

## 10X10mm 涡旋相位板/螺旋相位板 1064nm



### 产品描述

涡旋相位板是一种光学厚度与旋转方位角成正比的纯相位衍射光学元件，入射平面波通过涡旋相位板的出射光束具有涡旋相位波前。涡旋相位板作为一种新型的衍射光学元件，已在光信息处理，光学微操作，生物医学，形貌测量，天文观测等诸多领域得到实际应用。目前，对涡旋相位板的研究已经发展为现代光学的一个重要领域。

### 产品特点

选择性偏振的特殊衍射效率、宽频带低角敏度专用设计、超抛光石英基板 Max. 限度地减小传输中的波前变形、仅使用熔融石英和高强度介电材料、不使用聚合物或有机物、每个衍射光栅都是主光栅；超低散射、极为精确的线密度（线密度均匀性 $<0.001$  线/mm）

### 产品型号

VPP-m1064

### 应用领域

微微秒和飞秒脉冲压缩

高功率激光器

光谱光束合成与光束控制

远程光学传感器和光谱学

## 核心参数

| 涡旋口径        | 透射光谱       | 工作温度            |
|-------------|------------|-----------------|
| 10mm x 10mm | 350-2000nm | -150°C to 120°C |

## 通用参数

### 型号参数

| 型号        | 基地尺寸                   | 材料    | 相位种类  | 波长         |
|-----------|------------------------|-------|-------|------------|
| VPP-1a    | 50*50mm 尺寸, 10*10mm 涡孔 | 塑料或玻璃 | 1     | 350-2000nm |
| VPP-1b    | 50*50mm 尺寸, 10*10mm 涡孔 | 塑料或玻璃 | 1     | 350-2000nm |
| VPP-1c    | 50*50mm 尺寸, 10*10mm 涡孔 | 塑料或玻璃 | 1     | 350-2000nm |
| VPP-1c    | 50*50mm 尺寸, 10*10mm 涡孔 | 塑料或玻璃 | 2     | 350-2000nm |
| VPP-m589  | 50*50mm 尺寸, 10*10mm 涡孔 | 塑料或玻璃 | 1 到 8 | 589nm      |
| VPP-m633  | 50*50mm 尺寸, 10*10mm 涡孔 | 塑料或玻璃 | 1 到 8 | 633nm      |
| VPP-m780  | 50*50mm 尺寸, 10*10mm 涡孔 | 塑料或玻璃 | 1 到 8 | 780nm      |
| VPP-m1064 | 50*50mm 尺寸, 10*10mm 涡孔 | 塑料或玻璃 | 1 到 8 | 1064nm     |
| VPP-m1340 | 50*50mm 尺寸, 10*10mm 涡孔 | 塑料或玻璃 | 1 到 8 | 1340nm     |
| VPP-m1550 | 50*50mm 尺寸, 10*10mm 涡孔 | 塑料或玻璃 | 1 到 8 | 1550nm     |
| VPP-m1792 | 50*50mm 尺寸, 10*10mm 涡孔 | 塑料或玻璃 | 1 到 8 | 1792nm     |

### 通用参数

厚度:6.25mm,

温度范围: -150° C 至 120° C

材料: 在玻璃基板上复制的聚合物

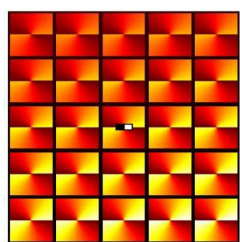
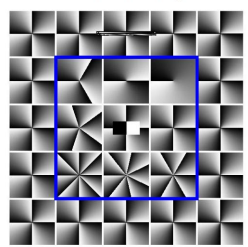
折射率:1.56

