



## IR 抛光氟化钙 $\text{CaF}_2$ 平凸正透镜 (直径 40mm 焦距 440mm)



### 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

CAF40LENS440





## 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  |
|------|-------------|-----------|-------|
| 40mm | 440mm @ 3μm | 187 (±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 |

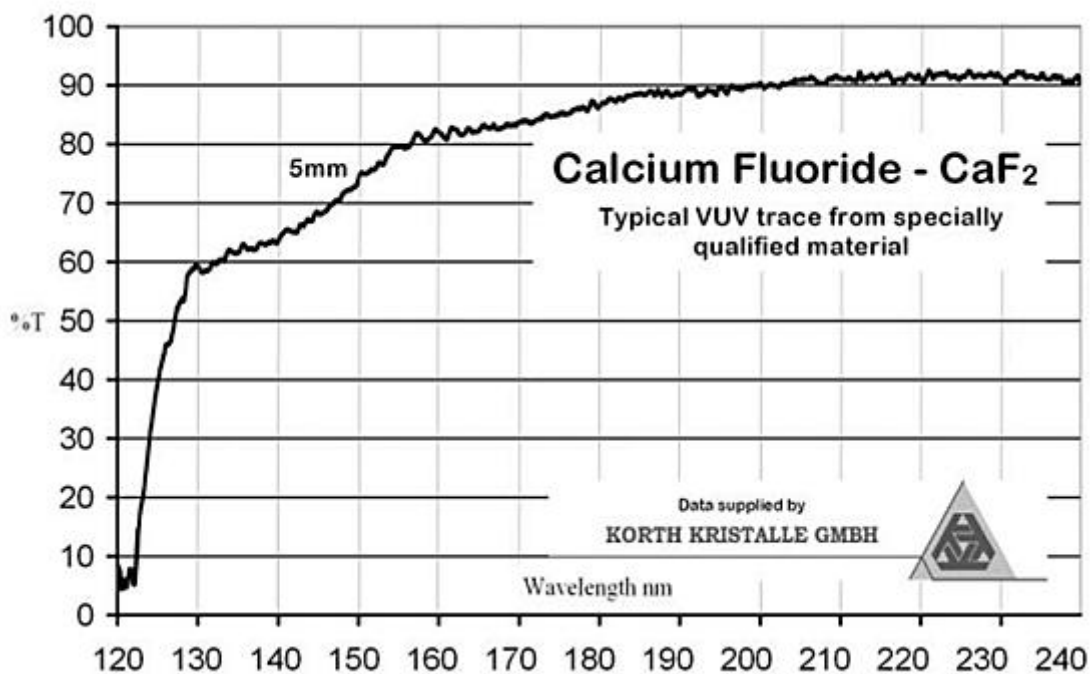
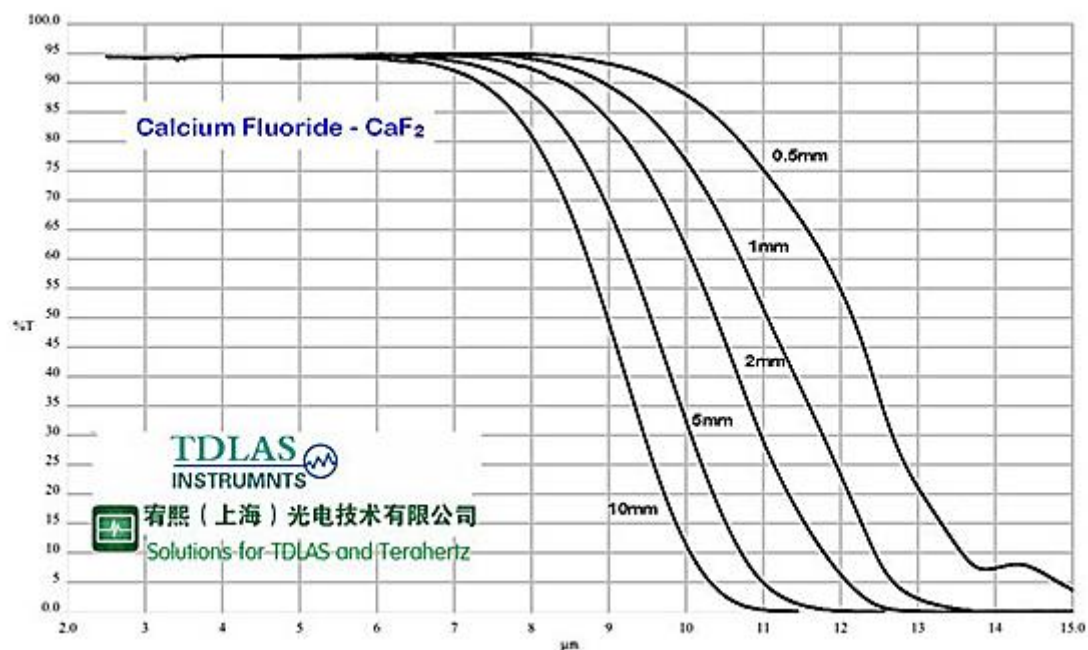
### 折射率:(No=Ordinary Ray 普通射线)

