BACK FOCAL LENGTH: 22mm (+/-5%) @ 3 microns

BAF38L ENS100	38.0mm Ø	45.0 (+0.25/0 mm)	100mm @ 5µm	IR 平凸	BARIUM FLUORIDE PLANO-CONVEX IR GRADE LENS MATERIAL: Infrared Grade BaF ₂ Diameter: 38.0mm (±0.1mm) Edge thickness: 3.0mm (+0/-0.1mm) Radius of Curvature 1: 45.0 (+0.25/-0mm) Radius of Curvature 2: Plano Centre Thickness: 7.2mm nominal S/D: 60/40 FOCAL LENGTH: 100mm (+/-5%) @ 5 microns
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