

- CE UK  
CA

P3 2 M - 0 0 0 - 0 0 0 - ML

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# P3X TECHNICAL SPECIFICATIONS

SMART CAMERAS

SMART CAMERA

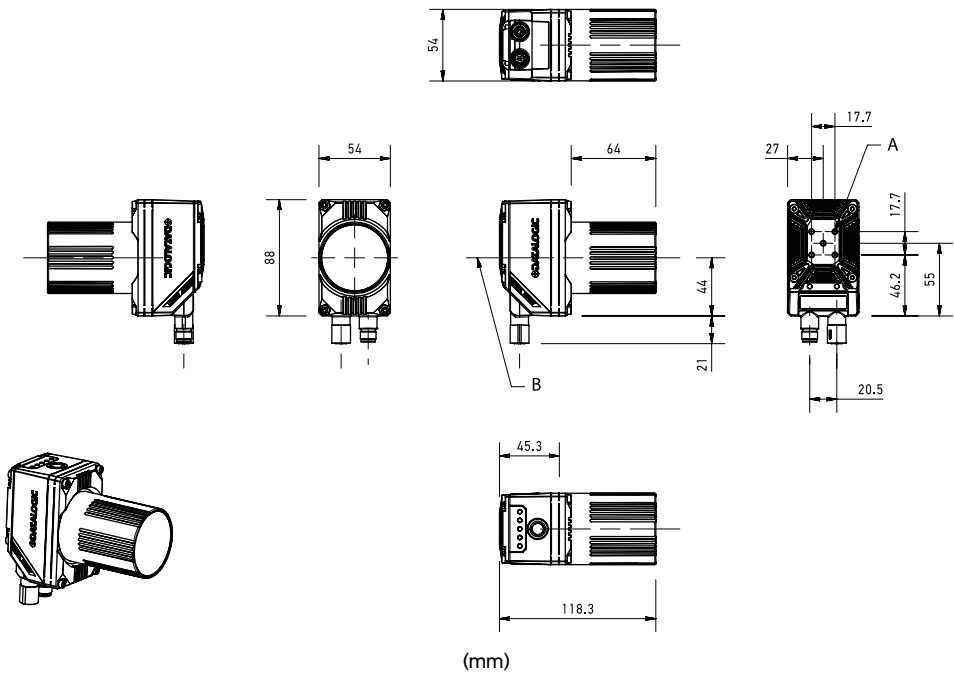
|                        | P30C/*00-000-**                                | P32C/*00-000-**    | P35C/*00-000-**  |
|------------------------|------------------------------------------------|--------------------|------------------|
| GENERAL DATA           |                                                |                    |                  |
| Storage                | 1 GB                                           |                    |                  |
| System Memory          | 380 MB                                         |                    |                  |
| DETECTION CAPABILITIES |                                                |                    |                  |
| Resolution             | 960 x 540 pixels                               | 1920 x 1080 pixels | 2560x1920 pixels |
| Imager                 | 1/2.8 " CMOS                                   |                    | 1/1.8 " CMOS     |
| Mono / Color           | Color                                          |                    |                  |
| Pixel size             | 5.6 µm                                         | 2.8 µm             |                  |
| Shutter                | Global                                         |                    |                  |
| INPUT/OUTPUT           |                                                |                    |                  |
| I/O                    | 2 IN / 3 OUT                                   |                    |                  |
| COMMUNICATION          |                                                |                    |                  |
| Comm. Connectivity     | Supports EtherNet/IP, Profinet, Modbus TCP     |                    |                  |
| Serial Communications  | 1x RS-232 serial port                          |                    |                  |
| Network Interface      | 1000 Mbit/s Ethernet                           |                    |                  |
| MECHANICAL DATA        |                                                |                    |                  |
| Material               | Aluminum (housing) and plastic (front head)    |                    |                  |
| ENVIRONMENTAL DATA     |                                                |                    |                  |
| Operating Temperature  | -10 ... 50 °C                                  |                    |                  |
| Mechanical Protection  | IP65 / IP67                                    |                    |                  |
| Shocks and vibrations  | Vibration IEC 60068-2-6 / Shock IEC 60068-2-27 |                    |                  |

|                        | P30M/*00-000-**                                | P32M/*00-000-**    | P35M/*00-000-**  |
|------------------------|------------------------------------------------|--------------------|------------------|
| GENERAL DATA           |                                                |                    |                  |
| Storage                | 1 GB                                           |                    |                  |
| System Memory          | 380 MB                                         |                    |                  |
| DETECTION CAPABILITIES |                                                |                    |                  |
| Resolution             | 960 x 540 pixels                               | 1920 x 1080 pixels | 2560x1920 pixels |
| Imager                 | 1/2.8 " CMOS                                   |                    | 1/1.8 " CMOS     |
| Mono / Color           | Monochrome                                     |                    |                  |
| Pixel size             | 5.6 µm                                         | 2.8 µm             |                  |
| Shutter                | Global                                         |                    |                  |
| INPUT/OUTPUT           |                                                |                    |                  |
| I/O                    | 2 IN / 3 OUT                                   |                    |                  |
| COMMUNICATION          |                                                |                    |                  |
| Comm. Connectivity     | Supports EtherNet/IP, Profinet, Modbus TCP     |                    |                  |
| Serial Communications  | 1x RS-232 serial port                          |                    |                  |
| Network Interface      | 1000 Mbit/s Ethernet                           |                    |                  |
| MECHANICAL DATA        |                                                |                    |                  |
| Material               | Aluminum (housing) and plastic (front head)    |                    |                  |
| ENVIRONMENTAL DATA     |                                                |                    |                  |
| Operating Temperature  | -10 ... 50 °C                                  |                    |                  |
| Mechanical Protection  | IP65 / IP67                                    |                    |                  |
| Shocks and vibrations  | Vibration IEC 60068-2-6 / Shock IEC 60068-2-27 |                    |                  |

