



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

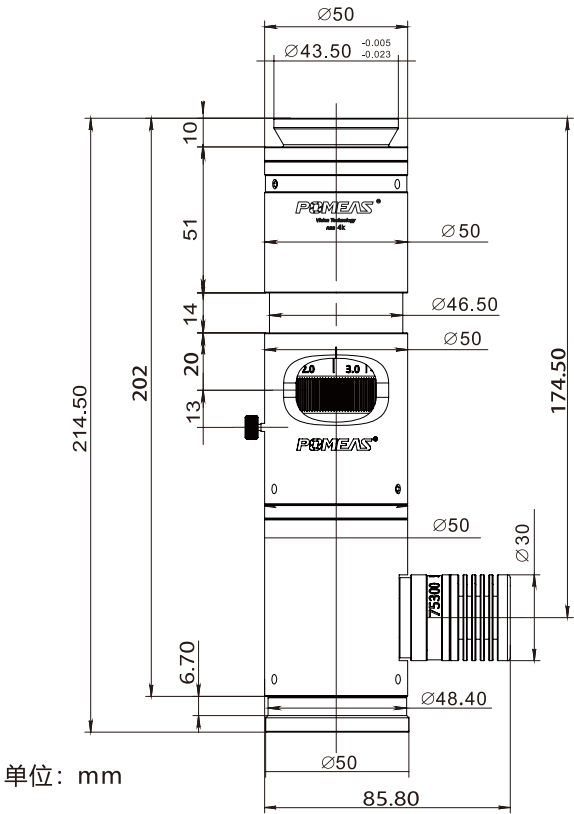


4k高分辨率变倍镜头5X-棋盘格



| 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<br>(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           |               |             |               |               |               |

