



## IR 抛光氟化钙 CaF<sub>2</sub> 平凸正透镜 (直径 25.4mm 焦距 200mm)



### 描述

氟化钙在紫外到中红外 (250nm~7um) 之间都有很高的透射率, 所以广泛被用于制造棱镜, 透镜, 窗片, 氟化钙透镜具有低折射率, 高激光损伤阈值, 低同轴与径向应力双折射特性, 适合于准分子激光器使用, 或者集成于红外系统上。且氟化钙也备有低可溶性, 也可抵抗恶劣环境。氟化钙的抛光面可以工作数年之久, 氟化钙的硬度是氟化钡的两倍, 而且抗热冲击能力更强。

### 产品特点

透射波长范围广, 低折射率, 高透射率, 高损伤阈值, 低可溶性

### 产品型号

CAF25.4LENS200





## 应用领域

中红外QCL激光器

中红外激光光路搭建

## 核心参数

| 规格尺寸   | 焦距F.L.      | 曲率         | 透镜等级  |
|--------|-------------|------------|-------|
| 25.4mm | 200mm @ 5μm | 80.7 (±2%) | IR 平凸 |

## 详细参数

| 名称      | 参数                                         |
|---------|--------------------------------------------|
| 透射范围    | 0.13~10um                                  |
| 折射率     | 1.39908 at 5um                             |
| 反射损耗    | 5.4% at 5um                                |
| 吸收系数    | $7.8 \times 10^{-4} \text{cm}^{-1}$ @2.7um |
| 吸收峰     | 35um                                       |
| dn/dT   | $-10.6 \times 10^{-6}/^{\circ}\text{C}$    |
| dn/du=0 | dn/du=0                                    |
| 密度      | 3.18g/cc                                   |



|        |                                                                  |
|--------|------------------------------------------------------------------|
| 熔点     | 1360℃                                                            |
| 导热率    | 9.71Wm <sup>-1</sup> K <sup>-1</sup>                             |
| 热膨胀    | 18.85×10 <sup>-6</sup> /℃                                        |
| 硬度     | Knoop 158.3                                                      |
| 比热容    | 854J Kg <sup>-1</sup> K <sup>-1</sup>                            |
| 介电常数   | 6.76 at 1MHz                                                     |
| 杨氏模量   | 75.8GPa                                                          |
| 剪切模量   | 33.77GPa                                                         |
| 体积模量   | 82.71GPa                                                         |
| 弹性系数   | C <sub>11</sub> =164 ,C <sub>12</sub> =53 ,C <sub>44</sub> =33.7 |
| 表现弹性极限 | 36.54MPa                                                         |
| 泊松比    | 0.26                                                             |
| 溶解度    | 0.0017g/100g with, 20 °C                                         |
| 分子量    | 78.08                                                            |

|       |             |
|-------|-------------|
| 类型/结构 | 立方裂解        |
| 反射损耗  | 5.4% at 5um |

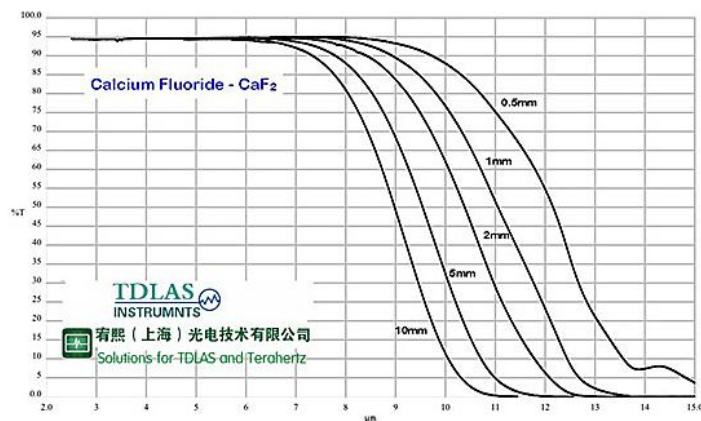
### 折射率:(No=Ordinary Ray 普通射线)

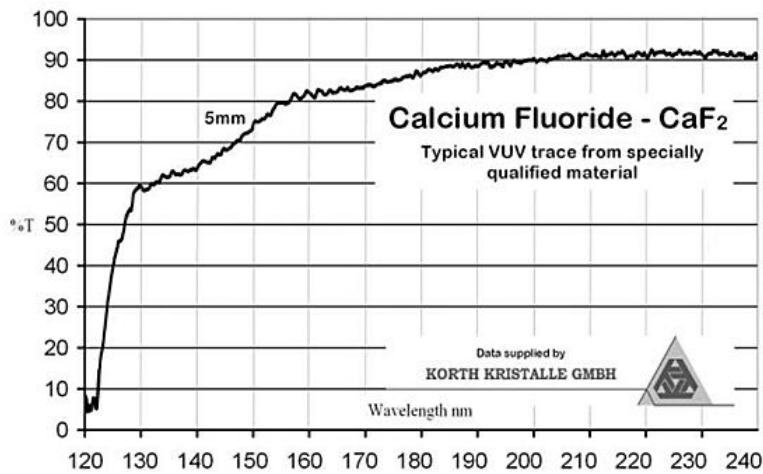
| um   | No     | um   | No     | um   | No     |
|------|--------|------|--------|------|--------|
| 0.54 | 2.6754 | 0.58 | 2.6312 | 0.62 | 2.5994 |
| 0.66 | 2.5755 | 0.7  | 2.5568 | 0.74 | 2.5418 |
| 0.78 | 2.5295 | 0.82 | 2.5193 | 0.86 | 2.5107 |
| 0.90 | 2.5034 | 0.94 | 2.4971 | 0.98 | 2.4916 |
| 1.0  | 2.4892 | 1.4  | 2.4609 | 1.8  | 2.4496 |
| 2.2  | 2.4437 | 2.6  | 2.4401 | 3.0  | 2.4376 |
| 3.4  | 2.4356 | 3.8  | 2.4339 | 4.2  | 2.4324 |
| 4.6  | 2.4309 | 5.0  | 2.4295 | 5.4  | 2.4281 |
| 5.8  | 2.4266 | 6.2  | 2.4251 | 6.6  | 2.4235 |
| 7.0  | 2.4218 | 7.4  | 2.4201 | 7.8  | 2.4183 |

|      |        |      |        |      |        |
|------|--------|------|--------|------|--------|
| 8.2  | 2.4163 | 8.6  | 2.4143 | 9.0  | 2.4122 |
| 9.4  | 2.4100 | 9.8  | 2.4077 | 10.2 | 2.4053 |
| 10.6 | 2.4028 | 11.0 | 2.4001 | 11.4 | 2.3974 |
| 11.8 | 2.3945 | 12.2 | 2.3915 | 12.6 | 2.3883 |
| 13.0 | 2.3850 | 13.4 | 2.3816 | 13.8 | 2.3781 |
| 14.2 | 2.3744 | 14.6 | 2.3705 | 15.0 | 2.3665 |
| 15.4 | 2.3623 | 15.8 | 2.3579 | 16.2 | 2.3534 |
| 16.6 | 2.3487 | 17.0 | 2.3438 | 17.4 | 2.3387 |
| 17.8 | 2.3333 | 18.2 | 2.3278 |      |        |