## AVAILABLE MODELS

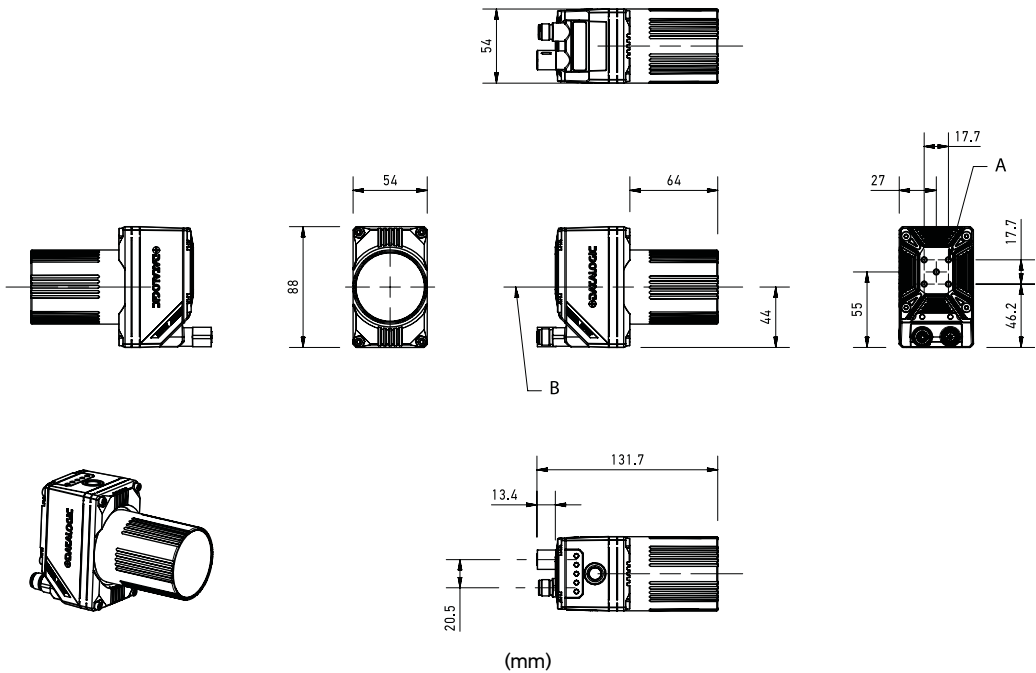
| Resolution         | Mono / Color | Frame rate (FPS) | Model                                 |
|--------------------|--------------|------------------|---------------------------------------|
| 960 x 540 pixels   | Monochrome   | 120 fps          | <b>P30M 100-000 CM</b><br>(937710038) |
|                    |              |                  | <b>P30M 100-000 ML</b><br>(937710034) |
|                    | Color        | 30 fps           | <b>P30C 000-000 CM</b><br>(937710039) |
|                    |              |                  | <b>P30C 000-000 ML</b><br>(937710035) |
| 1920 x 1080 pixels | Monochrome   | 60 fps           | <b>P32M 700-000 CM</b><br>(937710040) |
|                    |              |                  | <b>P32M 700-000 ML</b><br>(937710036) |
|                    | Color        | 30 fps           | <b>P32C 600-000 CM</b><br>(937710041) |
|                    |              |                  | <b>P32C 600-000 ML</b><br>(937710037) |
| 2560 x 1936 pixels | Monochrome   | 26 fps           | <b>P35M 800-000 CM</b><br>(937710032) |
|                    | Color        | 13 fps           | <b>P35C 900-000 CM</b><br>(937710033) |

P3X-SERIES C-MOUNT (0° CONNECTION)