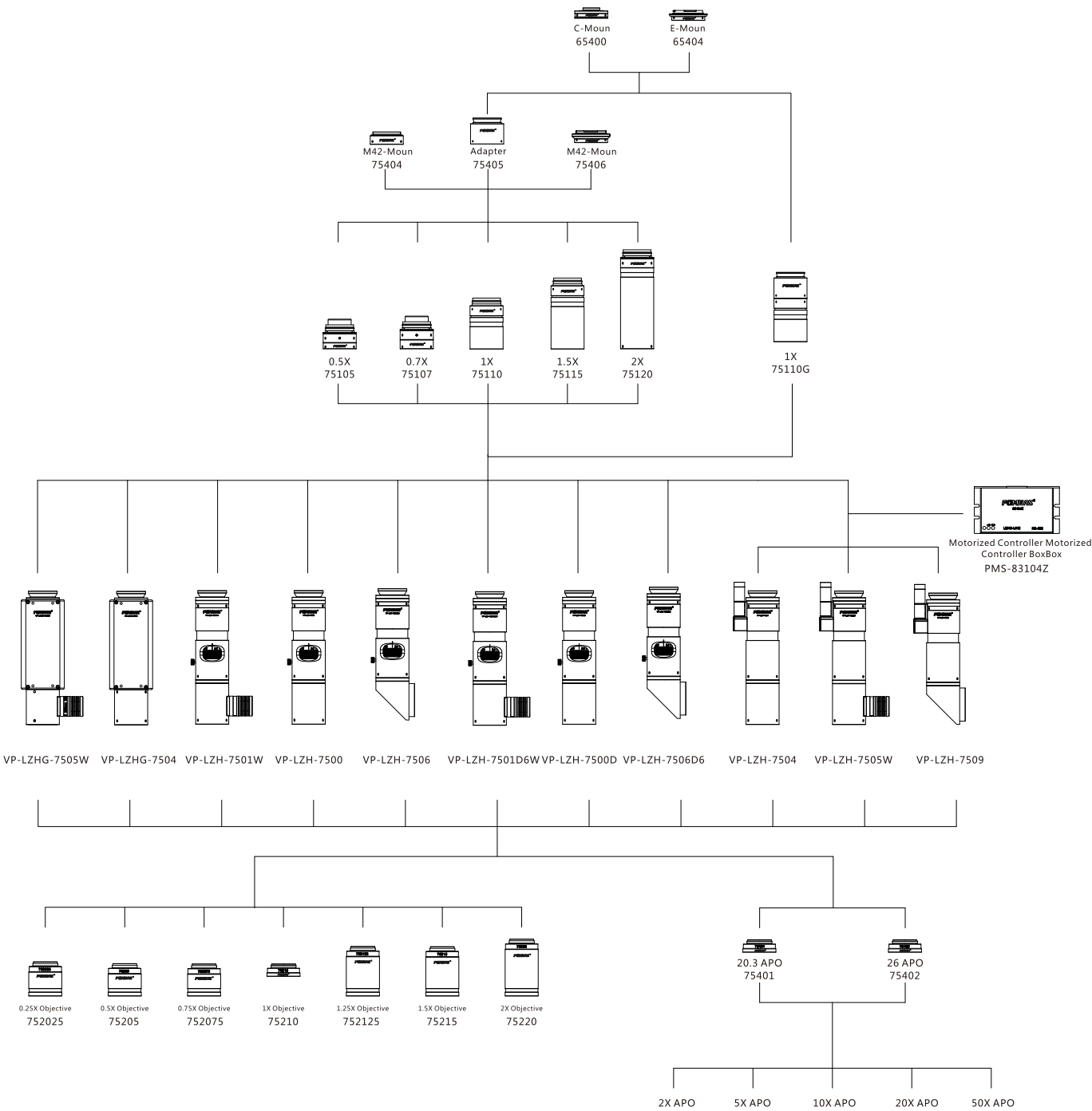
VP-LZH-7501



|        |           |    |             |
|--------|-----------|----|-------------|
| 单位: mm | 比例 1:2    | 型号 | VP-LZH-7501 |
| 视角     | 重量0.181KG | 名称 | 连接变倍镜头      |
|        |           | 日期 | 2019/07/20  |
| POMEAS |           |    |             |