## 特性曲线

### 光谱透射图





## 订购信息

| 订购型号               | 规格       | 曲率             | 焦距              | CaF2 等级 | 参数                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------|----------|----------------|-----------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CAF12.7L<br>ENS10U | 12.7mm Ø | 10.16<br>(±2%) | 10mm @<br>300nm | UV 双凸   | <div><div>CALCIUM FLUORIDE PLANO-CONVEX LENS</div><div>25mm Ø X 300mm F.L. @ 5µm</div><div>MATERIAL: IR Grade CaF<sub>2</sub></div><div></div><div><div>Diameter:</div><div>25.0mm (±0.1mm)</div></div><div><div>Centre Thickness:</div><div>2.6mm (±0.1mm)</div></div><div><div>Radius of Curvature 1:</div><div>120 (±2%)</div></div><div><div>Radius of Curvature 2:</div><div>Plano</div></div><div><div>S/D:</div><div>60/40</div></div><div><div>Edge thickness:</div><div>2.0mm (derived)</div></div><div><div><div>Effective F.L.</div><div>Back F.L.</div><div>Wavelength</div></div><div><div>277mm</div><div>278mm</div><div>0.633µm</div></div><div><div>280mm</div><div>278mm</div><div>1.064µm</div></div><div><div>287mm</div><div>286mm</div><div>3.0µm</div></div><div><div>300mm</div><div>299mm</div><div>5.0µm</div></div></div><div><div>Parallel F.L. Tolerances ±2% to nearest mm</div><div>BFL from this lens formula. BFL is referenced from the lens surface.</div></div></div> |
| CAF12.7L<br>ENS12  | 12.7mm Ø | 12.0<br>(±2%)  | 12.7mm<br>@ 5µm | IR 双凸   | <div><div>CALCIUM FLUORIDE BI-CONVEX LENS</div><div>12.7mm Ø X 12.7mm F.L. @ 0.633µm</div><div>MATERIAL: IR Grade CaF<sub>2</sub></div><div></div><div><div>Diameter:</div><div>12.7mm (+0.0/-0.127mm)</div></div><div><div>Centre Thickness:</div><div>6.0mm (±0.127mm)</div></div><div><div>Radius of Curvature 1:</div><div>12.0 (±2%)</div></div><div><div>Radius of Curvature 2:</div><div>12.0 (±2%)</div></div><div><div>S/D:</div><div>60/40</div></div><div><div>Edge thickness:</div><div>1.5mm (derived)</div></div><div><div><div>Effective F.L.</div><div>Back F.L.</div><div>Wavelength</div></div><div><div>15.0mm</div><div>12.7mm</div><div>0.633µm</div></div><div><div>15.5mm</div><div>13.2mm</div><div>3.0µm</div></div><div><div>16.2mm</div><div>13.9mm</div><div>5.0µm</div></div></div><div><div>Parallel F.L. Tolerances ±2% to nearest mm</div><div>BFL from this lens formula. BFL is referenced from the lens surface.</div></div></div>                                     |

|                    |          |                |                 |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------|----------|----------------|-----------------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CAF12.7L<br>ENS12U | 12.7mm Ø | 12.0<br>(±2%)  | 12mm @<br>300nm | UV 双凸 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| CAF12.7L<br>ENS100 | 12.7mm Ø | 40.32<br>(±2%) | 100mm @<br>5µm  | IR 平凸 | <div>CALCIUM FLUORIDE BI-CONVEX LENS</div> <div>25mm Ø X 100mm F.L. @ 5µm</div> <div>MATERIAL: IR Grade CaF<sub>2</sub></div> <div></div> <div>Diameter: 25.0mm (±0.1mm)</div> <div>Centre Thickness: 4.0mm (±0.1mm)</div> <div>Radius of Curvature 1: 78.94 (±2%)</div> <div>Radius of Curvature 2: 78.94 (±2%)</div> <div>S/D: 60/40</div> <div>Edge thickness: 2.0mm (derived)</div> <div></div> <div><div>Effective F.L. 92mm</div><div>Back F.L. 90mm</div><div>Wavelength 0.633µm</div></div> <div><div>93mm</div><div>91mm</div><div>1.064µm</div></div> <div><div>95mm</div><div>94mm</div><div>3.0µm</div></div> <div><div>100mm</div><div>98mm</div><div>5.0µm</div></div> <div><div>Paraxial F.L. Tolerances ±2% to nearest mm</div><div>EFL from thin lens formula. BFL is referenced from the lens surface.</div></div> |
| CAF16LE<br>NS90    | 16.0mm Ø | 73.90<br>(±2%) | 90mm @<br>3µm   | IR 双凸 | <div>CALCIUM FLUORIDE BI-CONVEX LENS</div> <div>16mm Ø X 90mm F.L. @ 3µm</div> <div>MATERIAL: IR Grade CaF<sub>2</sub></div> <div></div> <div>Diameter: 16.0mm (±0.1mm)</div> <div>Centre Thickness: 3.0mm (±0.1mm)</div> <div>Radius of Curvature 1: 73.90 (±2%)</div> <div>Radius of Curvature 2: 73.90 (±2%)</div> <div>S/D: 60/40</div> <div>Edge thickness: 2.0mm (derived)</div> <div></div> <div><div>Effective F.L. 86mm</div><div>Back F.L. 85mm</div><div>Wavelength 0.633µm</div></div> <div><div>86mm</div><div>85mm</div><div>1.064µm</div></div> <div><div>89mm</div><div>88mm</div><div>3.0µm</div></div> <div><div>93mm</div><div>92mm</div><div>5.0µm</div></div> <div><div>Paraxial F.L. Tolerances ±2% to nearest mm</div><div>EFL from thin lens formula. BFL is referenced from the lens surface.</div></div>   |
| CAF18.5L<br>ENS26  | 18.5mm Ø | 12.6<br>(±2%)  | 26mm @<br>3µm   | IR 平凸 | <div>CALCIUM FLUORIDE PLANO-CONVEX LENS</div> <div>18.5mm Ø X 26mm F.L. @ 3µm</div> <div>MATERIAL: IR Grade CaF<sub>2</sub></div> <div></div> <div>Diameter: 18.7mm (±0.25mm)</div> <div>Centre Thickness: 5.0mm (±0.2mm)</div> <div>Centration 3 Arc Minutes</div> <div>Radius of Curvature 1: 12.6 (±2%)</div> <div>Radius of Curvature 2: Plano</div> <div>S/D: 60/40</div> <div>Edge thickness: 1.0mm (derived)</div> <div></div> <div><div>Effective F.L. 29.1mm</div><div>Back F.L. 25.6mm</div><div>Wavelength 0.633µm</div></div> <div><div>30.2mm</div><div>26.6mm</div><div>3.0µm</div></div> <div><div>31.6mm</div><div>28.0mm</div><div>5.0µm</div></div> <div><div>Paraxial F.L. Tolerances ±2% to nearest mm</div><div>EFL from thin lens formula. BFL is referenced from the lens surface.</div></div>                |