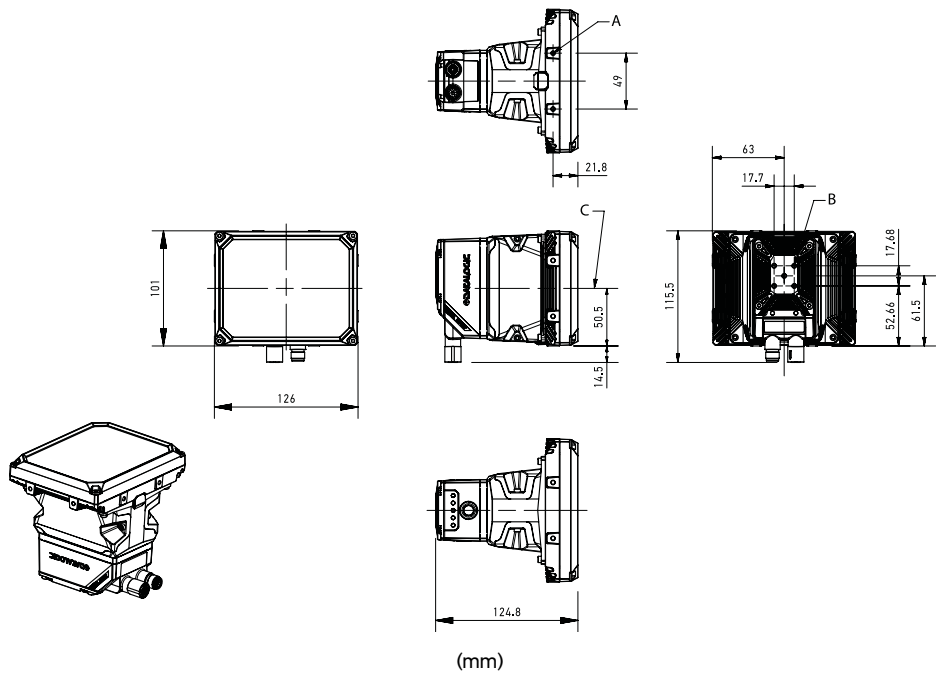
| Models        | A             | B            |
|---------------|---------------|--------------|
| P3x CM long 0 | 5x M4 depth 7 | Optical Axis |

P3X-SERIES C-MOUNT (90° CONNECTION)



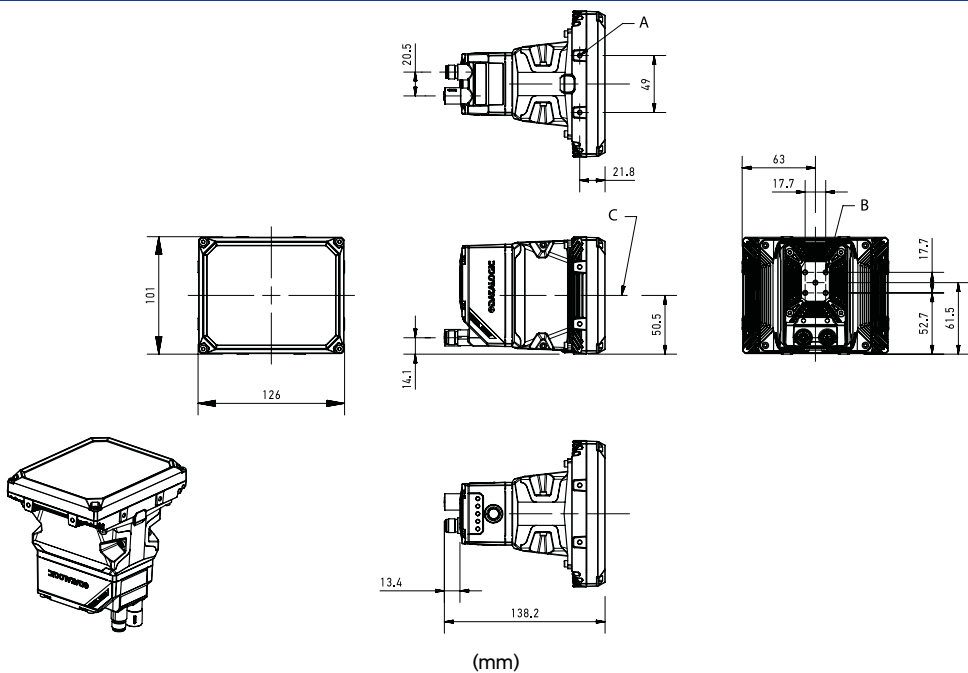
| Models         | A             | B            |
|----------------|---------------|--------------|
| P3x CM long 90 | 5x M4 depth 7 | Optical Axis |

P3X-SERIES C-MOUNT, COVER 36 LED (0° CONNECTION)



