



变倍镜头系列 / VP-LZH系列

支持1"靶面，新一代4K级别大视野连续变倍镜头

新一代4K级别大视野高分辨率变倍镜头，不仅拥有卓越的变倍性能，更可提供更宽视野范围，可更快捕捉更大范围的影像；是高速检测及精确测量应用的理想之选。与传统变焦系统相比，视野大小提升1.45X以上。

产品优势

PRODUCT ADVANTAGES

- 1、支持1英寸传感器相机，相比传统镜头在相同的倍率下，视野大小提升1.45X以上；
- 2、按更高规格的分辨率要求设计，搭配1英寸相机横向分辨率可达到4K级别；
- 3、倍率按0.68X~5X设计，适用于大部分应用场合的检测需求；
- 4、模块化设计，多种倍率TV镜管与附加镜可选，另外提供其它功能的模块组件供选配。

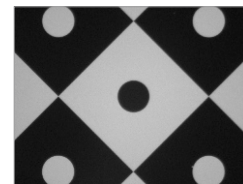
应用领域

APPLICATION FIELDS

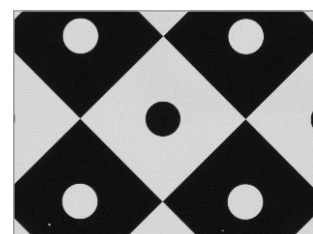
广泛应用生物、电子、半导体、机器视觉等高精度行业。

实际效果图

ACTUAL IMAGE



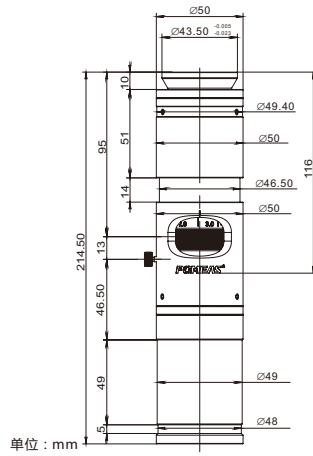
普通变倍镜头5X-棋盘格



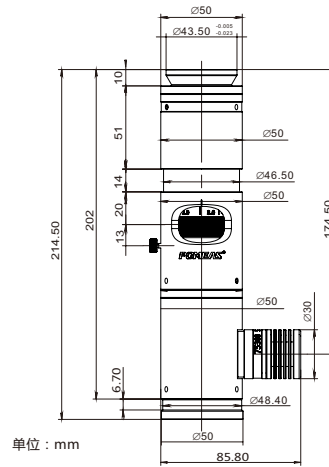
4k高分辨率变倍镜头5X-棋盘格

| | | | | | | | |
|--------------|------------|-------------------|---------------|-------------|---------------|---------------|---------------|
| 倍率范围 | 0.68X-5.0X | | | | | | |
| 工作距离(mm) | 80 | | | | | | |
| 放大倍率 | 0.68X | 1.0X | 2.0X | 3.0X | 4.0X | 5.0X | |
| 景深(mm) | 1.78 | 0.89 | 0.25 | 0.12 | 0.08 | 0.07 | |
| N.A. | 0.033 | 0.045 | 0.08 | 0.11 | 0.12 | 0.12 | |
| F.No. | 10.3 | 11.0 | 12.4 | 13.5 | 16.5 | 20.6 | |
| 分辨率(μm) | 10.17 | 7.46 | 4.19 | 3.05 | 2.8 | 2.8 | |
| TV畸变 | <0.02% | <0.02% | <0.02% | <0.02% | <0.02% | <0.02% | |
| 视野大小 (mm) | 1° | 23.53×18.82×14.12 | 16.0×12.8×9.6 | 8.0×6.4×4.8 | 5.33×4.27×3.2 | 4.0×3.2×2.4 | 3.2×2.56×1.92 |
| | 2/3° | 16.18×12.94×9.71 | 11.0×8.8×6.6 | 5.5×4.4×3.3 | 3.67×2.93×2.2 | 2.75×2.2×1.65 | 2.2×1.76×1.32 |
| | 1/2° | 11.76×9.41×7.06 | 8.0×6.4×4.8 | 4.0×3.2×2.4 | 2.67×2.13×1.6 | 2.0×1.6×1.2 | 1.6×1.28×0.96 |
| | 1/3° | 8.82×7.06×5.29 | 6.0×4.8×3.6 | 3.0×2.4×1.8 | 2.0×1.6×1.2 | 1.5×1.2×0.9 | 1.2×0.96×0.72 |
| 最大像面 | 1° | | | | | | |
| 总长(mm) | 328 | | | | | | |
| 变倍方式 | 手动/电动 | | | | | | |
| 接口类型 | C-Mount | | | | | | |