|                  |        |                |                 |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------|--------|----------------|-----------------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CAF20LE<br>NS50  | 20mm Ø | 19.95<br>(±2%) | 50mm @<br>5µm   | IR 平凸 | <div>CALCIUM FLUORIDE PLANO-CONVEX LENS</div> <div>20mm Ø x 50mm F.L. @ 5µm</div> <div>MATERIAL: IR Grade CaF<sub>2</sub></div> <div></div> <div>Diameter: 20.0mm (±0.1mm)</div> <div>Centre Thickness: 4.0mm (±0.1mm)</div> <div>Radius of Curvature 1: 19.95 (±2%)</div> <div>Radius of Curvature 2: Plano</div> <div>S/D: 60/40</div> <div>Edge thickness: 1.3mm (derived)</div> <div><div>Effective F.L. 46mm</div><div>Back F.L. 43mm</div><div>Wavelength 0.633µm</div><div>47mm</div><div>44mm</div><div>1.064µm</div><div>48mm</div><div>45mm</div><div>3.0µm</div><div>50mm</div><div>47mm</div><div>5.0µm</div></div> <div><div>Parallel F.L. Tolerances ±0% to nearest mm</div><div>EFL from this lens formula. BFL is referenced from the back lens surface.</div></div>                                                                        |
| CAF25LE<br>NS25U | 25mm Ø | 21.53<br>(±2%) | 25mm @<br>350nm | UV 双凸 | <div>CALCIUM FLUORIDE BI-CONVEX LENS</div> <div>25mm Ø X 25mm F.L. @ 0.35µm</div> <div>MATERIAL: UV Grade CaF<sub>2</sub></div> <div></div> <div>Diameter: 25.0mm (+0.0/-0.1mm)</div> <div>Centre Thickness: 10mm (±0.1mm)</div> <div>Radius of Curvature 1: 21.53 (±2%)</div> <div>Radius of Curvature 2: 21.53 (±2%)</div> <div>S/D: 60/40</div> <div>Edge thickness: 2.0mm (derived)</div> <div><div>Effective F.L. 26.0mm</div><div>Pr. Plane F.L. 25.0mm</div><div>Back F.L. 22.2mm</div><div>Wavelength 0.35µm</div><div>26.8mm</div><div></div><div>23.0mm</div><div>0.633µm</div></div> <div><div>Parallel F.L. Tolerances ±0%</div><div>EFL from this lens formula. BFL is referenced from the lens surface.</div></div>                                                                                                                           |
| CAF25LE<br>NS25  | 25mm Ø | 20.80<br>(±2%) | 25.4mm<br>@ 3µm | IR 双凸 | <div>CALCIUM FLUORIDE BI-CONVEX LENS</div> <div>25mm Ø X 25.4mm F.L. @ 3µm</div> <div>MATERIAL: IR Grade CaF<sub>2</sub></div> <div></div> <div>Diameter: 25.0mm (+0.0/-0.1mm)</div> <div>Centre Thickness: 10mm (±0.1mm)</div> <div>Radius of Curvature 1: 20.80 (±2%)</div> <div>Radius of Curvature 2: 20.80 (±2%)</div> <div>S/D: 60/40</div> <div>Edge thickness: 1.6mm (derived)</div> <div><div>Effective F.L. 25.9mm</div><div>Pr. Plane F.L. 25.4mm</div><div>Back F.L. 22.2mm</div><div>Wavelength 0.633µm</div><div>26.2mm</div><div></div><div>22.4mm</div><div>1.064µm</div><div>26.8mm</div><div></div><div>23.0mm</div><div>3.0µm</div><div>28.0mm</div><div></div><div>24.1mm</div><div>5.0µm</div></div> <div><div>Parallel F.L. Tolerances ±0%</div><div>EFL from this lens formula. BFL is referenced from the lens surface.</div></div> |
| CAF25LE<br>NS50B | 25mm Ø | 39.1<br>(±2%)  | 50mm @<br>5µm   | IR 双凸 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| CAF25LE<br>NS50  | 25mm Ø | 20.9<br>(±2%)  | 50mm @<br>5µm   | IR 平凸 | <div>CALCIUM FLUORIDE PLANO-CONVEX LENS</div> <div>25mm Ø x 50mm F.L. @ 3µm</div> <div>MATERIAL: IR Grade CaF<sub>2</sub></div> <div></div> <div>Diameter: 25.0mm (±0.1mm)</div> <div>Centre Thickness: 6.1mm (±0.1mm)</div> <div>Radius of Curvature 1: 20.9 (±2%)</div> <div>Radius of Curvature 2: Plano</div> <div>S/D: 60/40</div> <div>Edge thickness: 2.0mm (derived)</div> <div><div>Effective F.L. 48mm</div><div>Back F.L. 44mm</div><div>Wavelength 0.633µm</div><div>49mm</div><div>45mm</div><div>1.064µm</div><div>50mm</div><div>46mm</div><div>3.0µm</div><div>52mm</div><div>48mm</div><div>5.0µm</div></div> <div><div>Parallel F.L. Tolerances ±0% to nearest mm</div><div>EFL from this lens formula. BFL is referenced from the back lens surface.</div></div>                                                                         |