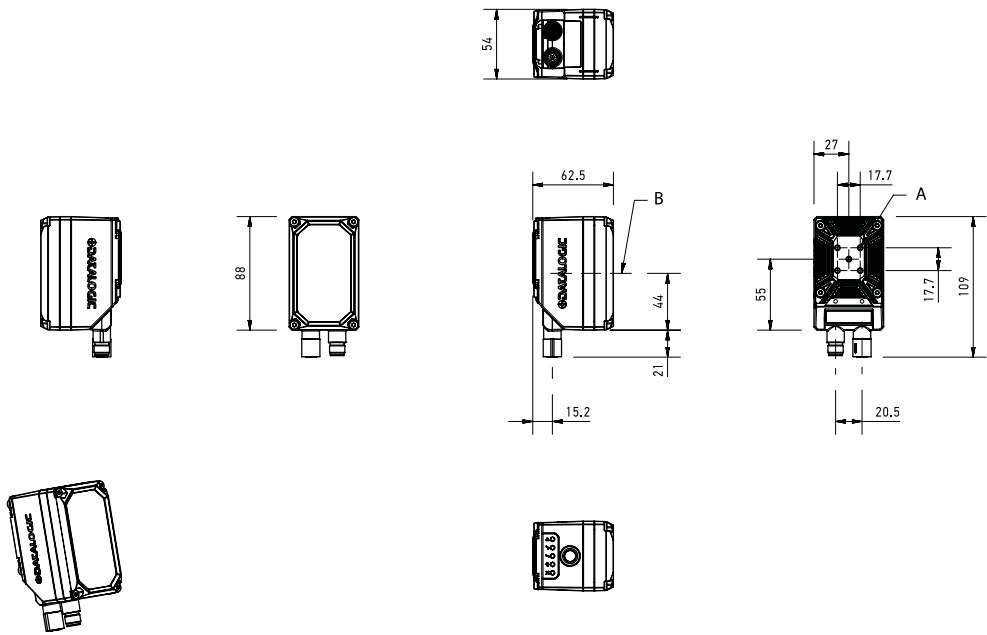
| Models                   | A             | B             | C            |
|--------------------------|---------------|---------------|--------------|
| P3x/CM-36LED-0-LANDSCAPE | 8x M4 Depth 7 | 5x M4 depth 7 | Optical axis |

P3X-SERIES C-MOUNT, COVER 36 LED (90° CONNECTION)



| Models                    | A             | B             | C            |
|---------------------------|---------------|---------------|--------------|
| P3x/CM-36LED-90-LANDSCAPE | 8x M4 Depth 7 | 5x M4 depth 7 | Optical axis |

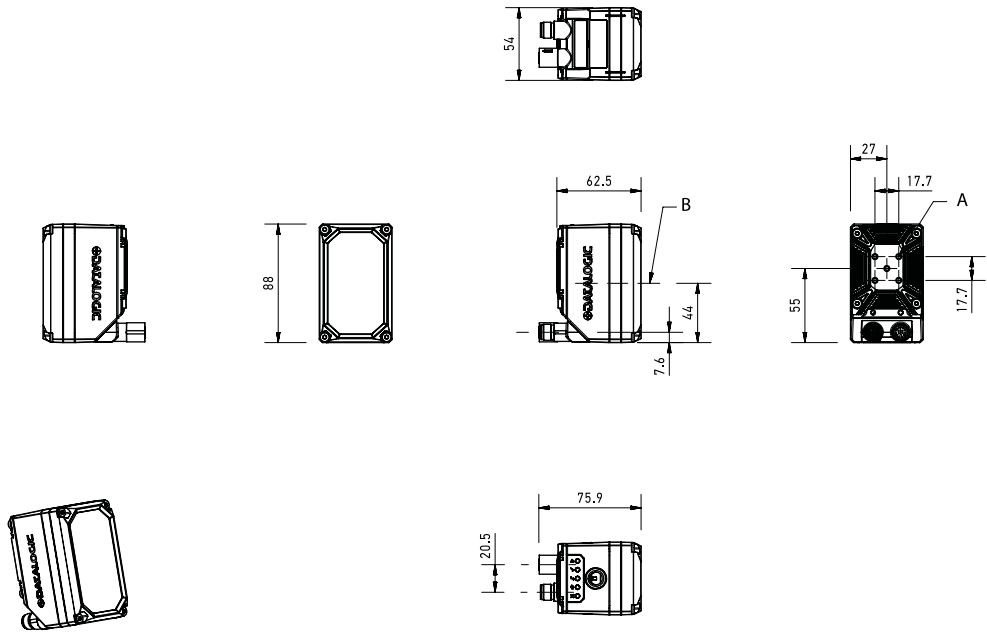
P3X-SERIES MICRO-VIDEO, COVER 14 LED (0° CONNECTION)



(mm)

| Models        | A            | B             |
|---------------|--------------|---------------|
| P3x ML 14 LED | Optical Axis | 5x M4 depth 7 |