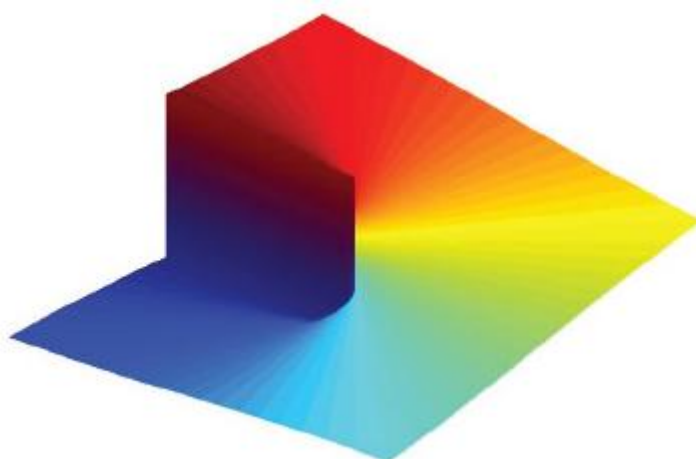
50\*50mm 尺寸, 10\*10mm 涡孔,

相位深度公差±3% (典型值)

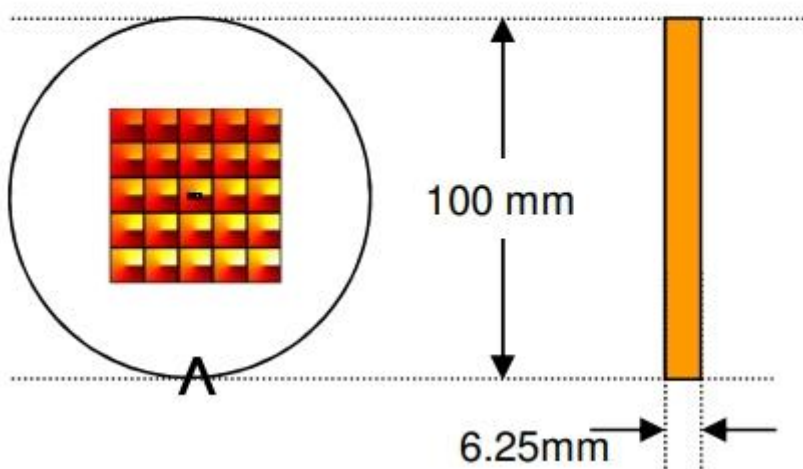
透射光谱:350-2000nm

| 型号     | 相位种类  | 波长    | 2 $\pi$ 相位深度波长/几何图                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |       |       |       |       |       |       |       |       |       |       |       |       |      |       |       |       |       |       |       |       |       |       |       |       |       |      |     |     |     |      |      |      |      |      |      |      |
|--------|-------|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-----|-----|-----|------|------|------|------|------|------|------|
| VPP-1a | 1     | -     | <div><div><div>Wavelength Map for 2<math>\pi</math> Phase Depth</div><table><tr><td>527.0</td><td>512.5</td><td>487.3</td><td>466.2</td><td>443.9</td></tr><tr><td>629.2</td><td>620.4</td><td>596.5</td><td>576.7</td><td>560.8</td></tr><tr><td>735.8</td><td>727.7</td><td></td><td>688.9</td><td>678.8</td></tr><tr><td>849.9</td><td>844.2</td><td>826.6</td><td>807.3</td><td>796.3</td></tr><tr><td>990.8</td><td>999.7</td><td>983.6</td><td>959.8</td><td>939.4</td></tr></table><div><div><math>\wedge</math></div><div>*Pattern side up</div></div></div><div><div>Vortex Geometry</div></div></div>                                                                                                                                                                        | 527.0 | 512.5 | 487.3 | 466.2 | 443.9 | 629.2 | 620.4 | 596.5 | 576.7 | 560.8 | 735.8 | 727.7 |      | 688.9 | 678.8 | 849.9 | 844.2 | 826.6 | 807.3 | 796.3 | 990.8 | 999.7 | 983.6 | 959.8 | 939.4 |      |     |     |     |      |      |      |      |      |      |      |
| 527.0  | 512.5 | 487.3 | 466.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 443.9 |       |       |       |       |       |       |       |       |       |       |       |      |       |       |       |       |       |       |       |       |       |       |       |       |      |     |     |     |      |      |      |      |      |      |      |
| 629.2  | 620.4 | 596.5 | 576.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 560.8 |       |       |       |       |       |       |       |       |       |       |       |      |       |       |       |       |       |       |       |       |       |       |       |       |      |     |     |     |      |      |      |      |      |      |      |
| 735.8  | 727.7 |       | 688.9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 678.8 |       |       |       |       |       |       |       |       |       |       |       |      |       |       |       |       |       |       |       |       |       |       |       |       |      |     |     |     |      |      |      |      |      |      |      |
| 849.9  | 844.2 | 826.6 | 807.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 796.3 |       |       |       |       |       |       |       |       |       |       |       |      |       |       |       |       |       |       |       |       |       |       |       |       |      |     |     |     |      |      |      |      |      |      |      |