|                   |        |                |                  |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------|--------|----------------|------------------|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CAF25LE<br>NS50U  | 25mm Ø | 22.96<br>(±2%) | 50mm @<br>350nm  | UV 平凸 | <div>CALCIUM FLUORIDE PLANO-CONVEX LENS</div> <div>25mm Ø x 50mm F.L. @ 0.35µm</div> <div>MATERIAL: UV Grade CaF<sub>2</sub></div> <div><div>Diameter:25.0mm (±0.1mm)</div><div>Centre Thickness:5.7mm (±0.1mm)</div><div>Radius of Curvature 1:22.96mm (±2%)</div><div>Radius of Curvature 2:Plano</div><div>S/D:60/40</div><div>Edge thickness:2.0mm (derived)</div><div><div>Effective F.L.<br/>51mm<br/>53mm<br/>54mm<br/>55mm<br/>57mm</div><div>Back F.L.<br/>47mm<br/>49mm<br/>49mm<br/>51mm<br/>53mm</div><div>Wavelength<br/>0.35 µm<br/>0.633µm<br/>1.064µm<br/>3.0µm<br/>5.0µm</div></div><div>Paraxial F.L. Tolerances ±0% to nearest mm<br/>EFL from thin lens formula. BFL is referenced from the back lens surface.</div></div> |
| CAF25LE<br>NS75   | 25mm Ø | 31.35<br>(±2%) | 75mm @<br>5µm    | IR 平凸 | <div>CALCIUM FLUORIDE PLANO-CONVEX LENS</div> <div>25mm Ø x 75mm F.L. @ 5µm</div> <div>MATERIAL: IR Grade CaF<sub>2</sub></div> <div><div>Diameter:25.0mm (±0.1mm)</div><div>Centre Thickness:4.6mm (±0.1mm)</div><div>Radius of Curvature 1:31.35 (±2%)</div><div>Radius of Curvature 2:Plano</div><div>S/D:60/40</div><div>Edge thickness:2.0mm (derived)</div><div><div>Effective F.L.<br/>72mm<br/>73mm<br/>75mm<br/>78mm</div><div>Back F.L.<br/>69mm<br/>70mm<br/>72mm<br/>75mm</div><div>Wavelength<br/>0.633µm<br/>1.064µm<br/>3.0µm<br/>5.0µm</div></div><div>Paraxial F.L. Tolerances ±0% to nearest mm<br/>EFL from thin lens formula. BFL is referenced from the back lens surface.</div></div>                                    |
| CAF25LE<br>NS100B | 25mm Ø | 78.94<br>(±2%) | 100mm @<br>3µm   | IR 双凸 | <div>CALCIUM FLUORIDE BI-CONVEX LENS</div> <div>25mm Ø X 100mm F.L. @ 5µm</div> <div>MATERIAL: IR Grade CaF<sub>2</sub></div> <div><div>Diameter:25.0mm (±0.1mm)</div><div>Centre Thickness:4.0mm (±0.1mm)</div><div>Radius of Curvature 1:78.94 (±2%)</div><div>Radius of Curvature 2:78.94 (±2%)</div><div>S/D:60/40</div><div>Edge thickness:2.0mm (derived)</div><div><div>Effective F.L.<br/>92mm<br/>93mm<br/>95mm<br/>100mm</div><div>Back F.L.<br/>90mm<br/>91mm<br/>94mm<br/>98mm</div><div>Wavelength<br/>0.633µm<br/>1.064µm<br/>3.0µm<br/>5.0µm</div></div><div>Paraxial F.L. Tolerances ±2% to nearest mm<br/>EFL from thin lens formula. BFL is referenced from the lens surface.</div></div>                                    |
| CAF25LE<br>NS100  | 25mm Ø | 43.73<br>(±2%) | 100mm @<br>3µm   | IR 平凸 | <div>CALCIUM FLUORIDE PLANO-CONVEX LENS</div> <div>50mm Ø X 100mm F.L. @ 1µm</div> <div>MATERIAL: IR Grade CaF<sub>2</sub></div> <div><div>Diameter:50.0mm (±0.1mm)</div><div>Centre Thickness:10.0mm (±0.1mm)</div><div>Radius of Curvature 1:43.0 (±2%)</div><div>Radius of Curvature 2:Plano</div><div>S/D:60/40</div><div>Edge thickness:2.0mm (derived)</div><div><div>Effective F.L.<br/>99mm<br/>100mm<br/>103mm<br/>108mm</div><div>Back F.L.<br/>92mm<br/>93mm<br/>96mm<br/>101mm</div><div>Wavelength<br/>0.633µm<br/>1.064µm<br/>3.0µm<br/>5.0µm</div></div><div>Paraxial F.L. Tolerances ±2% to nearest mm<br/>EFL from thin lens formula. BFL is referenced from the lens surface.</div></div>                                    |
| CAF25LE<br>NS100U | 25mm Ø | 43.73<br>(±2%) | 100mm @<br>350nm | UV 平凸 | <div>CALCIUM FLUORIDE PLANO-CONVEX LENS</div> <div>50mm Ø X 100mm F.L. @ 0.35µm</div> <div>MATERIAL: UV Grade CaF<sub>2</sub></div> <div><div>Diameter:50.0mm (±0.1mm)</div><div>Centre Thickness:10.0mm (±0.1mm)</div><div>Radius of Curvature 1:43.0 (±2%)</div><div>Radius of Curvature 2:Plano</div><div>S/D:60/40</div><div>Edge thickness:2.0mm (derived)</div><div><div>Effective F.L.<br/>99mm<br/>100mm<br/>103mm<br/>108mm</div><div>Back F.L.<br/>92mm<br/>93mm<br/>96mm<br/>101mm</div><div>Wavelength<br/>0.35 µm<br/>0.633µm<br/>1.064µm<br/>3.0µm<br/>5.0µm</div></div><div>Paraxial F.L. Tolerances ±2% to nearest mm<br/>EFL from thin lens formula. BFL is referenced from the lens surface.</div></div>                     |

|                       |        |                    |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------|--------|--------------------|----------------------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CAF25LE<br><br>NS130  | 25mm Ø | 55.35<br><br>(±2%) | 130mm @<br><br>3µm   | IR 平凸 | <div>CALCIUM FLUORIDE PLANO-CONVEX LENS</div> <div>25mm Ø X 130mm F.L. @ 3µm</div> <div>MATERIAL: IR Grade CaF<sub>2</sub></div> <div><div>Diameter:25.0mm (±0.1mm)</div><div>Centre Thickness:3.0mm (±0.1mm)</div><div>Radius of Curvature 1:55.35 (±2%)</div><div>Radius of Curvature 2:Plano</div><div>S/D:60/40</div><div>Edge thickness:1.5mm (derived)</div></div> <div><div>Effective F.L.128mm</div><div>Back F.L.128mm</div><div>Wavelength0.633µm</div><div>129mm</div><div>128mm</div><div>1.064µm</div><div>133mm</div><div>130mm</div><div>3.0µm</div><div>139mm</div><div>136mm</div><div>5.0µm</div></div> <div><div>Paraxial F.L. Tolerances ±2% to nearest mm</div><div>EFL from thin lens formula. BFL is referenced from the lens surface.</div></div>                                                     |
| CAF25LE<br><br>NS150  | 25mm Ø | 61.0<br><br>(±2%)  | 150mm @<br><br>5µm   | IR 平凸 | <div>CALCIUM FLUORIDE PLANO-CONVEX LENS</div> <div>25mm Ø X 150mm F.L. @ 5µm</div> <div>MATERIAL: IR Grade CaF<sub>2</sub></div> <div><div>Diameter:25.0mm (±0.1mm)</div><div>Centre Thickness:3.3mm (±0.1mm)</div><div>Radius of Curvature 1:61.0 (±2%)</div><div>Radius of Curvature 2:Plano</div><div>S/D:60/40</div><div>Edge thickness:2.0mm (derived)</div></div> <div><div>Effective F.L.141mm</div><div>Back F.L.139mm</div><div>Wavelength0.633µm</div><div>142mm</div><div>140mm</div><div>1.064µm</div><div>146mm</div><div>144mm</div><div>3.0µm</div><div>152mm</div><div>150mm</div><div>5.0µm</div></div> <div><div>Paraxial F.L. Tolerances ±2% to nearest mm</div><div>EFL from thin lens formula. BFL is referenced from the lens surface.</div></div>                                                      |
| CAF25LE<br><br>NS150U | 25mm Ø | 69.75<br><br>(±2%) | 150mm @<br><br>350nm | UV 平凸 | <div>CALCIUM FLUORIDE PLANO-CONVEX LENS</div> <div>25mm Ø X 150mm F.L. @ 350nm</div> <div>MATERIAL: UV Grade CaF<sub>2</sub></div> <div><div>Diameter:25.0mm (±0.1mm)</div><div>Centre Thickness:3.1mm (±0.1mm)</div><div>Radius of Curvature 1:69.75 (±2%)</div><div>Radius of Curvature 2:Plano</div><div>S/D:60/40</div><div>Edge thickness:2.0mm (derived)</div></div> <div><div>Effective F.L.156mm</div><div>Back F.L.154mm</div><div>Wavelength0.350µm</div><div>161mm</div><div>159mm</div><div>0.633µm</div><div>163mm</div><div>161mm</div><div>1.064µm</div><div>167mm</div><div>165mm</div><div>3.0µm</div><div>175mm</div><div>173mm</div><div>5.0µm</div></div> <div><div>Paraxial F.L. Tolerances ±2% to nearest mm</div><div>EFL from thin lens formula. BFL is referenced from the lens surface.</div></div> |
| CAF25LE<br><br>NS200U | 25mm Ø | 90.39<br><br>(±2%) | 200mm @<br><br>350nm | UV 平凸 | <div>CALCIUM FLUORIDE PLANO-CONVEX LENS</div> <div>25mm Ø X 200mm F.L. @ 350nm</div> <div>MATERIAL: UV Grade CaF<sub>2</sub></div> <div><div>Diameter:25.0mm (±0.1mm)</div><div>Centre Thickness:2.9mm (±0.1mm)</div><div>Radius of Curvature 1:90.39 (±2%)</div><div>Radius of Curvature 2:Plano</div><div>S/D:60/40</div><div>Edge thickness:2.0mm (derived)</div></div> <div><div>Effective F.L.202mm</div><div>Back F.L.200mm</div><div>Wavelength0.350µm</div><div>209mm</div><div>207mm</div><div>0.633µm</div><div>210mm</div><div>209mm</div><div>1.064µm</div><div>217mm</div><div>214mm</div><div>3.0µm</div><div>226mm</div><div>224mm</div><div>5.0µm</div></div> <div><div>Paraxial F.L. Tolerances ±2% to nearest mm</div><div>EFL from thin lens formula. BFL is referenced from the lens surface.</div></div> |