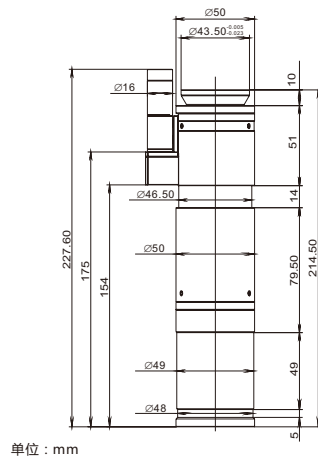
VP-LZH-7500



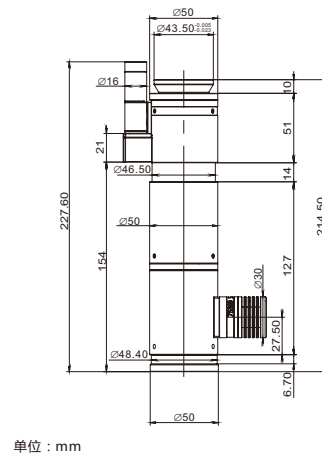
VP-LZH-7501



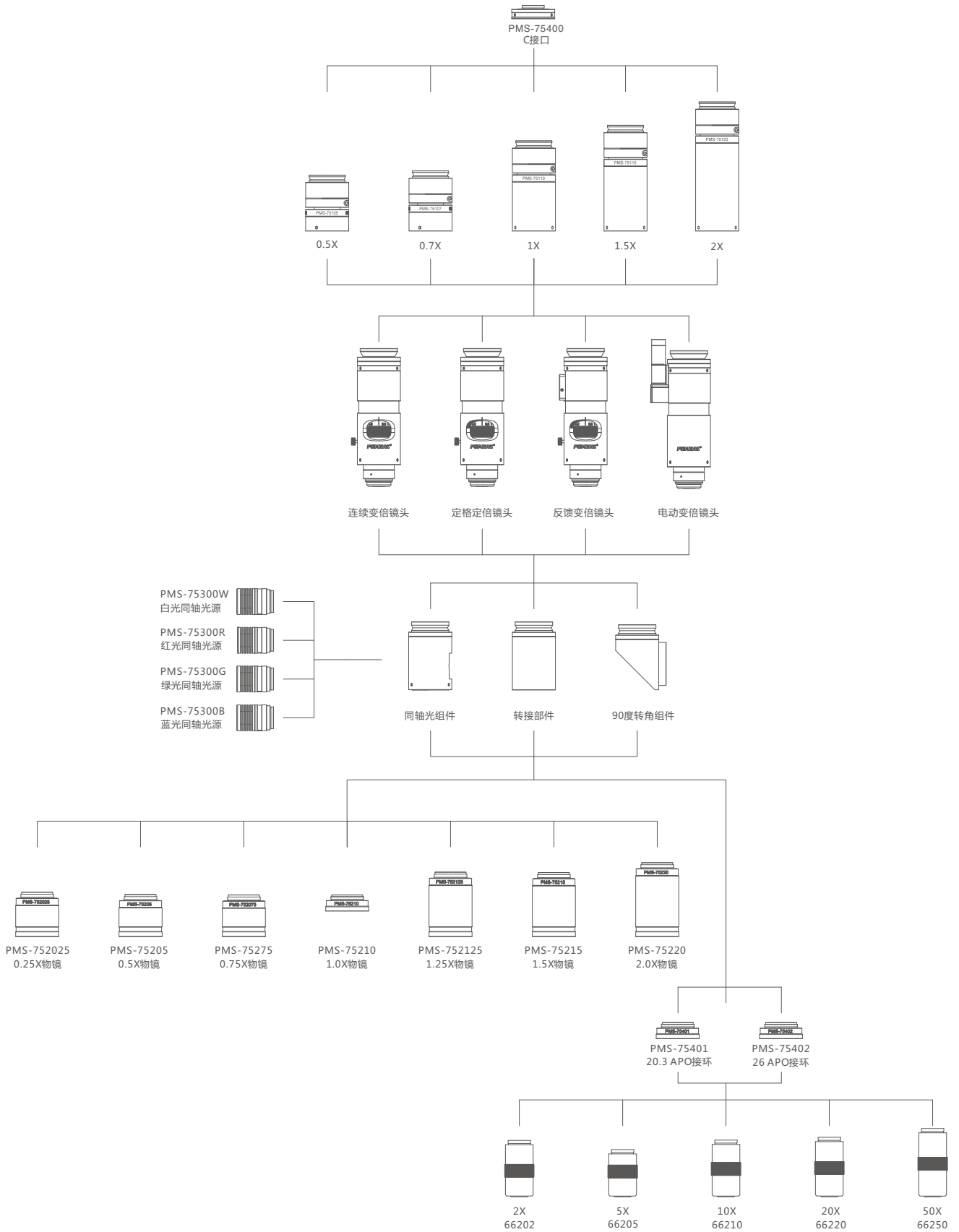
VP-LZH-7502



VP-LZH-7503



4K变倍镜头选型图



4K变倍镜头视场范围对照表

| 物镜类别 | | 0.5X转换器(PMS-75105) | | 0.75X转换器(PMS-751075) | | 1.0X转换器(PMS-75110) | | 1.5X转换器(PMS-75115) | | 2.0X转换器(PMS-75120) | | |
|-----------------------|------|--------------------|----------------|----------------------|----------------|--------------------|----------------|--------------------|----------------|--------------------|----------------|---------------|
| | | 低倍 | 高倍 | 低倍 | 高倍 | 低倍 | 高倍 | 低倍 | 高倍 | 低倍 | 高倍 | |
| 0.25X (PMS-752025) | 放大倍率 | 0.09 | 0.63 | 0.12 | 0.88 | 0.17 | 1.25 | 0.26 | 1.88 | 0.34 | 2.50 | |
| | 相机靶面 | 1/2' | 94.1×75.3×56.5 | 12.8×10.2×7.7 | 67.2×53.8×40.3 | 9.1×7.3×5.5 | 47.1×37.6×28.2 | 6.4×5.1×3.8 | 31.4×25.1×18.8 | 4.3×3.4×2.6 | 23.5×18.8×14.1 | 3.2×2.6×1.9 |
| | | 2/3' | - | - | 92.4×73.9×55.5 | 12.6×10.1×7.5 | 64.7×51.8×38.8 | 8.8×7.0×5.3 | 43.1×34.5×25.9 | 5.9×4.7×3.5 | 32.4×25.9×19.4 | 4.4×3.5×2.6 |
| | | 1" | - | - | - | - | 94.1×75.3×56.5 | 12.8×10.2×7.7 | 62.7×50.2×37.6 | 8.5×6.8×5.1 | 47.1×37.6×28.2 | 6.4×5.1×3.8 |
| | | 4/3' | - | - | - | - | - | - | 86.3×69.0×51.8 | 11.7×9.4×7.0 | 64.7×51.8×38.8 | 8.8×7.0×5.3 |
| | | 32mm | - | - | - | - | - | - | - | - | 94.1×75.3×56.5 | 12.8×10.2×7.7 |
| 0.5X (PMS-75205) | 放大倍率 | 0.17 | 1.25 | 0.24 | 1.75 | 0.34 | 2.50 | 0.51 | 3.75 | 0.68 | 5.00 | |