| 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><br>ENS10U | 12.7mm Ø | 10.16<br><br>(±2%) | 10mm @<br><br>300nm | UV 双凸   | <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> <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><div>Effective F.L. 277mm</div><div>Back F.L. 278mm</div><div>Wavelength 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>295mm</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> |
| CAF12.7L<br><br>ENS12  | 12.7mm Ø | 12.0<br><br>(±2%)  | 12.7mm<br><br>@ 5µm | IR 双凸   | <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>Diameter: 12.7mm (+0.0/-0.127mm)</div> <div>Centre Thickness: 6.0mm (±0.127mm)</div> <div>Radius of Curvature 1: 12.0 (±2%)</div> <div>Radius of Curvature 2: 12.0 (±2%)</div> <div>S/D: 60/40</div> <div>Edge thickness: 1.5mm (derived)</div> <div></div> <div><div>Effective F.L. 15.0mm</div><div>Back F.L. 12.7mm</div><div>Wavelength 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>Paraxial F.L. Tolerances: ±2% to nearest mm</div><div>EFL from thin lens formula. BFL is referenced from the lens surface.</div></div>                                      |
| CAF12.7L<br><br>ENS12U | 12.7mm Ø | 12.0<br><br>(±2%)  | 12mm @<br><br>300nm | UV 双凸   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| CAF12.7L<br><br>ENS100 | 12.7mm Ø | 40.32<br><br>(±2%) | 100mm @<br><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><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><div>Diameter:</div><div>16.0mm (±0.1mm)</div></div><div><div>Centre Thickness:</div><div>3.0mm (±0.1mm)</div></div><div><div>Radius of Curvature 1:</div><div>73.90 (±2%)</div></div><div><div>Radius of Curvature 2:</div><div>73.90 (±2%)</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><div><div>Effective F.L.</div><div>86mm</div></div><div><div>Back F.L.</div><div>85mm</div></div><div><div>Wavelength</div><div>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>Parallel F.L. Tolerances ±0% to repeat min.</div></div><div><div>EFL from this lens formula. BFL is referenced from the lens surface.</div></div></div></div>                                                                                      |
| CAF18.5L<br>ENS26 | 18.5mm Ø | 12.6<br>(±2%)  | 26mm @<br>3µm   | IR 平凸 | <div><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><div>Diameter:</div><div>18.7mm (±0.25mm)</div></div><div><div>Centre Thickness:</div><div>5.0mm (±0.2mm)</div></div><div><div>Centration</div><div>3 Arc Minutes</div></div><div><div>Radius of Curvature 1:</div><div>12.6 (±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>1.0mm (derived)</div></div><div><div></div><div><div>Effective F.L.</div><div>29.1mm</div></div><div><div>Back F.L.</div><div>25.6mm</div></div><div><div>Wavelength</div><div>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>Parallel F.L. Tolerances ±0% to repeat min.</div></div><div><div>EFL from this lens formula. BFL is referenced from the lens surface.</div></div></div></div>                                                                              |
| CAF20LE<br>NS50   | 20mm Ø   | 19.95<br>(±2%) | 50mm @<br>5µm   | IR 平凸 | <div><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><div>Diameter:</div><div>20.0mm (±0.1mm)</div></div><div><div>Centre Thickness:</div><div>4.0mm (±0.1mm)</div></div><div><div>Radius of Curvature 1:</div><div>19.95 (±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>1.3mm (derived)</div></div><div><div></div><div><div>Effective F.L.</div><div>46mm</div></div><div><div>Back F.L.</div><div>43mm</div></div><div><div>Wavelength</div><div>0.633µm</div></div><div><div>47mm</div><div>44mm</div><div>1.064µm</div></div><div><div>48mm</div><div>45mm</div><div>3.0µm</div></div><div><div>50mm</div><div>47mm</div><div>5.0µm</div></div><div><div>Parallel F.L. Tolerances ±0% to repeat min.</div></div><div><div>EFL from this lens formula. BFL is referenced from the lens surface.</div></div></div></div>                                                                                         |