|                        |          |                     |                    |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------|----------|---------------------|--------------------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CAF25LE<br><br>NS300   | 25mm Ø   | 120.0<br><br>(±2%)  | 300mm @<br><br>5µm | IR 平凸 | <div>CALCIUM FLUORIDE PLANO-CONVEX LENS</div> <div>25mm Ø X 300mm F.L. @ 5µm</div> <div>MATERIAL: IR Grade CaF<sub>2</sub></div> <div><div>Diameter:25.0mm (±0.1mm)</div><div>Centre Thickness:2.6mm (±0.1mm)</div><div>Radius of Curvature 1:120 (±2%)</div><div>Radius of Curvature 2:Plano</div><div>S/D:60/40</div><div>Edge thickness:2.0mm (derived)</div></div> <div><div>Effective F.L.277mm</div><div>Back F.L.276mm</div><div>Wavelength0.633µm</div><div>280mm278mm1.064µm</div><div>287mm286mm3.0µm</div><div>300mm299mm5.0µm</div></div> <div>Parallel F.L. Tolerances: ±2% to nearest mm<br/>EFL from this lens formula. BFL is referenced from the lens surface.</div>                 |
| CAF25LE<br><br>NS500   | 25mm Ø   | 202.02<br><br>(±2%) | 500mm @<br><br>5µm | IR 平凸 | <div>CALCIUM FLUORIDE PLANO-CONVEX LENS</div> <div>25mm Ø X 500mm F.L. @ 5µm</div> <div>MATERIAL: IR Grade CaF<sub>2</sub></div> <div><div>Diameter:25.0mm (±0.1mm)</div><div>Centre Thickness:2.4mm (±0.1mm)</div><div>Radius of Curvature 1:202 (±2%)</div><div>Radius of Curvature 2:Plano</div><div>S/D:60/40</div><div>Edge thickness:2.0mm (derived)</div></div> <div><div>Effective F.L.467mm</div><div>Back F.L.465mm</div><div>Wavelength0.633µm</div><div>471mm469mm1.064µm</div><div>483mm482mm3.0µm</div><div>506mm504mm5.0µm</div></div> <div>Parallel F.L. Tolerances: ±2% to nearest mm<br/>EFL from this lens formula. BFL is referenced from the lens surface.</div>                 |
| CAF25.4L<br><br>ENS200 | 25.4mm Ø | 80.7<br><br>(±2%)   | 200mm @<br><br>5µm | IR 平凸 | <div>CALCIUM FLUORIDE PLANO-CONVEX LENS</div> <div>25.4mm Ø X 200mm F.L. @ 5µm</div> <div>MATERIAL: IR Grade CaF<sub>2</sub></div> <div><div>Diameter:25.4mm (+0.0 / -0.127mm)</div><div>Centre Thickness:2.64mm (±0.127mm)</div><div>Radius of Curvature 1:80.7 (±2%)</div><div>Radius of Curvature 2:Plano</div><div>S/D:60/40</div><div>Edge thickness:1.65mm (derived)</div></div> <div><div>Effective F.L.187mm</div><div>Back F.L.185mm</div><div>Wavelength0.633µm</div><div>188mm186mm1.064µm</div><div>193mm191mm3.0µm</div><div>202mm200mm5.0µm</div></div> <div>Parallel F.L. Tolerances: ±2% to nearest mm<br/>EFL from this lens formula. BFL is referenced from the lens surface.</div> |
| CAF27LE<br><br>NS50    | 27mm Ø   | 43.10<br><br>(±2%)  | 50mm @<br><br>3µm  | IR 双凸 | <div>CALCIUM FLUORIDE BI-CONVEX LENS</div> <div>27mm Ø X 50mm F.L. @ 3µm</div> <div>MATERIAL: IR Grade CaF<sub>2</sub></div> <div><div>Diameter:27.0mm (±0.1mm)</div><div>Centre Thickness:6.4mm (±0.1mm)</div><div>Radius of Curvature 1:43.10 (±2%)</div><div>Radius of Curvature 2:43.10 (±2%)</div><div>S/D:60/40</div><div>Edge thickness:2.1mm (derived)</div></div> <div><div>Effective F.L.51mm</div><div>Back F.L.48.7mm</div><div>Wavelength0.633µm</div><div>51mm49.2mm1.064µm</div><div>53mm50.5mm3.0µm</div><div>55mm52.8mm5.0µm</div></div> <div>Parallel F.L. Tolerances: ±2% to nearest mm<br/>EFL from this lens formula. BFL is referenced from the lens surface.</div>             |