| | 相机靶面 | 1/2' | 47.1×37.6×28.2 | 6.4×5.1×3.8 | 33.6×26.9×20.2 | 4.6×3.7×2.7 | 23.5×18.8×14.1 | 3.2×2.6×1.9 | 15.7×12.5×9.4 | 2.1×1.7×1.3 | 11.8×9.4×7.1 | 1.6×1.3×1.0 |
| | | 2/3' | - | - | 46.2×37.0×27.7 | 6.3×5.0×3.8 | 32.4×25.9×19.4 | 4.4×3.5×2.6 | 21.6×17.3×12.9 | 2.9×2.3×1.8 | 16.2×12.9×9.7 | 2.2×1.8×1.3 |
| | | 1" | - | - | - | - | 47.1×37.6×28.2 | 6.4×5.1×3.8 | 31.4×25.1×18.8 | 4.3×3.4×2.6 | 23.5×18.8×14.1 | 3.2×2.6×1.9 |
| | | 4/3' | - | - | - | - | - | - | 41.8×33.5×25.1 | 5.7×4.6×3.4 | 31.4×25.1×18.8 | 4.3×3.4×2.6 |
| | | 32mm | - | - | - | - | - | - | - | - | 47.1×37.6×28.2 | 6.4×5.1×3.8 |
| 0.75X (PMS-752075) | 放大倍率 | 0.26 | 1.88 | 0.36 | 2.63 | 0.51 | 3.75 | 0.77 | 5.63 | 1.02 | 7.50 | |
| | 相机靶面 | 1/2' | 31.4×25.1×18.8 | 4.3×3.4×2.6 | 22.4×17.9×13.4 | 3.0×2.4×1.8 | 15.7×12.5×9.4 | 2.1×1.7×1.3 | 10.5×8.4×6.3 | 1.4×1.1×0.9 | 7.8×6.3×4.7 | 1.1×0.9×0.6 |
| | | 2/3' | - | - | 30.8×24.6×18.5 | 4.2×3.4×2.5 | 21.6×17.3×12.9 | 2.9×2.9×1.8 | 14.4×11.5×8.6 | 2.0×1.6×1.2 | 10.8×8.6×6.5 | 1.5×1.2×0.9 |
| | | 1" | - | - | - | - | 31.4×25.1×18.8 | 4.3×3.4×2.6 | 20.9×16.7×12.5 | 2.8×2.3×1.7 | 15.7×12.5×9.4 | 2.1×1.7×1.3 |
| | | 4/3' | - | - | - | - | - | - | 28.8×23.0×17.3 | 3.9×3.1×2.3 | 21.6×17.3×12.9 | 2.9×2.3×1.8 |
| | | 32mm | - | - | - | - | - | - | - | - | 31.4×25.1×18.8 | 4.3×3.4×2.6 |
| 1.0X (PMS-75210) | 放大倍率 | 0.34 | 2.50 | 0.48 | 3.50 | 0.68 | 5.00 | 1.02 | 7.50 | 1.36 | 10.0 | |
| | 相机靶面 | 1/2' | 23.5×18.8×14.1 | 3.2×2.6×1.9 | 16.8×13.4×10.1 | 2.3×1.8×1.4 | 11.8×9.4×7.1 | 1.6×1.3×1.0 | 7.8×6.3×4.7 | 1.1×0.9×0.6 | 5.9×4.7×3.5 | 0.8×0.6×0.5 |