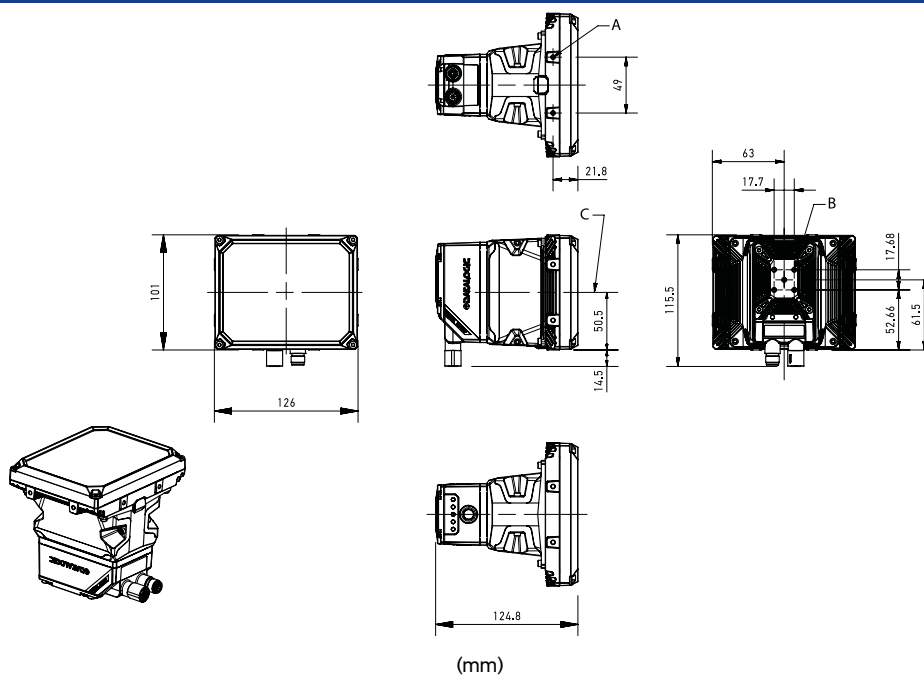
P3X-SERIES MICRO-VIDEO, COVER 14 LED (90° CONNECTION)



(mm)

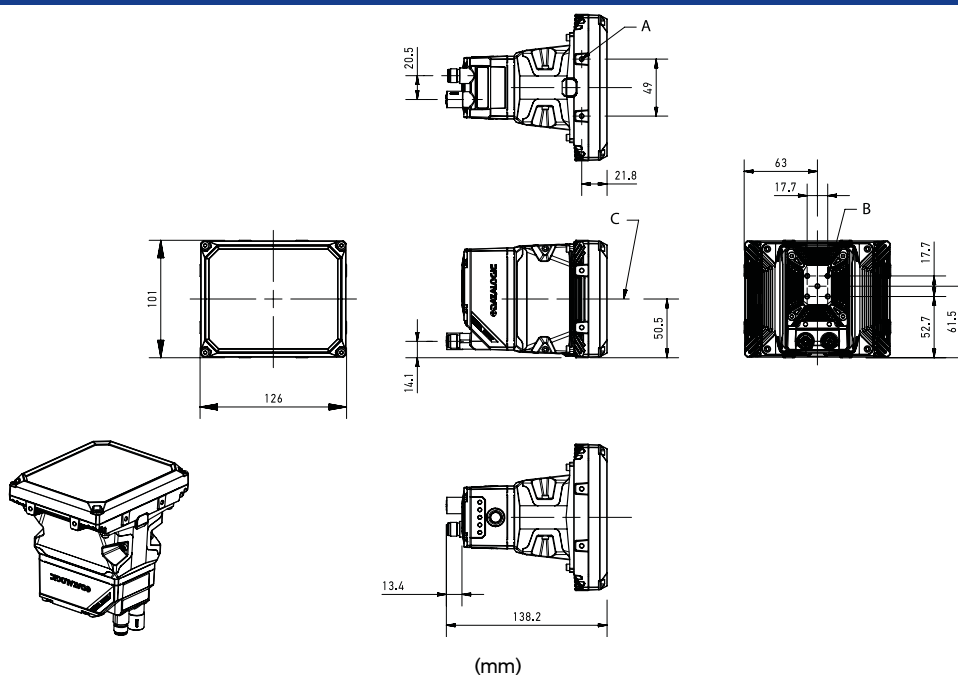
| Models           | A            | B             |
|------------------|--------------|---------------|
| P3x ML 14led 90° | Optical Axis | 5x M4 depth 7 |

## P3X-SERIES MICRO-VIDEO, COVER 36 LED (0° CONNECTION)



| Models                   | A             | B             | C            |
|--------------------------|---------------|---------------|--------------|
| P3x/CM-36LED-0-LANDSCAPE | 8x M4 Depth 7 | 5x M4 depth 7 | Optical axis |

## P3X-SERIES MICRO-VIDEO, COVER 36 LED (90° CONNECTION)



| Models                    | A             | B             | C            |
|---------------------------|---------------|---------------|--------------|
| P3x/CM-36LED-90-LANDSCAPE | 8x M4 Depth 7 | 5x M4 depth 7 | Optical axis |



# P3X

## SMART CAMERA ACCESSORIES

- Wide range of illuminators
- Wide range of filters
- Wide range of covers
- Wide range of lenses



## MICRO VIDEO LENSES



P3X-SERIES FIELD OF VIEW qHD / 2 MP (H x V in mm)