| CAF25LE<br>NS25U  | 25mm Ø   | 21.53<br>(±2%) | 25mm @<br>350nm | UV 双凸 | <div><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><div>Diameter:</div><div>25.0mm (+0.0/-0.1mm)</div></div><div><div>Centre Thickness:</div><div>10mm (±0.1mm)</div></div><div><div>Radius of Curvature 1:</div><div>21.53 (±2%)</div></div><div><div>Radius of Curvature 2:</div><div>21.53 (±2%)</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><div><div>Effective F.L.</div><div>26.0mm</div></div><div><div>Pr Plane F.L.</div><div>25.0mm</div></div><div><div>Back F.L.</div><div>22.2mm</div></div><div><div>Wavelength</div><div>0.35µm</div></div><div><div>26.8mm</div><div></div><div>23.0mm</div><div>0.633µm</div></div><div><div>Parallel F.L. Tolerances ±0% to repeat min.</div></div><div><div>EFL from this lens formula. BFL is referenced from the lens surface.</div></div></div></div>                                                                                                                           |
| CAF25LE<br>NS25   | 25mm Ø   | 20.80<br>(±2%) | 25.4mm<br>@ 3µm | IR 双凸 | <div><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><div>Diameter:</div><div>25.0mm (+0.0/-0.1mm)</div></div><div><div>Centre Thickness:</div><div>10mm (±0.1mm)</div></div><div><div>Radius of Curvature 1:</div><div>20.80 (±2%)</div></div><div><div>Radius of Curvature 2:</div><div>20.80 (±2%)</div></div><div><div>S/D:</div><div>60/40</div></div><div><div>Edge thickness:</div><div>1.6mm (derived)</div></div><div><div></div><div><div>Effective F.L.</div><div>25.9mm</div></div><div><div>Pr Plane F.L.</div><div>25.4mm</div></div><div><div>Back F.L.</div><div>22.2mm</div></div><div><div>Wavelength</div><div>0.633µm</div></div><div><div>26.2mm</div><div></div><div>22.4mm</div><div>1.064µm</div></div><div><div>26.8mm</div><div>24.1mm</div><div>3.0µm</div></div><div><div>28.0mm</div><div>24.1mm</div><div>5.0µm</div></div><div><div>Parallel F.L. Tolerances ±0% to repeat min.</div></div><div><div>EFL from this lens formula. BFL is referenced from the lens surface.</div></div></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> <div><div>Effective F.L.</div><div>48mm</div><div>49mm</div><div>50mm</div><div>52mm</div></div> <div><div>Back F.L.</div><div>44mm</div><div>45mm</div><div>45mm</div><div>48mm</div></div> <div><div>Wavelength</div><div>0.633µm</div><div>1.064µm</div><div>3.0µm</div><div>5.0µm</div></div> <div><div>Paraxial 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> <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> <div><div>Effective F.L.</div><div>51mm</div><div>53mm</div><div>54mm</div><div>55mm</div><div>57mm</div></div> <div><div>Back F.L.</div><div>47mm</div><div>49mm</div><div>49mm</div><div>51mm</div><div>53mm</div></div> <div><div>Wavelength</div><div>0.35 µm</div><div>0.633µm</div><div>1.064µm</div><div>3.0µm</div><div>5.0µm</div></div> <div><div>Paraxial 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>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> <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> <div><div>Effective F.L.</div><div>72mm</div><div>73mm</div><div>75mm</div><div>78mm</div></div> <div><div>Back F.L.</div><div>69mm</div><div>70mm</div><div>72mm</div><div>75mm</div></div> <div><div>Wavelength</div><div>0.633µm</div><div>1.064µm</div><div>3.0µm</div><div>5.0µm</div></div> <div><div>Paraxial 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>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> <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.</div><div>92mm</div><div>93mm</div><div>95mm</div><div>100mm</div></div> <div><div>Back F.L.</div><div>90mm</div><div>91mm</div><div>94mm</div><div>98mm</div></div> <div><div>Wavelength</div><div>0.633µm</div><div>1.064µm</div><div>3.0µm</div><div>5.0µm</div></div> <div><div>Paraxial F.L. Tolerances ±0% to nearest mm</div><div>EFL from this lens formula. BFL is referenced from the lens surface.</div></div>                                                      |