| 990.8  | 999.7 | 983.6 | 959.8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 939.4 |       |       |       |       |       |       |       |       |       |       |       |      |       |       |       |       |       |       |       |       |       |       |       |       |      |     |     |     |      |      |      |      |      |      |      |
| VPP-1b | 1     | -     | <div><div><div>Wavelength Map for 2<math>\pi</math> Phase Depth</div><table><tr><td>339</td><td>365</td><td>372</td><td>375</td><td>398</td></tr><tr><td>407</td><td>418</td><td>432</td><td>463</td><td>542</td></tr><tr><td>548</td><td>539</td><td></td><td>552</td><td>582</td></tr><tr><td>683</td><td>671</td><td>708</td><td>735</td><td>794</td></tr><tr><td>858</td><td>953</td><td>969</td><td>1193</td><td>1450</td></tr></table><div><div><math>\wedge</math></div><div>*Pattern side up</div></div></div><div><div>Vortex Geometry</div></div></div>                                                                                                                                                                                                                      | 339   | 365   | 372   | 375   | 398   | 407   | 418   | 432   | 463   | 542   | 548   | 539   |      | 552   | 582   | 683   | 671   | 708   | 735   | 794   | 858   | 953   | 969   | 1193  | 1450  |      |     |     |     |      |      |      |      |      |      |      |
| 339    | 365   | 372   | 375                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 398   |       |       |       |       |       |       |       |       |       |       |       |      |       |       |       |       |       |       |       |       |       |       |       |       |      |     |     |     |      |      |      |      |      |      |      |
| 407    | 418   | 432   | 463                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 542   |       |       |       |       |       |       |       |       |       |       |       |      |       |       |       |       |       |       |       |       |       |       |       |       |      |     |     |     |      |      |      |      |      |      |      |
| 548    | 539   |       | 552                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 582   |       |       |       |       |       |       |       |       |       |       |       |      |       |       |       |       |       |       |       |       |       |       |       |       |      |     |     |     |      |      |      |      |      |      |      |
| 683    | 671   | 708   | 735                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 794   |       |       |       |       |       |       |       |       |       |       |       |      |       |       |       |       |       |       |       |       |       |       |       |       |      |     |     |     |      |      |      |      |      |      |      |
| 858    | 953   | 969   | 1193                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1450  |       |       |       |       |       |       |       |       |       |       |       |      |       |       |       |       |       |       |       |       |       |       |       |       |      |     |     |     |      |      |      |      |      |      |      |