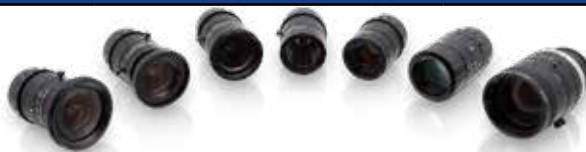


| operating distance (mm) | 6 mm       | 8 mm      | 12.5 mm   | 17.5 mm   |
|-------------------------|------------|-----------|-----------|-----------|
| 50                      | 67 x 37    | 46 x 26   | 24 x 13   | -         |
| 100                     | 117 x 66   | 82 x 46   | 46 x 25   | 31 x 17   |
| 200                     | 218 x 122  | 155 x 87  | 90 x 49   | 62 x 35   |
| 300                     | 318 x 179  | 227 x 128 | 133 x 73  | 93 x 52   |
| 400                     | 419 x 236  | 300 x 169 | 177 x 96  | 124 x 70  |
| 500                     | 519 x 292  | 373 x 209 | 220 x 120 | 155 x 87  |
| 600                     | 620 x 349  | 445 x 250 | 263 x 144 | 185 x 104 |
| 700                     | 720 x 405  | 518 x 291 | 307 x 167 | 216 x 121 |
| 800                     | 821 x 462  | 590 x 332 | 350 x 191 | 247 x 139 |
| 900                     | 921 x 518  | 663 x 373 | 394 x 214 | 277 x 156 |
| 1000                    | 1022 x 575 | 735 x 414 | 437 x 238 | 308 x 173 |
| 1100                    | -          | 808 x 454 | 480 x 262 | 339 x 190 |
| 1200                    | -          | 880 x 495 | 524 x 285 | 369 x 208 |
| 1300                    | -          | -         | 567 x 309 | 400 x 225 |
| 1400                    | -          | -         | 611 x 333 | 431 x 242 |
| 1500                    | -          | -         | 654 x 357 | 461 x 259 |

| CATEGORY           | ORDER NR. | DESCRIPTION                     |
|--------------------|-----------|---------------------------------|
| Micro-Video Lenses | 95A900010 | LNP 601-040 ML 6 mm FF4 1/3"    |
|                    | 95A900011 | LNP 603-040 ML 8 mm FF4 1/3"    |
|                    | 95A900012 | LNP 606-040 ML 12.5 mm FF4 1/3" |
|                    | 95A900013 | LNP 608-040 ML 17.5 mm FF4 1/3" |
|                    | 95A900014 | LNP Micro Lens Kit M320/P2      |



P3X-SERIES FIELD OF VIEW qHD /2 MP (H in mm)



| working distance (mm) | 4 mm | 6 mm | 8 mm | 12 mm | 16 mm | 25 mm | 35 mm |
|-----------------------|------|------|------|-------|-------|-------|-------|
| 50                    | 121  | 81   | 67   | 47    | -     | -     | -     |
| 100                   | 188  | 126  | 100  | 69    | -     | -     | -     |
| 200                   | 323  | 216  | 167  | 114   | 89    | 55    | 39    |
| 300                   | 457  | 305  | 234  | 159   | 123   | 77    | 54    |
| 400                   | 591  | 395  | 302  | 203   | 156   | 98    | 69    |
| 500                   | 726  | 484  | 369  | 248   | 190   | 120   | 85    |
| 600                   | 860  | 574  | 436  | 293   | 233   | 141   | 100   |
| 700                   | 995  | 664  | 503  | 338   | 257   | 163   | 115   |
| 800                   | 1129 | 753  | 570  | 383   | 291   | 184   | 131   |
| 900                   | 1263 | 843  | 638  | 427   | 324   | 206   | 146   |
| 1000                  | 1398 | 932  | 705  | 472   | 358   | 227   | 162   |
| 1100                  | -    | 1022 | 772  | 517   | 391   | 249   | 177   |
| 1200                  | -    | 1112 | 839  | 562   | 425   | 270   | 192   |
| 1300                  | -    | 1201 | 906  | 606   | 459   | 292   | 208   |
| 1400                  | -    | 1291 | 974  | 651   | 492   | 313   | 223   |
| 1500                  | -    | 1380 | 1041 | 696   | 526   | 335   | 238   |
| 1600                  | -    | -    | -    | 741   | 559   | 356   | 254   |
| 1700                  | -    | -    | -    | 786   | 593   | 378   | 269   |
| 1800                  | -    | -    | -    | 830   | 627   | 399   | 284   |
| 1900                  | -    | -    | -    | 875   | 660   | 421   | 300   |
| 2000                  | -    | -    | -    | 920   | 694   | 442   | 315   |
| 2500                  | -    | -    | -    | -     | 862   | 550   | 392   |