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|-------------------|--------|------------------|------------------|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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><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><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>NS100U | 25mm Ø | 43.73<br>( ±2% ) | 100mm @<br>350nm | UV 平凸 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| CAF25LE<br>NS130  | 25mm Ø | 55.35<br>( ±2% ) | 130mm @<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.<br/>128mm<br/>129mm<br/>133mm<br/>139mm</div><div>Back F.L.<br/>126mm<br/>126mm<br/>130mm<br/>136mm</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>                                   |
| CAF25LE<br>NS150  | 25mm Ø | 61.0<br>( ±2% )  | 150mm @<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.<br/>141mm<br/>142mm<br/>146mm<br/>152mm</div><div>Back F.L.<br/>139mm<br/>140mm<br/>144mm<br/>150mm</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>                                    |
| CAF25LE<br>NS150U | 25mm Ø | 69.75<br>( ±2% ) | 150mm @<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.<br/>156mm<br/>161mm<br/>163mm<br/>167mm<br/>175mm</div><div>Back F.L.<br/>154mm<br/>159mm<br/>161mm<br/>165mm<br/>173mm</div><div>Wavelength<br/>0.350µm<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> |

|                        |           |                     |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
|------------------------|-----------|---------------------|----------------------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------|------------|-------|-------|---------|-------|-------|---------|-------|-------|---------|-------|-------|-------|-------|-------|-------|
| 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> <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><table><tr><td>Effective F.L.</td><td>Back F.L.</td><td>Wavelength</td></tr><tr><td>202mm</td><td>200mm</td><td>0.350µm</td></tr><tr><td>209mm</td><td>207mm</td><td>0.633µm</td></tr><tr><td>210mm</td><td>209mm</td><td>1.064µm</td></tr><tr><td>217mm</td><td>214mm</td><td>3.0µm</td></tr><tr><td>226mm</td><td>224mm</td><td>5.0µm</td></tr></table><div>Paraxial F.L. Tolerances ±2% to nearest mm.<br/>EFL from the lens surface. BFL is referenced from the lens surface.</div></div> | Effective F.L. | Back F.L. | Wavelength | 202mm | 200mm | 0.350µm | 209mm | 207mm | 0.633µm | 210mm | 209mm | 1.064µm | 217mm | 214mm | 3.0µm | 226mm | 224mm | 5.0µm |
| Effective F.L.         | Back F.L. | Wavelength          |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 202mm                  | 200mm     | 0.350µm             |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 209mm                  | 207mm     | 0.633µm             |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 210mm                  | 209mm     | 1.064µm             |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 217mm                  | 214mm     | 3.0µm               |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 226mm                  | 224mm     | 5.0µm               |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 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> <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><table><tr><td>Effective F.L.</td><td>Back F.L.</td><td>Wavelength</td></tr><tr><td>277mm</td><td>276mm</td><td>0.633µm</td></tr><tr><td>280mm</td><td>278mm</td><td>1.064µm</td></tr><tr><td>287mm</td><td>286mm</td><td>3.0µm</td></tr><tr><td>300mm</td><td>299mm</td><td>5.0µm</td></tr></table><div>Paraxial F.L. Tolerances ±2% to nearest mm.<br/>EFL from the lens surface. BFL is referenced from the lens surface.</div></div>                                                          | Effective F.L. | Back F.L. | Wavelength | 277mm | 276mm | 0.633µm | 280mm | 278mm | 1.064µm | 287mm | 286mm | 3.0µm   | 300mm | 299mm | 5.0µm |       |       |       |
| Effective F.L.         | Back F.L. | Wavelength          |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 277mm                  | 276mm     | 0.633µm             |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 280mm                  | 278mm     | 1.064µm             |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 287mm                  | 286mm     | 3.0µm               |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 300mm                  | 299mm     | 5.0µm               |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 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> <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><table><tr><td>Effective F.L.</td><td>Back F.L.</td><td>Wavelength</td></tr><tr><td>467mm</td><td>465mm</td><td>0.633µm</td></tr><tr><td>471mm</td><td>469mm</td><td>1.064µm</td></tr><tr><td>483mm</td><td>482mm</td><td>3.0µm</td></tr><tr><td>506mm</td><td>504mm</td><td>5.0µm</td></tr></table><div>Paraxial F.L. Tolerances ±2% to nearest mm.<br/>EFL from the lens surface. BFL is referenced from the lens surface.</div></div>                                                          | Effective F.L. | Back F.L. | Wavelength | 467mm | 465mm | 0.633µm | 471mm | 469mm | 1.064µm | 483mm | 482mm | 3.0µm   | 506mm | 504mm | 5.0µm |       |       |       |
| Effective F.L.         | Back F.L. | Wavelength          |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 467mm                  | 465mm     | 0.633µm             |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 471mm                  | 469mm     | 1.064µm             |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 483mm                  | 482mm     | 3.0µm               |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 506mm                  | 504mm     | 5.0µm               |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 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> <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><table><tr><td>Effective F.L.</td><td>Back F.L.</td><td>Wavelength</td></tr><tr><td>187mm</td><td>185mm</td><td>0.633µm</td></tr><tr><td>188mm</td><td>186mm</td><td>1.064µm</td></tr><tr><td>193mm</td><td>191mm</td><td>3.0µm</td></tr><tr><td>202mm</td><td>200mm</td><td>5.0µm</td></tr></table><div>Paraxial F.L. Tolerances ±2% to nearest mm.<br/>EFL from the lens surface. BFL is referenced from the lens surface.</div></div>                                          | Effective F.L. | Back F.L. | Wavelength | 187mm | 185mm | 0.633µm | 188mm | 186mm | 1.064µm | 193mm | 191mm | 3.0µm   | 202mm | 200mm | 5.0µm |       |       |       |
| Effective F.L.         | Back F.L. | Wavelength          |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 187mm                  | 185mm     | 0.633µm             |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 188mm                  | 186mm     | 1.064µm             |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 193mm                  | 191mm     | 3.0µm               |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 202mm                  | 200mm     | 5.0µm               |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |

|                       |           |                    |                     |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                |           |            |      |        |         |      |        |         |      |        |       |      |        |       |
|-----------------------|-----------|--------------------|---------------------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------|------------|------|--------|---------|------|--------|---------|------|--------|-------|------|--------|-------|
| 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>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><table><tr><td>Effective F.L.</td><td>Back F.L.</td><td>Wavelength</td></tr><tr><td>51mm</td><td>48.7mm</td><td>0.633µm</td></tr><tr><td>51mm</td><td>49.2mm</td><td>1.064µm</td></tr><tr><td>53mm</td><td>50.5mm</td><td>3.0µm</td></tr><tr><td>55mm</td><td>52.8mm</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 | 51mm | 48.7mm | 0.633µm | 51mm | 49.2mm | 1.064µm | 53mm | 50.5mm | 3.0µm | 55mm | 52.8mm | 5.0µm |
| Effective F.L.        | Back F.L. | Wavelength         |                     |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                |           |            |      |        |         |      |        |         |      |        |       |      |        |       |
| 51mm                  | 48.7mm    | 0.633µm            |                     |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                |           |            |      |        |         |      |        |         |      |        |       |      |        |       |
| 51mm                  | 49.2mm    | 1.064µm            |                     |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                |           |            |      |        |         |      |        |         |      |        |       |      |        |       |
| 53mm                  | 50.5mm    | 3.0µm              |                     |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                |           |            |      |        |         |      |        |         |      |        |       |      |        |       |
| 55mm                  | 52.8mm    | 5.0µm              |                     |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                |           |            |      |        |         |      |        |         |      |        |       |      |        |       |
| 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>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><table><tr><td>Effective F.L.</td><td>Back F.L.</td><td>Wavelength</td></tr><tr><td>67mm</td><td>65mm</td><td>0.633µm</td></tr><tr><td>67mm</td><td>65mm</td><td>1.064µm</td></tr><tr><td>69mm</td><td>67mm</td><td>3.0µm</td></tr><tr><td>72mm</td><td>70mm</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 | 67mm | 65mm   | 0.633µm | 67mm | 65mm   | 1.064µm | 69mm | 67mm   | 3.0µm | 72mm | 70mm   | 5.0µm |
| Effective F.L.        | Back F.L. | Wavelength         |                     |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                |           |            |      |        |         |      |        |         |      |        |       |      |        |       |
| 67mm                  | 65mm      | 0.633µm            |                     |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                |           |            |      |        |         |      |        |         |      |        |       |      |        |       |
| 67mm                  | 65mm      | 1.064µm            |                     |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                |           |            |      |        |         |      |        |         |      |        |       |      |        |       |
| 69mm                  | 67mm      | 3.0µm              |                     |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                |           |            |      |        |         |      |        |         |      |        |       |      |        |       |
| 72mm                  | 70mm      | 5.0µm              |                     |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                |           |            |      |        |         |      |        |         |      |        |       |      |        |       |
| 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>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><table><tr><td>Effective F.L.</td><td>Back F.L.</td><td>Wavelength</td></tr><tr><td>64mm</td><td>59mm</td><td>0.633µm</td></tr><tr><td>64mm</td><td>59mm</td><td>1.064µm</td></tr><tr><td>65mm</td><td>61mm</td><td>3.0µm</td></tr><tr><td>69mm</td><td>64mm</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 | 64mm | 59mm   | 0.633µm | 64mm | 59mm   | 1.064µm | 65mm | 61mm   | 3.0µm | 69mm | 64mm   | 5.0µm |
| Effective F.L.        | Back F.L. | Wavelength         |                     |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                |           |            |      |        |         |      |        |         |      |        |       |      |        |       |
| 64mm                  | 59mm      | 0.633µm            |                     |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                |           |            |      |        |         |      |        |         |      |        |       |      |        |       |
| 64mm                  | 59mm      | 1.064µm            |                     |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                |           |            |      |        |         |      |        |         |      |        |       |      |        |       |
| 65mm                  | 61mm      | 3.0µm              |                     |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                |           |            |      |        |         |      |        |         |      |        |       |      |        |       |
| 69mm                  | 64mm      | 5.0µm              |                     |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                |           |            |      |        |         |      |        |         |      |        |       |      |        |       |
| 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>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><table><tr><td>Effective F.L.</td><td>Back F.L.</td><td>Wavelength</td></tr><tr><td>78mm</td><td>72mm</td><td>0.633µm</td></tr><tr><td>79mm</td><td>73mm</td><td>1.064µm</td></tr><tr><td>81mm</td><td>75mm</td><td>3.0µm</td></tr><tr><td>85mm</td><td>78mm</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 | 78mm | 72mm   | 0.633µm | 79mm | 73mm   | 1.064µm | 81mm | 75mm   | 3.0µm | 85mm | 78mm   | 5.0µm |
| Effective F.L.        | Back F.L. | Wavelength         |                     |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                |           |            |      |        |         |      |        |         |      |        |       |      |        |       |
| 78mm                  | 72mm      | 0.633µm            |                     |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                |           |            |      |        |         |      |        |         |      |        |       |      |        |       |
| 79mm                  | 73mm      | 1.064µm            |                     |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                |           |            |      |        |         |      |        |         |      |        |       |      |        |       |
| 81mm                  | 75mm      | 3.0µm              |                     |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                |           |            |      |        |         |      |        |         |      |        |       |      |        |       |
| 85mm                  | 78mm      | 5.0µm              |                     |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                |           |            |      |        |         |      |        |         |      |        |       |      |        |       |