|                        |          |                      |                     |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------|----------|----------------------|---------------------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CAF30LE<br><br>NS70    | 30mm Ø   | 57.00<br><br>( ±2% ) | 70mm @<br><br>4µm   | IR 双凸 | <div>CALCIUM FLUORIDE BI-CONVEX LENS</div> <div>30mm Ø X 70mm F.L. @ 5µm</div> <div>MATERIAL: IR Grade CaF<sub>2</sub></div> <div><div>Diameter:30.0mm (±0.1mm)</div><div>Centre Thickness:6.0mm (±0.1mm)</div><div>Radius of Curvature 1:57.0 (±2%)</div><div>Radius of Curvature 2:57.0 (±2%)</div><div>S/D:60/40</div><div>Edge thickness:2.0mm (derived)</div><div><div>Effective F.L.67mm</div><div>Back F.L.65mm</div><div>Wavelength0.633µm</div><div>67mm</div><div>65mm</div><div>1.064µm</div><div>69mm</div><div>67mm</div><div>3.0µm</div><div>72mm</div><div>70mm</div><div>5.0µm</div></div><div>Parallel F.L. Tolerances ±2% to nearest mm</div><div>EFL from thin lens formula. BFL is referenced from the lens surface.</div></div>                                                   |
| CAF31.5L<br><br>ENS60  | 31.5mm Ø | 27.50<br><br>( ±2% ) | 60mm @<br><br>3µm   | IR 平凸 | <div>CALCIUM FLUORIDE PLANO-CONVEX LENS</div> <div>31.5mm Ø X 60mm F.L. @ 3µm</div> <div>MATERIAL: IR Grade CaF<sub>2</sub></div> <div><div>Diameter:31.5mm (±0.1mm)</div><div>Centre Thickness:6.8mm (±0.1mm)</div><div>Radius of Curvature 1:27.5 (±2%)</div><div>Radius of Curvature 2:Plano</div><div>S/D:60/40</div><div>Edge thickness:1.8mm (derived)</div><div><div>Effective F.L.64mm</div><div>Back F.L.59mm</div><div>Wavelength0.633µm</div><div>64mm</div><div>59mm</div><div>1.064µm</div><div>65mm</div><div>61mm</div><div>3.0µm</div><div>69mm</div><div>64mm</div><div>5.0µm</div></div><div>Parallel F.L. Tolerances ±2% to nearest mm</div><div>EFL from thin lens formula. BFL is referenced from the lens surface.</div></div>                                                   |
| CAF38.1L<br><br>ENS75  | 38.1mm Ø | 33.84<br><br>( ±2% ) | 75mm @<br><br>4.5µm | IR 平凸 | <div>CALCIUM FLUORIDE PLANO-CONVEX LENS</div> <div>38.1mm Ø X 75mm F.L. @ 3µm</div> <div>MATERIAL: IR Grade CaF<sub>2</sub></div> <div><div>Diameter:38.1mm (±0.1mm)</div><div>Centre Thickness:9.0mm (±0.1mm)</div><div>Radius of Curvature 1:33.84 (±2%)</div><div>Radius of Curvature 2:Plano</div><div>S/D:60/40</div><div>Edge thickness:3.1mm (derived)</div><div><div>Effective F.L.78mm</div><div>Back F.L.72mm</div><div>Wavelength0.633µm</div><div>79mm</div><div>73mm</div><div>1.064µm</div><div>81mm</div><div>75mm</div><div>3.0µm</div><div>85mm</div><div>78mm</div><div>5.0µm</div></div><div>Parallel F.L. Tolerances ±2% to nearest mm</div><div>EFL from thin lens formula. BFL is referenced from the lens surface.</div></div>                                                  |
| CAF38.1L<br><br>ENS75U | 38.1mm Ø | 33.84<br><br>( ±2% ) | 66mm @<br><br>248nm | UV 平凸 | <div>CALCIUM FLUORIDE PLANO-CONVEX LENS</div> <div>38.1mm Ø X 75mm F.L. @ 3µm*</div> <div>MATERIAL: UV Grade CaF<sub>2</sub></div> <div><div>Diameter:38.1mm (±0.1mm)</div><div>Centre Thickness:9.0mm (±0.1mm)</div><div>Radius of Curvature 1:33.84 (±2%)</div><div>Radius of Curvature 2:Plano</div><div>S/D:60/40</div><div>Edge thickness:3.1mm (derived)</div><div><div>Effective F.L.72mm</div><div>Back F.L.66mm</div><div>Wavelength0.248µm</div><div>78mm</div><div>72mm</div><div>0.633µm</div><div>79mm</div><div>73mm</div><div>1.064µm</div><div>81mm</div><div>75mm</div><div>3.0µm</div><div>85mm</div><div>78mm</div><div>5.0µm</div></div><div>Parallel F.L. Tolerances ±2% to nearest mm</div><div>EFL from thin lens formula. BFL is referenced from the lens surface.</div></div> |

|                         |          |                     |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------|----------|---------------------|----------------------|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CAF38.1L<br><br>ENS160  | 38.1mm Ø | 68.16<br><br>(±2%)  | 160mm @<br><br>3µm   | IR 平凸 | <div>CALCIUM FLUORIDE PLANO-CONVEX LENS</div> <div>38.1mm Ø X 160mm F.L. @ 3µm</div> <div>MATERIAL: IR Grade CaF<sub>2</sub></div> <div><div>Diameter:38.1mm (+0.1 / -0.2mm)</div><div>Centre Thickness:4.5mm (±0.1mm)</div><div>Radius of Curvature 1:68.16 (±2%)</div><div>Radius of Curvature 2:Plano</div><div>S/D:60/40</div><div>Edge thickness:1.8mm (derived)</div><div><div>Effective F.L.<br/>157mm<br/>159mm<br/>163mm<br/>171mm</div><div>Back F.L.<br/>154mm<br/>156mm<br/>160mm<br/>167mm</div><div>Wavelength<br/>0.633µm<br/>1.064µm<br/>3.0µm<br/>5.0µm</div></div><div><div>Paraxial F.L. Tolerances ±2% to nearest mm.</div><div>EFL from thin lens formula. BFL is referenced from the lens surface.</div></div></div>                          |
| CAF38.1L<br><br>ENS250U | 38.1mm Ø | 100<br><br>(±2%)    | 215mm @<br><br>248nm | UV 平凸 | <div>CALCIUM FLUORIDE PLANO-CONVEX LENS</div> <div>38.1mm Ø X 250mm F.L. @ 5µm</div> <div>MATERIAL: UV Grade CaF<sub>2</sub></div> <div><div>Diameter:38.1mm (±0.1mm)</div><div>Centre Thickness:3.8mm (±0.1mm)</div><div>Radius of Curvature 1:100.0 (±2%)</div><div>Radius of Curvature 2:Plano</div><div>S/D:60/40</div><div>Edge thickness:2.0mm (derived)</div><div><div>Effective F.L.<br/>213mm<br/>231mm<br/>233mm<br/>240mm<br/>250mm</div><div>Back F.L.<br/>211mm<br/>229mm<br/>231mm<br/>237mm<br/>247mm</div><div>Wavelength<br/>0.248µm<br/>0.633µm<br/>1.064µm<br/>3.0µm<br/>5.0µm</div></div><div><div>Paraxial F.L. Tolerances ±2% to nearest mm.</div><div>EFL from thin lens formula. BFL is referenced from the lens surface.</div></div></div> |
| CAF38.1L<br><br>ENS475  | 38.1mm Ø | 190.35<br><br>(±2%) | 475mm @<br><br>5µm   | IR 平凸 | <div>CALCIUM FLUORIDE PLANO-CONVEX LENS</div> <div>38.1mm Ø X 475mm F.L. @ 5µm</div> <div>MATERIAL: IR Grade CaF<sub>2</sub></div> <div><div>Diameter:38.1mm (+0.05 / -0.0mm)</div><div>Centre Thickness:4.0mm (±0.1mm)</div><div>Radius of Curvature 1:190.35 (±2%)</div><div>Radius of Curvature 2:Plano</div><div>S/D:60/40</div><div>Edge thickness:3.0mm (derived)</div><div><div>Effective F.L.<br/>440mm<br/>444mm<br/>456mm<br/>477mm</div><div>Back F.L.<br/>437mm<br/>442mm<br/>453mm<br/>474mm</div><div>Wavelength<br/>0.633µm<br/>1.064µm<br/>3.0µm<br/>5.0µm</div></div><div><div>Paraxial F.L. Tolerances ±2% to nearest mm.</div><div>EFL from thin lens formula. BFL is referenced from the lens surface.</div></div></div>                        |
| CAF40LE<br><br>NS120    | 40mm Ø   | 50.25<br><br>(±2%)  | 120mm @<br><br>3µm   | UV 平凸 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