| VPP-1c | 1     | -     | <div><div><div>Wavelength Map for 2<math>\pi</math> Phase Depth</div><table><tr><td>1515</td><td>1471</td><td>1504</td><td>1515</td><td>1471</td><td>1455</td></tr><tr><td>1531</td><td>980</td><td>854</td><td>606</td><td>1520</td><td>1466</td></tr><tr><td>1563</td><td>490</td><td>395</td><td>388</td><td>474</td><td>1542</td></tr><tr><td>1542</td><td>534</td><td>455</td><td>411</td><td>607</td><td>1536</td></tr><tr><td>1520</td><td>1081</td><td>779</td><td>721</td><td>885</td><td>1515</td></tr><tr><td>1509</td><td>1477</td><td>1498</td><td>1515</td><td>1520</td><td>1525</td></tr></table><div><div><math>\wedge</math></div><div>*Pattern side up</div><div>Blue boundary indicates clear aperture</div></div></div><div><div>Vortex Geometry</div></div></div> | 1515  | 1471  | 1504  | 1515  | 1471  | 1455  | 1531  | 980   | 854   | 606   | 1520  | 1466  | 1563 | 490   | 395   | 388   | 474   | 1542  | 1542  | 534   | 455   | 411   | 607   | 1536  | 1520  | 1081 | 779 | 721 | 885 | 1515 | 1509 | 1477 | 1498 | 1515 | 1520 | 1525 |
| 1515   | 1471  | 1504  | 1515                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1471  | 1455  |       |       |       |       |       |       |       |       |       |       |      |       |       |       |       |       |       |       |       |       |       |       |       |      |     |     |     |      |      |      |      |      |      |      |
| 1531   | 980   | 854   | 606                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1520  | 1466  |       |       |       |       |       |       |       |       |       |       |      |       |       |       |       |       |       |       |       |       |       |       |       |      |     |     |     |      |      |      |      |      |      |      |
| 1563   | 490   | 395   | 388                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 474   | 1542  |       |       |       |       |       |       |       |       |       |       |      |       |       |       |       |       |       |       |       |       |       |       |       |      |     |     |     |      |      |      |      |      |      |      |
| 1542   | 534   | 455   | 411                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 607   | 1536  |       |       |       |       |       |       |       |       |       |       |      |       |       |       |       |       |       |       |       |       |       |       |       |      |     |     |     |      |      |      |      |      |      |      |
| 1520   | 1081  | 779   | 721                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 885   | 1515  |       |       |       |       |       |       |       |       |       |       |      |       |       |       |       |       |       |       |       |       |       |       |       |      |     |     |     |      |      |      |      |      |      |      |
| 1509   | 1477  | 1498  | 1515                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1520  | 1525  |       |       |       |       |       |       |       |       |       |       |      |       |       |       |       |       |       |       |       |       |       |       |       |      |     |     |     |      |      |      |      |      |      |      |