|                         |           |                     |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
|-------------------------|-----------|---------------------|----------------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------|------------|-------|-------|---------|-------|-------|---------|-------|-------|---------|-------|-------|-------|-------|-------|-------|
| 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>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><table><tr><td>Effective F.L.</td><td>Back F.L.</td><td>Wavelength</td></tr><tr><td>72mm</td><td>66mm</td><td>0.246µm</td></tr><tr><td>78mm</td><td>72mm</td><td>0.633µm</td></tr><tr><td>79mm</td><td>73mm</td><td>1.064µm</td></tr><tr><td>81mm</td><td>75mm</td><td>3.0µm</td></tr><tr><td>85mm</td><td>78mm</td><td>5.0µm</td></tr></table><div><div>Paraxial F.L. Tolerances ±2% to nearest mm</div><div>EFL from the lens formula. BFL is referenced from the lens surface.</div></div></div>           | Effective F.L. | Back F.L. | Wavelength | 72mm  | 66mm  | 0.246µm | 78mm  | 72mm  | 0.633µm | 79mm  | 73mm  | 1.064µm | 81mm  | 75mm  | 3.0µm | 85mm  | 78mm  | 5.0µm |
| Effective F.L.          | Back F.L. | Wavelength          |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 72mm                    | 66mm      | 0.246µm             |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 78mm                    | 72mm      | 0.633µm             |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 79mm                    | 73mm      | 1.064µm             |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 81mm                    | 75mm      | 3.0µm               |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 85mm                    | 78mm      | 5.0µm               |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 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>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><table><tr><td>Effective F.L.</td><td>Back F.L.</td><td>Wavelength</td></tr><tr><td>157mm</td><td>154mm</td><td>0.633µm</td></tr><tr><td>159mm</td><td>156mm</td><td>1.064µm</td></tr><tr><td>163mm</td><td>160mm</td><td>3.0µm</td></tr><tr><td>171mm</td><td>167mm</td><td>5.0µm</td></tr></table><div><div>Paraxial F.L. Tolerances ±2% to nearest mm</div><div>EFL from the lens formula. BFL is referenced from the lens surface.</div></div></div>                                               | Effective F.L. | Back F.L. | Wavelength | 157mm | 154mm | 0.633µm | 159mm | 156mm | 1.064µm | 163mm | 160mm | 3.0µm   | 171mm | 167mm | 5.0µm |       |       |       |
| Effective F.L.          | Back F.L. | Wavelength          |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 157mm                   | 154mm     | 0.633µm             |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 159mm                   | 156mm     | 1.064µm             |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 163mm                   | 160mm     | 3.0µm               |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 171mm                   | 167mm     | 5.0µm               |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 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>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><table><tr><td>Effective F.L.</td><td>Back F.L.</td><td>Wavelength</td></tr><tr><td>213mm</td><td>211mm</td><td>0.246µm</td></tr><tr><td>231mm</td><td>229mm</td><td>0.633µm</td></tr><tr><td>233mm</td><td>231mm</td><td>1.064µm</td></tr><tr><td>240mm</td><td>237mm</td><td>3.0µm</td></tr><tr><td>250mm</td><td>247mm</td><td>5.0µm</td></tr></table><div><div>Paraxial F.L. Tolerances ±2% to nearest mm</div><div>EFL from the lens formula. BFL is referenced from the lens surface.</div></div></div> | Effective F.L. | Back F.L. | Wavelength | 213mm | 211mm | 0.246µm | 231mm | 229mm | 0.633µm | 233mm | 231mm | 1.064µm | 240mm | 237mm | 3.0µm | 250mm | 247mm | 5.0µm |
| Effective F.L.          | Back F.L. | Wavelength          |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 213mm                   | 211mm     | 0.246µm             |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 231mm                   | 229mm     | 0.633µm             |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 233mm                   | 231mm     | 1.064µm             |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 240mm                   | 237mm     | 3.0µm               |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 250mm                   | 247mm     | 5.0µm               |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 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>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><table><tr><td>Effective F.L.</td><td>Back F.L.</td><td>Wavelength</td></tr><tr><td>440mm</td><td>437mm</td><td>0.633µm</td></tr><tr><td>444mm</td><td>442mm</td><td>1.064µm</td></tr><tr><td>456mm</td><td>453mm</td><td>3.0µm</td></tr><tr><td>477mm</td><td>474mm</td><td>5.0µm</td></tr></table><div><div>Paraxial F.L. Tolerances ±2% to nearest mm</div><div>EFL from the lens formula. BFL is referenced from the lens surface.</div></div></div>                                             | Effective F.L. | Back F.L. | Wavelength | 440mm | 437mm | 0.633µm | 444mm | 442mm | 1.064µm | 456mm | 453mm | 3.0µm   | 477mm | 474mm | 5.0µm |       |       |       |
| Effective F.L.          | Back F.L. | Wavelength          |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 440mm                   | 437mm     | 0.633µm             |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 444mm                   | 442mm     | 1.064µm             |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 456mm                   | 453mm     | 3.0µm               |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| 477mm                   | 474mm     | 5.0µm               |                      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |
| CAF40LE<br><br>NS120    | 40mm Ø    | 50.25<br><br>(±2%)  | 120mm @<br><br>3µm   | UV 平凸 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |           |            |       |       |         |       |       |         |       |       |         |       |       |       |       |       |       |