4K变倍镜头选型图



4K变倍镜头视场范围对照表

| 物镜倍率  | WD(mm) | NA     |      | 物方分辨率 (μm) |       | 镜管倍             | 0.7X   |                | 1X            |                | 1.5X          |                | 2X           |                |               |
|-------|--------|--------|------|------------|-------|-----------------|--------|----------------|---------------|----------------|---------------|----------------|--------------|----------------|---------------|
|       |        | 最低倍    | 最高倍  | 最低倍        | 最高倍   |                 | 最低倍    | 最高倍            | 最低倍           | 最高倍            | 最低倍           | 最高倍            | 最低倍          | 最高倍            |               |
| 0.25X | 240    | 0.0083 | 0.03 | 40.67      | 11.18 | 综合放大倍率          | 0.119X | 0.857X         | 0.17X         | 1.25X          | 0.255X        | 1.875X         | 0.34X        | 2.5X           |               |
|       |        |        |      |            |       | 景深(mm)          | 40.74  | 1.52           | 28.52         | 1.07           | 19.01         | 0.71           | 14.26        | 0.53           |               |
|       |        |        |      |            |       | 视野大小(D.H.V)(mm) | 1/2"   | 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"   | -              | -             | -              | -             | 84.7×67.8×50.8 | 11.5×9.2×6.9 | 63.5×50.8×38.1 | 8.6×6.9×5.2   |
|       |        |        |      |            |       |                 | 32mm   | -              | -             | -              | -             | -              | -            | 94.1×75.3×56.5 | 12.8×10.2×7.7 |
| 0.5X  | 135    | 0.0165 | 0.06 | 20.33      | 5.59  | 综合放大倍率          | 0.238X | 1.75X          | 0.34X         | 2.5X           | 0.51X         | 3.75X          | 0.68X        | 5X             |               |
|       |        |        |      |            |       | 景深(mm)          | 10.19  | 0.38           | 7.13          | 0.27           | 4.75          | 0.18           | 3.57         | 0.13           |               |
|       |        |        |      |            |       | 视野大小(D.H.V)(mm) | 1/2"   | 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"   | -              | -             | -              | -             | 42.4×33.9×25.4 | 5.8×4.6×3.5  | 31.8×25.4×19.1 | 4.3×3.5×2.6   |
|       |        |        |      |            |       |                 | 32mm   | -              | -             | -              | -             | -              | -            | 47.1×37.6×28.2 | 6.4×5.1×3.8   |
| 0.75X | 111    | 0.025  | 0.09 | 13.56      | 3.73  | 综合放大倍率          | 0.375X | 2.625X         | 0.51X         | 3.75X          | 0.765X        | 5.625X         | 1.02X        | 7.5X           |               |
|       |        |        |      |            |       | 景深(mm)          | 4.53   | 0.17           | 3.17          | 0.12           | 2.11          | 0.08           | 1.58         | 0.06           |               |
|       |        |        |      |            |       | 视野大小(D.H.V)(mm) | 1/2"   | 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 | 2.9×2.3×1.8   | 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"   | -              | -             | -              | -             | 28.2×22.6×16.9 | 3.8×3.1×2.3  | 21.2×16.9×12.7 | 2.9×2.3×1.7   |
|       |        |        |      |            |       |                 | 32mm   | -              | -             | -              | -             | -              | -            | 31.4×25.1×18.8 | 4.3×3.4×2.6   |
| 1X    | 80     | 0.033  | 0.12 | 10.17      | 2.80  | 综合放大倍率          | 0.476X | 3.5X           | 0.68X         | 5X             | 1.02X         | 7.5X           | 1.36X        | 10X            |               |
|       |        |        |      |            |       | 景深(mm)          | 2.55   | 0.10           | 1.78          | 0.07           | 1.19          | 0.04           | 0.89         | 0.03           |               |
|       |        |        |      |            |       | 视野大小(D.H.V)(mm) | 1/2"   | 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"   | -              | -             | -              | -             | 21.2×16.9×12.7 | 2.9×2.3×1.7  | 15.9×12.7×9.5  | 2.2×1.7×1.3   |
|       |        |        |      |            |       |                 | 32mm   | -              | -             | -              | -             | -              | -            | 23.5×18.8×14.1 | 3.2×2.6×1.9   |
| 1.5X  | 45     | 0.0495 | 0.18 | 6.78       | 1.86  | 综合放大倍率          | 0.714X | 5.25X          | 1.02X         | 7.5X           | 1.53X         | 11.25X         | 2.04X        | 15X            |               |
|       |        |        |      |            |       | 景深(mm)          | 1.13   | 0.04           | 0.79          | 0.03           | 0.53          | 0.02           | 0.40         | 0.01           |               |
|       |        |        |      |            |       | 视野大小(D.H.V)(mm) | 1/2"   | 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"   | -              | -             | -              | -             | 14.1×11.3×8.5  | 1.9×1.5×1.2  | 10.6×8.5×6.4   | 1.4×1.2×0.9   |
|       |        |        |      |            |       |                 | 32mm   | -              | -             | -              | -             | -              | -            | 15.7×12.5×9.4  | 2.1×1.7×1.3   |
| 2X    | 27     | 0.066  | 0.24 | 5.08       | 1.40  | 综合放大倍率          | 0.952X | 7X             | 1.36X         | 10X            | 2.04X         | 15X            | 2.72X        | 20X            |               |
|       |        |        |      |            |       | 景深(mm)          | 0.64   | 0.02           | 0.45          | 0.02           | 0.30          | 0.01           | 0.22         | 0.01           |               |
|       |        |        |      |            |       | 视野大小(D.H.V)(mm) | 1/2"   | 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"   | -              | -             | -              | -             | 10.6×8.5×6.4   | 1.4×1.2×0.9  | 7.9×6.4×4.8    | 1.1×0.9×0.6   |
|       |        |        |      |            |       |                 | 32mm   | -              | -             | -              | -             | -              | -            | 11.8×9.4×7.1   | 1.6×1.3×1.0   |