|                      |        |                  |                    |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------|--------|------------------|--------------------|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CAF40LE<br><br>NS150 | 40mm Ø | 64<br><br>(±2%)  | 150mm @<br><br>3µm | IR 平凸 | <div>CALCIUM FLUORIDE PLANO-CONVEX LENS</div> <div>40mm Ø X 150mm F.L. @ 3µm</div> <div>MATERIAL: IR Grade CaF<sub>2</sub></div> <div><div>Diameter:40.0mm (±0.1mm)</div><div>Centre Thickness:4.1mm (±0.1mm)</div><div>Radius of Curvature 1:64.0 (±2%)</div><div>Radius of Curvature 2:Plano</div><div>S/D:60/40</div><div>Edge thickness:1.0mm (derived)</div></div> <div><div>Effective F.L.148mm</div><div>Back F.L.145mm</div><div>Wavelength0.633µm</div><div>149mm</div><div>146mm</div><div>1.064µm</div><div>153mm</div><div>150mm</div><div>3.0µm</div><div>160mm</div><div>157mm</div><div>5.0µm</div></div> <div><div>Parallel F.L. Tolerances: ±2% to nearest mm</div><div>EFL from thin lens formula. BFL is referenced from the lens surface.</div></div>  |
| CAF40LE<br><br>NS200 | 40mm Ø | 85<br><br>(±2%)  | 200mm @<br><br>3µm | IR 平凸 | <div>CALCIUM FLUORIDE PLANO-CONVEX LENS</div> <div>40mm Ø X 200mm F.L. @ 3µm</div> <div>MATERIAL: IR Grade CaF<sub>2</sub></div> <div><div>Diameter:40.0mm (±0.1mm)</div><div>Centre Thickness:3.3mm (±0.1mm)</div><div>Radius of Curvature 1:85.0 (±2%)</div><div>Radius of Curvature 2:Plano</div><div>S/D:60/40</div><div>Edge thickness:1.0mm (derived)</div></div> <div><div>Effective F.L.196mm</div><div>Back F.L.194mm</div><div>Wavelength0.633µm</div><div>198mm</div><div>196mm</div><div>1.064µm</div><div>203mm</div><div>201mm</div><div>3.0µm</div><div>212mm</div><div>210mm</div><div>5.0µm</div></div> <div><div>Parallel F.L. Tolerances: ±2% to nearest mm</div><div>EFL from thin lens formula. BFL is referenced from the lens surface.</div></div>  |
| CAF40LE<br><br>NS330 | 40mm Ø | 138<br><br>(±2%) | 330mm @<br><br>3µm | IR 平凸 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| CAF40LE<br><br>NS440 | 40mm Ø | 187<br><br>(±2%) | 440mm @<br><br>3µm | IR 平凸 | <div>CALCIUM FLUORIDE PLANO-CONVEX LENS</div> <div>40mm Ø X 440mm F.L. @ 3µm</div> <div>MATERIAL: IR Grade CaF<sub>2</sub></div> <div><div>Diameter:40.0mm (±0.1mm)</div><div>Centre Thickness:2.0mm (±0.1mm)</div><div>Radius of Curvature 1:187.0 (±2%)</div><div>Radius of Curvature 2:Plano</div><div>S/D:60/40</div><div>Edge thickness:1.0mm (derived)</div></div> <div><div>Effective F.L.432mm</div><div>Back F.L.431mm</div><div>Wavelength0.633µm</div><div>436mm</div><div>435mm</div><div>1.064µm</div><div>448mm</div><div>446mm</div><div>3.0µm</div><div>468mm</div><div>467mm</div><div>5.0µm</div></div> <div><div>Parallel F.L. Tolerances: ±2% to nearest mm</div><div>EFL from thin lens formula. BFL is referenced from the lens surface.</div></div> |

|                      |        |                    |                    |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------|--------|--------------------|--------------------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CAF50LE<br><br>NS80  | 50mm Ø | 65.6<br><br>(±2%)  | 80mm @<br><br>5µm  | IR 平凸 | <div>CALCIUM FLUORIDE BI-CONVEX LENS</div> <div>50mm Ø X 80mm F.L. @ 5µm</div> <div>MATERIAL: IR Grade CaF<sub>2</sub></div> <div></div> <div>Diameter: 50.0mm (±0.1mm)</div> <div>Centre Thickness: 19.9mm (±0.1mm)</div> <div>Radius of Curvature 1: 65.6 (±2%)</div> <div>Radius of Curvature 2: 65.6 (±2%)</div> <div>S/D: 60/40</div> <div>Edge thickness: 10mm (derived)</div> <div></div> <div><div>Effective F.L.79mm80mm82mm86mm</div><div>Back F.L.72mm73mm75mm78mm</div><div>Wavelength0.633µm1.064µm3.0µm5.0µm</div></div> <div>Parallel F.L. Tolerances ±2% to nearest mm<br/>EFL from thin lens formula. BFL is referenced from the lens surface.</div>          |
| CAF50LE<br><br>NS100 | 50mm Ø | 43.0<br><br>(±2%)  | 100mm @<br><br>1µm | IR 双凸 | <div>CALCIUM FLUORIDE PLANO-CONVEX LENS</div> <div>50mm Ø X 100mm F.L. @ 1µm</div> <div>MATERIAL: IR Grade CaF<sub>2</sub></div> <div></div> <div>Diameter: 50.0mm (±0.1mm)</div> <div>Centre Thickness: 10.0mm (±0.1mm)</div> <div>Radius of Curvature 1: 43.0 (±2%)</div> <div>Radius of Curvature 2: Plano</div> <div>S/D: 60/40</div> <div>Edge thickness: 2.0mm (derived)</div> <div></div> <div><div>Effective F.L.99mm100mm103mm108mm</div><div>Back F.L.92mm93mm96mm101mm</div><div>Wavelength0.633µm1.064µm3.0µm5.0µm</div></div> <div>Parallel F.L. Tolerances ±2% to nearest mm<br/>EFL from thin lens formula. BFL is referenced from the lens surface.</div>      |
| CAF50LE<br><br>NS135 | 50mm Ø | 57.0<br><br>(±2%)  | 135mm @<br><br>5µm | IR 平凸 | <div>CALCIUM FLUORIDE PLANO-CONVEX LENS</div> <div>50mm Ø X 135mm F.L. @ 5µm</div> <div>MATERIAL: IR Grade CaF<sub>2</sub></div> <div></div> <div>Diameter: 50.0mm (±0.1mm)</div> <div>Centre Thickness: 7.8mm (±0.1mm)</div> <div>Radius of Curvature 1: 57 (±2%)</div> <div>Radius of Curvature 2: Plano</div> <div>S/D: 60/40</div> <div>Edge thickness: 2mm (derived)</div> <div></div> <div><div>Effective F.L.132mm133mm136mm143mm</div><div>Back F.L.126mm128mm131mm137mm</div><div>Wavelength0.633µm1.064µm3.0µm5.0µm</div></div> <div>Parallel F.L. Tolerances ±2% to nearest mm<br/>EFL from thin lens formula. BFL is referenced from the lens surface.</div>       |
| CAF50LE<br><br>NS250 | 50mm Ø | 198.9<br><br>(±2%) | 250mm @<br><br>5µm | IR 双凸 | <div>CALCIUM FLUORIDE BI-CONVEX LENS</div> <div>50mm Ø X 250mm F.L. @ 5µm</div> <div>MATERIAL: IR Grade CaF<sub>2</sub></div> <div></div> <div>Diameter: 50.0mm (±0.1mm)</div> <div>Centre Thickness: 6.2mm (±0.1mm)</div> <div>Radius of Curvature 1: 198.9 (±2%)</div> <div>Radius of Curvature 2: 198.9 (±2%)</div> <div>S/D: 60/40</div> <div>Edge thickness: 3mm (derived)</div> <div></div> <div><div>Effective F.L.231mm233mm239mm250mm</div><div>Back F.L.229mm231mm237mm248mm</div><div>Wavelength0.633µm1.064µm3.0µm5.0µm</div></div> <div>Parallel F.L. Tolerances ±2% to nearest mm<br/>EFL from thin lens formula. BFL is referenced from the lens surface.</div> |