| | | 2/3' | - | - | 23.1×18.5×13.9 | 3.1×2.5×1.9 | 16.2×12.9×9.7 | 2.2×1.8×1.3 | 10.8×8.6×6.5 | 1.5×1.2×0.9 | 8.1×6.5×4.9 | 1.1×0.9×0.7 |
| | | 1" | - | - | - | - | 23.5×18.8×14.1 | 3.2×2.6×1.9 | 15.7×12.5×9.4 | 2.1×1.7×1.3 | 11.8×9.4×7.1 | 1.6×1.3×1.0 |
| | | 4/3' | - | - | - | - | - | - | 21.6×17.3×12.9 | 2.9×2.3×1.8 | 16.2×12.9×9.7 | 2.2×1.8×1.3 |
| | | 32mm | - | - | - | - | - | - | - | - | 23.5×18.8×14.1 | 3.2×2.6×1.9 |
| 1.25X (PMS-752125) | 放大倍率 | 0.43 | 3.13 | 0.60 | 4.38 | 0.85 | 6.25 | 1.28 | 9.38 | 1.70 | 12.5 | |
| | 相机靶面 | 1/2' | 18.8×15.1×11.3 | 2.6×2.0×1.5 | 13.4×10.8×8.1 | 1.8×1.5×1.1 | 9.4×7.5×5.6 | 1.3×1.0×0.8 | 6.3×5.0×3.8 | 0.9×0.7×0.5 | 4.7×3.8×2.8 | 0.6×0.5×0.4 |
| | | 2/3' | - | - | 18.5×14.8×11.1 | 2.5×2.0×1.5 | 12.9×10.4×7.8 | 1.8×1.4×1.1 | 8.6×6.9×5.2 | 1.2×0.9×0.7 | 6.5×5.2×3.9 | 0.9×0.7×0.5 |
| | | 1" | - | - | - | - | 18.8×15.1×11.3 | 2.6×2.0×1.5 | 12.5×10.0×7.5 | 1.7×1.4×1.0 | 9.4×7.5×5.6 | 1.3×1.0×0.8 |
| | | 4/3' | - | - | - | - | - | - | 17.3×13.8×10.4 | 2.3×1.9×1.4 | 12.9×10.4×7.8 | 1.8×1.4×1.1 |
| | | 32mm | - | - | - | - | - | - | - | - | 18.8×15.1×11.3 | 2.6×2.0×1.5 |
| 1.5X (PMS-75215) | 放大倍率 | 0.51 | 3.75 | 0.71 | 5.25 | 1.02 | 7.50 | 1.53 | 11.25 | 2.04 | 15.0 | |
| | 相机靶面 | 1/2' | 15.7×12.5×9.4 | 2.1×1.7×1.3 | 11.2×9.0×6.7 | 1.5×1.2×0.9 | 7.8×6.3×4.7 | 1.1×0.9×0.6 | 5.2×4.2×3.1 | 0.7×0.6×0.4 | 3.9×3.1×2.4 | 0.5×0.4×0.3 |