|           |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |       |       |       |       |       |       |       |       |       |       |       |       |  |       |       |       |       |       |       |       |        |        |       |       |       |
|-----------|--------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|-------|-------|-------|-------|-------|-------|-------|--------|--------|-------|-------|-------|
| VPP-2     | 2      | -      | <div><div><div>Design wavelength, nm (master u7155E)</div><table><tr><td>465.2</td><td>436.1</td><td>419.1</td><td>394.0</td><td>370.1</td></tr><tr><td>598.0</td><td>567.8</td><td>544.4</td><td>521.0</td><td>493.6</td></tr><tr><td>748.5</td><td>708.9</td><td></td><td>661.2</td><td>638.2</td></tr><tr><td>897.0</td><td>851.9</td><td>828.8</td><td>806.7</td><td>779.8</td></tr><tr><td>1026.8</td><td>1004.1</td><td>978.1</td><td>954.3</td><td>925.7</td></tr></table><div>Λ</div><div>*Pattern side up</div></div><div><div>Vortex Geometry</div></div></div> | 465.2 | 436.1 | 419.1 | 394.0 | 370.1 | 598.0 | 567.8 | 544.4 | 521.0 | 493.6 | 748.5 | 708.9 |  | 661.2 | 638.2 | 897.0 | 851.9 | 828.8 | 806.7 | 779.8 | 1026.8 | 1004.1 | 978.1 | 954.3 | 925.7 |
| 465.2     | 436.1  | 419.1  | 394.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 370.1 |       |       |       |       |       |       |       |       |       |       |       |  |       |       |       |       |       |       |       |        |        |       |       |       |
| 598.0     | 567.8  | 544.4  | 521.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 493.6 |       |       |       |       |       |       |       |       |       |       |       |  |       |       |       |       |       |       |       |        |        |       |       |       |
| 748.5     | 708.9  |        | 661.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 638.2 |       |       |       |       |       |       |       |       |       |       |       |  |       |       |       |       |       |       |       |        |        |       |       |       |
| 897.0     | 851.9  | 828.8  | 806.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 779.8 |       |       |       |       |       |       |       |       |       |       |       |  |       |       |       |       |       |       |       |        |        |       |       |       |
| 1026.8    | 1004.1 | 978.1  | 954.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 925.7 |       |       |       |       |       |       |       |       |       |       |       |  |       |       |       |       |       |       |       |        |        |       |       |       |
| VPP-m589  | 1 到 8  | 589nm  | <div><div><div>Charge Map</div><table><tr><td>4</td><td>4</td><td>4</td><td>4</td><td>4</td></tr><tr><td>4</td><td>3</td><td>2</td><td>1</td><td>4</td></tr><tr><td>4</td><td>5</td><td></td><td>4</td><td>4</td></tr><tr><td>4</td><td>8</td><td>7</td><td>6</td><td>4</td></tr><tr><td>4</td><td>4</td><td>4</td><td>4</td><td>4</td></tr></table><div>Λ</div><div>*Pattern side up<br/>Blue boundary indicates clear aperture</div></div><div><div>Vortex Geometry</div></div></div>                                                                                  | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 2     | 1     | 4     | 4     | 5     |  | 4     | 4     | 4     | 8     | 7     | 6     | 4     | 4      | 4      | 4     | 4     | 4     |
| 4         | 4      | 4      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 4     | 4     |       |       |       |       |       |       |       |       |       |       |  |       |       |       |       |       |       |       |        |        |       |       |       |
| 4         | 3      | 2      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1     | 4     |       |       |       |       |       |       |       |       |       |       |  |       |       |       |       |       |       |       |        |        |       |       |       |
| 4         | 5      |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 4     | 4     |       |       |       |       |       |       |       |       |       |       |  |       |       |       |       |       |       |       |        |        |       |       |       |
| 4         | 8      | 7      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 6     | 4     |       |       |       |       |       |       |       |       |       |       |  |       |       |       |       |       |       |       |        |        |       |       |       |
| 4         | 4      | 4      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 4     | 4     |       |       |       |       |       |       |       |       |       |       |  |       |       |       |       |       |       |       |        |        |       |       |       |
| VPP-m633  | 1 到 8  | 633nm  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |       |       |       |       |       |       |       |       |       |       |       |       |  |       |       |       |       |       |       |       |        |        |       |       |       |
| VPP-m780  | 1 到 8  | 780nm  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |       |       |       |       |       |       |       |       |       |       |       |       |  |       |       |       |       |       |       |       |        |        |       |       |       |
| VPP-m1064 | 1 到 8  | 1064nm |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |       |       |       |       |       |       |       |       |       |       |       |       |  |       |       |       |       |       |       |       |        |        |       |       |       |
| VPP-m1340 | 1 到 8  | 1340nm |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |       |       |       |       |       |       |       |       |       |       |       |       |  |       |       |       |       |       |       |       |        |        |       |       |       |
| VPP-m1550 | 1 到 8  | 1550nm |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |       |       |       |       |       |       |       |       |       |       |       |       |  |       |       |       |       |       |       |       |        |        |       |       |       |
| VPP-m1792 | 1 到 8  | 1792nm |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |       |       |       |       |       |       |       |       |       |       |       |       |  |       |       |       |       |       |       |       |        |        |       |       |       |



## Part Dimensions



注

\*基底上的 Caret 标记 (^) 指向图案一侧，并位于涡流图案的底部