## CaF<sub>2</sub> 负透镜

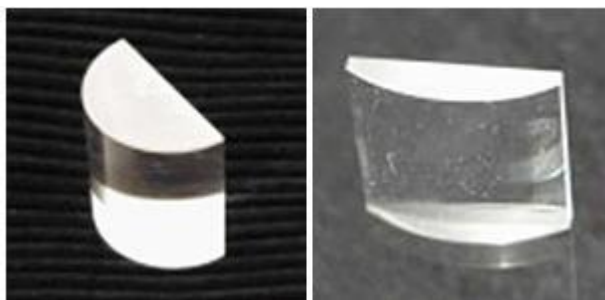


### 订购信息:

| 订购型号                  | 规格        | 曲率                  | 焦距                          | CaF2 等级 | 参数                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                |           |            |       |       |         |       |       |         |       |       |       |        |        |       |
|-----------------------|-----------|---------------------|-----------------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------|------------|-------|-------|---------|-------|-------|---------|-------|-------|-------|--------|--------|-------|
| CAF25LE<br><br>NS-50  | 25mm Ø    | -20.40<br><br>(±2%) | -50mm<br><br>@ 3μm          | IR 平凹   | <div>CALCIUM FLUORIDE PLANO-CONCAVE LENS</div> <div>25mm Ø X -50mm F.L. @ 3μm</div> <div>MATERIAL: IR Grade CaF<sub>2</sub></div> <div><div>Diameter:25.0mm (±0.1mm)</div><div>Centre Thickness:3.0mm (±0.1mm)</div><div>Radius of Curvature 1:-20.40 (±2%)</div><div>Radius of Curvature 2:Plano</div><div>S/D:60/40</div><div>Edge thickness:7.3mm (derived)</div></div> <div><table><tr><td>Effective F.L.</td><td>Back F.L.</td><td>Wavelength</td></tr><tr><td>-47mm</td><td>-49mm</td><td>0.633μm</td></tr><tr><td>-48mm</td><td>-50mm</td><td>1.064μm</td></tr><tr><td>-49mm</td><td>-51mm</td><td>3.0μm</td></tr><tr><td>-51mm</td><td>-53mm</td><td>5.0μm</td></tr></table><div>Paraxial F.L. Tolerances ±2% to nearest mm<br/>EFL from thin lens formula. BFL is referenced from the lens surface.</div></div>    | Effective F.L. | Back F.L. | Wavelength | -47mm | -49mm | 0.633μm | -48mm | -50mm | 1.064μm | -49mm | -51mm | 3.0μm | -51mm  | -53mm  | 5.0μm |
| Effective F.L.        | Back F.L. | Wavelength          |                             |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                |           |            |       |       |         |       |       |         |       |       |       |        |        |       |
| -47mm                 | -49mm     | 0.633μm             |                             |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                |           |            |       |       |         |       |       |         |       |       |       |        |        |       |
| -48mm                 | -50mm     | 1.064μm             |                             |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                |           |            |       |       |         |       |       |         |       |       |       |        |        |       |
| -49mm                 | -51mm     | 3.0μm               |                             |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                |           |            |       |       |         |       |       |         |       |       |       |        |        |       |
| -51mm                 | -53mm     | 5.0μm               |                             |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                |           |            |       |       |         |       |       |         |       |       |       |        |        |       |
| CAF25LE<br><br>NS-100 | 25mm Ø    | -40.32<br><br>(±2%) | -100m<br><br>m @<br><br>3μm | IR 平凹   | <div>CALCIUM FLUORIDE PLANO-CONCAVE LENS</div> <div>25mm Ø X -100mm F.L. @ 3μm</div> <div>MATERIAL: IR Grade CaF<sub>2</sub></div> <div><div>Diameter:25.0mm (±0.1mm)</div><div>Centre Thickness:2.0mm (±0.1mm)</div><div>Radius of Curvature 1:-40.32 (±2%)</div><div>Radius of Curvature 2:Plano</div><div>S/D:60/40</div><div>Edge thickness:3.8mm (derived)</div></div> <div><table><tr><td>Effective F.L.</td><td>Back F.L.</td><td>Wavelength</td></tr><tr><td>-93mm</td><td>-95mm</td><td>0.633μm</td></tr><tr><td>-94mm</td><td>-96mm</td><td>1.064μm</td></tr><tr><td>-97mm</td><td>-98mm</td><td>3.0μm</td></tr><tr><td>-101mm</td><td>-102mm</td><td>5.0μm</td></tr></table><div>Paraxial F.L. Tolerances ±2% to nearest mm<br/>EFL from thin lens formula. BFL is referenced from the lens surface.</div></div> | Effective F.L. | Back F.L. | Wavelength | -93mm | -95mm | 0.633μm | -94mm | -96mm | 1.064μm | -97mm | -98mm | 3.0μm | -101mm | -102mm | 5.0μm |
| Effective F.L.        | Back F.L. | Wavelength          |                             |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                |           |            |       |       |         |       |       |         |       |       |       |        |        |       |
| -93mm                 | -95mm     | 0.633μm             |                             |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                |           |            |       |       |         |       |       |         |       |       |       |        |        |       |
| -94mm                 | -96mm     | 1.064μm             |                             |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                |           |            |       |       |         |       |       |         |       |       |       |        |        |       |
| -97mm                 | -98mm     | 3.0μm               |                             |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                |           |            |       |       |         |       |       |         |       |       |       |        |        |       |
| -101mm                | -102mm    | 5.0μm               |                             |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                |           |            |       |       |         |       |       |         |       |       |       |        |        |       |

|                   |        |                 |                     |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------|--------|-----------------|---------------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CAF25LE<br>NS-150 | 25mm Ø | -59.85<br>(±2%) | -150m<br>m @<br>5µm | IR 平凹 | <b>CALCIUM FLUORIDE PLANO-CONCAVE LENS</b><br><br>25mm Ø X -150mm F.L. @ 5µm<br><br>MATERIAL: IR Grade CaF <sub>2</sub><br><br>Diameter: 25.0mm (±0.1mm)<br>Centre Thickness: 2.1mm (±0.1mm)<br>Radius of Curvature 1: -59.85 (±2%)<br>Radius of Curvature 2: Plano<br>S/D: 60/40<br>Edge thickness: 3.3mm (derived)<br><br>Effective F.L.      Back F.L.      Wavelength<br>-138mm          -141mm      0.633µm<br>-139mm          -142mm      1.064µm<br>-143mm          -146mm      3.0µm<br>-150mm          -152mm      5.0µm<br><small>Paraxial FL Tolerances ±2% to nearest mm<br/>EFL from thin lens formula. BFL is referenced from the lens surface.</small> |
|                   |        |                 |                     |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

## CaF<sub>2</sub> 柱面透镜:



## 订购信息:

| 订购型号             | 规格                   | 曲率         | 焦距             | CaF <sub>2</sub> 等级 |
|------------------|----------------------|------------|----------------|---------------------|
| CAF25-25LENS25C  | 25mm x<br>25mm 平凸半圆柱 | 12.5 (±2%) | 25mm @<br>3µm  | IR 平凸               |
| CAF25-25LENS350C | 25mm x 25mm          | 150 (±2%)  | 350mm @<br>3µm | IR 平凸               |