# P3X C-MOUNT LENSES

P3X  
SMART CAMERAS

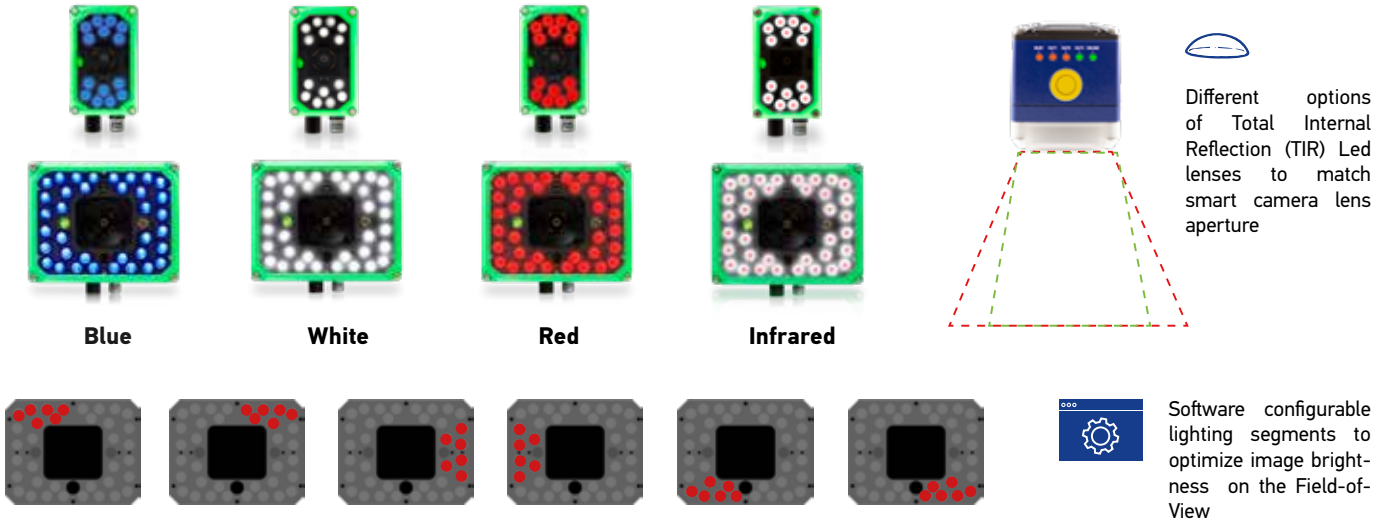
P3X-SERIES FIELD OF VIEW 5 MP (H in mm)



| working distance (mm) | 8 mm | 12 mm | 16 mm | 25 mm | 35 mm | 50 mm |
|-----------------------|------|-------|-------|-------|-------|-------|
| 100                   | 141  | 92    | -     | -     | -     | -     |
| 200                   | 233  | 153   | 116   | 72    | 46    | -     |
| 300                   | 326  | 214   | 160   | 100   | 66    | 47    |
| 400                   | 418  | 275   | 205   | 129   | 87    | 61    |
| 500                   | 511  | 335   | 249   | 158   | 107   | 76    |
| 600                   | 603  | 396   | 294   | 186   | 128   | 90    |
| 700                   | 695  | 457   | 338   | 215   | 148   | 105   |
| 800                   | 788  | 518   | 383   | 244   | 169   | 119   |
| 900                   | 880  | 578   | 427   | 272   | 189   | 134   |
| 1000                  | 973  | 639   | 472   | 301   | 210   | 148   |
| 1100                  | 1065 | 700   | 516   | 330   | 230   | 163   |
| 1200                  | 1157 | 761   | 561   | 358   | 251   | 177   |
| 1300                  | 1250 | 821   | 605   | 387   | 271   | 192   |
| 1400                  | 1342 | 882   | 650   | 415   | 292   | 206   |
| 1500                  | 1435 | 943   | 694   | 444   | 312   | 221   |
| 1600                  | -    | 1004  | 739   | 473   | 333   | 236   |
| 1700                  | -    | 1064  | 783   | 501   | 353   | 250   |
| 1800                  | -    | 1125  | 828   | 530   | 374   | 265   |
| 1900                  | -    | 1186  | 872   | 559   | 394   | 279   |
| 2000                  | -    | 1247  | 917   | 587   | 415   | 294   |
| 2100                  | -    | -     | 961   | 616   | 435   | 308   |
| 2200                  | -    | -     | 1006  | 645   | 456   | 323   |
| 2300                  | -    | -     | 1050  | 673   | 476   | 337   |
| 2400                  | -    | -     | 1095  | 702   | 497   | 352   |
| 2500                  | -    | -     | 1140  | 731   | 517   | 366   |

| CATEGORY       | ORDER NR. | DESCRIPTION                           |
|----------------|-----------|---------------------------------------|
| C-Mount Lenses | 93ACC0285 | LNМ 000-021 CM 4 mm VF1.8 1/2" ED     |
|                | 93ACC0286 | LNМ 001-031 CM 6 mm VF1.85 1/2" ED    |
|                | 93ACC0287 | LNМ 003-021 CM 8 mm VF1.8 1/2.5" ED   |
|                | 93ACC0288 | LNМ 005 021 CM 12 mm VF1.8 1/1.8" ED  |
|                | 93ACC0289 | LNМ 007-021 CM 16 mm VF1.8 1/1.8" ED  |
|                | 93ACC0290 | LNМ 009-021 CM 25 mm VF1.85 1/1.8" ED |
|                | 93ACC0292 | LNМ 010-021 CM 35 mm VF1.85 1/1.8" ED |
|                | 93ACC0343 | LNМ 011-012 CM 50 mm VF1.65 2/3" AZ   |