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|------------------|--------|---------------|----------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CAF40LE<br>NS150 | 40mm Ø | 64<br>(±2%)   | 150mm @<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> <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><div>Effective F.L. 148mm</div><div>Back F.L. 146mm</div><div>Wavelength 0.633µm</div></div> <div><div>146mm</div><div>146mm</div><div>1.064µm</div></div> <div><div>153mm</div><div>150mm</div><div>3.0µm</div></div> <div><div>160mm</div><div>157mm</div><div>5.0µm</div></div> <div><div>Paraxial F.L. Tolerances ±2% to nearest mm</div><div>EFL from the lens formula. BFL is referenced from the lens surface.</div></div>  |
| CAF40LE<br>NS200 | 40mm Ø | 85<br>(±2%)   | 200mm @<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> <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><div>Effective F.L. 196mm</div><div>Back F.L. 194mm</div><div>Wavelength 0.633µm</div></div> <div><div>198mm</div><div>196mm</div><div>1.064µm</div></div> <div><div>203mm</div><div>201mm</div><div>3.0µm</div></div> <div><div>212mm</div><div>210mm</div><div>5.0µm</div></div> <div><div>Paraxial F.L. Tolerances ±2% to nearest mm</div><div>EFL from the lens formula. BFL is referenced from the lens surface.</div></div>  |
| CAF40LE<br>NS330 | 40mm Ø | 138<br>(±2%)  | 330mm @<br>3µm | IR 平凸 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| CAF40LE<br>NS440 | 40mm Ø | 187<br>(±2%)  | 440mm @<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> <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><div>Effective F.L. 432mm</div><div>Back F.L. 431mm</div><div>Wavelength 0.633µm</div></div> <div><div>436mm</div><div>435mm</div><div>1.064µm</div></div> <div><div>448mm</div><div>446mm</div><div>3.0µm</div></div> <div><div>468mm</div><div>467mm</div><div>5.0µm</div></div> <div><div>Paraxial F.L. Tolerances ±2% to nearest mm</div><div>EFL from the lens formula. BFL is referenced from the lens surface.</div></div> |
| CAF50LE<br>NS80  | 50mm Ø | 65.6<br>(±2%) | 80mm @<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. 79mm</div><div>Back F.L. 72mm</div><div>Wavelength 0.633µm</div></div> <div><div>80mm</div><div>73mm</div><div>1.064µm</div></div> <div><div>92mm</div><div>75mm</div><div>3.0µm</div></div> <div><div>86mm</div><div>78mm</div><div>5.0µm</div></div> <div><div>Paraxial F.L. Tolerances ±2% to nearest mm</div><div>EFL from the lens formula. BFL is referenced from the lens surface.</div></div>         |