| | | 2/3' | - | - | 15.4×12.3×9.2 | 2.1×1.7×1.3 | 10.8×8.6×6.5 | 1.5×1.2×0.9 | 7.2×5.8×4.3 | 1.0×0.8×0.6 | 5.4×4.3×3.2 | 0.7×0.6×0.4 |
| | | 1" | - | - | - | - | 15.7×12.5×9.4 | 2.1×1.7×1.3 | 10.5×8.4×6.3 | 1.4×1.1×0.9 | 7.8×6.3×4.7 | 1.1×0.9×0.6 |
| | | 4/3' | - | - | - | - | - | - | 14.4×11.5×8.6 | 2.0×1.6×1.2 | 10.8×8.6×6.5 | 1.5×1.2×0.9 |
| | | 32mm | - | - | - | - | - | - | - | - | 15.7×12.5×9.4 | 2.1×1.7×1.3 |
| 2.0X (PMS-75220) | 放大倍率 | 0.68 | 5.00 | 0.95 | 7.00 | 1.36 | 10.0 | 2.04 | 15.0 | 2.72 | 20.0 | |
| | 相机靶面 | 1/2' | 11.8×9.4×7.1 | 1.6×1.3×1.0 | 8.4×6.7×5.0 | 1.1×0.9×0.7 | 5.9×4.7×3.5 | 0.8×0.6×0.5 | 3.9×3.1×2.4 | 0.5×0.4×0.3 | 2.9×2.4×1.8 | 0.4×0.3×0.2 |
| | | 2/3' | - | - | 11.6×9.2×6.9 | 1.6×1.3×0.9 | 8.1×6.5×4.9 | 1.1×0.9×0.7 | 5.4×4.3×3.2 | 0.7×0.6×0.4 | 4.0×3.2×2.4 | 0.6×0.4×0.3 |
| | | 1" | - | - | - | - | 11.8×9.4×7.1 | 1.6×1.3×1.0 | 7.8×6.3×4.7 | 1.1×0.9×0.6 | 5.9×4.7×3.5 | 0.8×0.6×0.5 |
| | | 4/3' | - | - | - | - | - | - | 10.8×8.6×6.5 | 1.5×1.2×0.9 | 8.1×6.5×4.9 | 1.1×0.9×0.7 |
| | | 32mm | - | - | - | - | - | - | - | - | 11.8×9.4×7.1 | 1.6×1.3×1.0 |

| | | | | | | | |
|------------|------|---------|--------|---------|-------|---------|--------|
| 物镜倍率 | 0.25 | 0.5 | 0.75 | 1.0 | 1.25 | 1.5 | 2.0 |
| 工作距离 (mm) | 240 | 138 | - | 80 | - | - | - |
| N.A. | 最低倍 | 0.00825 | 0.0165 | 0.02475 | 0.033 | 0.04125 | 0.0495 |
| | 最高倍 | 0.03 | 0.06 | 0.09 | 0.12 | 0.15 | 0.18 |
| 物方分辨率 (μm) | 最低倍 | 40.67 | 20.33 | 13.56 | 10.17 | 8.13 | 6.78 |
| | 最高倍 | 11.18 | 5.59 | 3.73 | 2.80 | 2.24 | 1.86 |