|                  |        |                |                |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------|--------|----------------|----------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CAF50LE<br>NS100 | 50mm Ø | 43.0<br>(±2%)  | 100mm @<br>1µm | IR 双凸 | <b>CALCIUM FLUORIDE PLANO-CONVEX LENS</b><br>50mm Ø X 100mm F.L. @ 1µm<br>MATERIAL: IR Grade CaF <sub>2</sub><br>Diameter: 50.0mm (±0.1mm)<br>Centre Thickness: 10.0mm (±0.1mm)<br>Radius of Curvature 1: 43.0 (±2%)<br>Radius of Curvature 2: Plano<br>S/D: 60/40<br>Edge thickness: 2.0mm (derived)<br>Effective F.L.: 99mm<br>100mm<br>103mm<br>108mm<br>Back F.L.: 92mm<br>93mm<br>96mm<br>101mm<br>Wavelength: 0.633µm<br>1.064µm<br>3.0µm<br>5.0µm<br><small>Paraxial F.L. Tolerances ±2% to nearest mm.<br/>EFL from the lens formula. BFL is referenced from the lens surface.</small>      |
| CAF50LE<br>NS135 | 50mm Ø | 57.0<br>(±2%)  | 135mm @<br>5µm | IR 平凸 | <b>CALCIUM FLUORIDE PLANO-CONVEX LENS</b><br>50mm Ø X 135mm F.L. @ 5µm<br>MATERIAL: IR Grade CaF <sub>2</sub><br>Diameter: 50.0mm (±0.1mm)<br>Centre Thickness: 7.8mm (±0.1mm)<br>Radius of Curvature 1: 57 (±2%)<br>Radius of Curvature 2: Plano<br>S/D: 60/40<br>Edge thickness: 2mm (derived)<br>Effective F.L.: 132mm<br>133mm<br>136mm<br>143mm<br>Back F.L.: 126mm<br>128mm<br>131mm<br>137mm<br>Wavelength: 0.633µm<br>1.064µm<br>3.0µm<br>5.0µm<br><small>Paraxial F.L. Tolerances ±2% to nearest mm.<br/>EFL from the lens formula. BFL is referenced from the lens surface.</small>       |
| CAF50LE<br>NS250 | 50mm Ø | 198.9<br>(±2%) | 250mm @<br>5µm | IR 双凸 | <b>CALCIUM FLUORIDE BI-CONVEX LENS</b><br>50mm Ø X 250mm F.L. @ 5µm<br>MATERIAL: IR Grade CaF <sub>2</sub><br>Diameter: 50.0mm (±0.1mm)<br>Centre Thickness: 6.2mm (±0.1mm)<br>Radius of Curvature 1: 198.9 (±2%)<br>Radius of Curvature 2: 198.9 (±2%)<br>S/D: 60/40<br>Edge thickness: 3mm (derived)<br>Effective F.L.: 231mm<br>233mm<br>239mm<br>250mm<br>Back F.L.: 229mm<br>231mm<br>237mm<br>248mm<br>Wavelength: 0.633µm<br>1.064µm<br>3.0µm<br>5.0µm<br><small>Paraxial F.L. Tolerances ±2% to nearest mm.<br/>EFL from the lens formula. BFL is referenced from the lens surface.</small> |

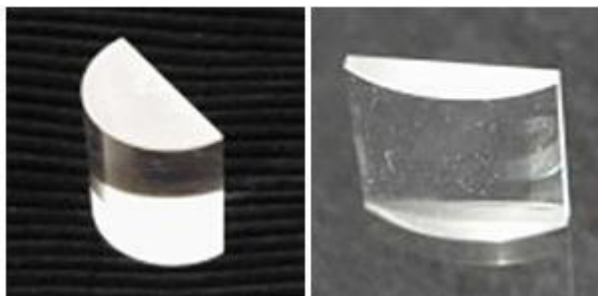
## CaF<sub>2</sub> 负透镜



## 订购信息:

| 订购型号              | 规格     | 曲率              | 焦距                  | CaF2 等级 | 参数                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------|--------|-----------------|---------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CAF25LE<br>NS-50  | 25mm Ø | -20.40<br>(±2%) | -50mm<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>SID:60/40</div><div>Edge thickness:7.3mm (derived)</div><div><div>Effective F.L.<br/>-47mm<br/>-48mm<br/>-49mm<br/>-51mm</div><div>Back F.L.<br/>-49mm<br/>-50mm<br/>-51mm<br/>-53mm</div><div>Wavelength<br/>0.633μm<br/>1.064μm<br/>3.0μm<br/>5.0μm</div></div><div><div>Paraxial F.L. Tolances ±2% to nearest mm</div><div>EFL from this lens formula. EFL is referenced from the lens surface.</div></div></div>          |
| CAF25LE<br>NS-100 | 25mm Ø | -40.32<br>(±2%) | -100m<br>m @<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>SID:60/40</div><div>Edge thickness:3.8mm (derived)</div><div><div>Effective F.L.<br/>-93mm<br/>-94mm<br/>-97mm<br/>-101mm</div><div>Back F.L.<br/>-95mm<br/>-96mm<br/>-98mm<br/>-102mm</div><div>Wavelength<br/>0.633μm<br/>1.064μm<br/>3.0μm<br/>5.0μm</div></div><div><div>Paraxial F.L. Tolances ±2% to nearest mm</div><div>EFL from this lens formula. EFL is referenced from the lens surface.</div></div></div>       |
| CAF25LE<br>NS-150 | 25mm Ø | -59.85<br>(±2%) | -150m<br>m @<br>5μm | IR 平凹   | <div>CALCIUM FLUORIDE PLANO-CONCAVE 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:2.1mm (±0.1mm)</div><div>Radius of Curvature 1:-59.85 (±2%)</div><div>Radius of Curvature 2:Plano</div><div>SID:60/40</div><div>Edge thickness:3.3mm (derived)</div><div><div>Effective F.L.<br/>-138mm<br/>-139mm<br/>-143mm<br/>-150mm</div><div>Back F.L.<br/>-141mm<br/>-142mm<br/>-146mm<br/>-152mm</div><div>Wavelength<br/>0.633μm<br/>1.064μm<br/>3.0μm<br/>5.0μm</div></div><div><div>Paraxial F.L. Tolances ±2% to nearest mm</div><div>EFL from this lens formula. EFL is referenced from the lens surface.</div></div></div> |

## CaF2 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               |