## ILLUMINATORS



## CODE DESCRIPTION

LTP11 0 / 35 0

|                   |    |            |
|-------------------|----|------------|
| illuminator size  | 0  | 14 LED     |
|                   | 2  | 36 LED     |
| LED lens aperture | 35 | 35 degrees |
|                   | 60 | 60 degrees |
|                   | 90 | 90 degrees |
| color             | 0  | red        |
|                   | 1  | blue       |
|                   | 2  | white      |
|                   | 3  | infrared   |

| CATEGORY     | ORDER NR.  | DESCRIPTION                          |
|--------------|------------|--------------------------------------|
| Illuminators | 95A900023  | LTP 110-600 SN14L 60D RED 625 nm     |
|              | 95A900026  | LTP 110-350 SN14L 35D RED 625 nm     |
|              | 95A900025  | LTP 110-602 SN14L 60D BLU 475 nm     |
|              | 95A900028  | LTP 110-352 SN14L 35D BLU 475 nm     |
|              | 95A900024  | LTP 110-601 SN14L 60D WHT white      |
|              | 95A900027  | LTP 110-351 SN14L 35D WHT white      |
|              | 95A900043  | LTP 110-003 SN14L 90D IR 850nm NL    |
|              | 95A900044  | LTP 110-353 SN14L 35D IR 850 nm      |
|              | 95A900045* | LTP 112-000 SN36L 120D RED 625nm NL  |
|              | 95A900031* | LTP 112-600 SN36L 60D RED 625 nm     |
|              | 95A900034* | LTP 112-350 SN36L 35D RED 625nm      |
|              | 95A900047* | LTP 112-002 SN36L 120D BLU 475 nm NL |
|              | 95A900033* | LTP 112-602 SN36L 60D BLU 475 nm     |
|              | 95A900036* | LTP 112-352 SN36L 35D BLU 475 nm     |
|              | 95A900046* | LTP 112-001 SN36L 120D WHT white NL  |
|              | 95A900032* | LTP 112-601 SN36L 60D WHT white      |
|              | 95A900035* | LTP 112-351 SN36L 35D WHT white      |
|              | 95A900048* | LTP 112-003 SN36L 90D IR 850 nm NL   |
|              | 95A900049* | LTP 112-353 SN36L 35D IR 850 nm      |
|              | 95A900038  | Adapter LL ML LT 36L M320/P2         |
|              | 95A900029  | Adapter CM LT 36L P2                 |

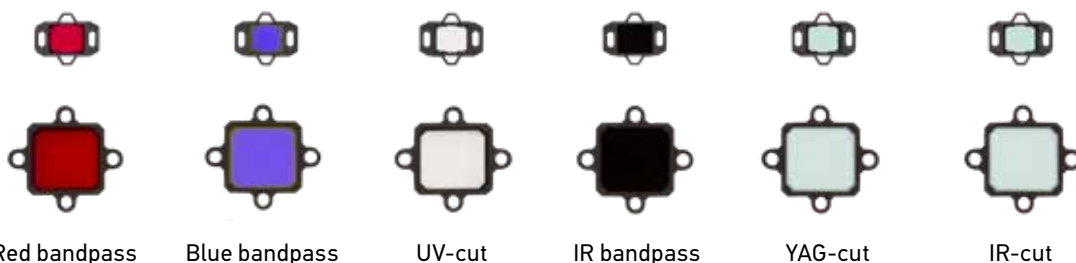
\*Requires Adapter LL ML LT 36L M320/P2 (order no. 95A900038) when using Micro-Video lenses or Adapter CM LT 36L P2 (order no. 95A900029) when using C-Mount lenses

## COVERS



| CATEGORY | ORDER NR.   | DESCRIPTION                       |
|----------|-------------|-----------------------------------|
| Covers   | 93ACC0271** | Cover STD LT 14L M320/P2/P3       |
|          | 93ACC0273   | Cover Polarizer LT 14L M320       |
|          | 93ACC0272   | Cover STD LT 36L M320/P2/P3       |
|          | 93ACC0274   | Cover Polarizer LT 36L M320/P2/P3 |
|          | 93ACC0278   | Cover ESD LT 14L M320             |
|          | 93ACC0323   | Cover LT 14L STS320/ATS320/P2/P3  |
|          | 93ACC0324   | Cover LT 36L STS320/ATS320/P2/P3  |
|          | 937710025   | C-Mount lens standard cover/P2/P3 |
|          | 937710026   | C-Mount lens long cover/P2/P3     |

## FILTERS



| CATEGORY | ORDER NR. | DESCRIPTION                                  |
|----------|-----------|----------------------------------------------|
| Filters  | 95A900018 | Filter YAG Cut LT 14L M320/P2/P3             |
|          | 95A900016 | Filter BLU Bandpass 470 nm LT 14L M320/P2/P3 |
|          | 95A900015 | Filter RED Bandpass 635 nm LT 14L M320/P2/P3 |
|          | 95A900017 | Filter IR Bandpass 850 nm LT 14L M320/P2/P3  |
|          | 95A900039 | Filter UV Cut Longpass 415 LT 14L M320/P2/P3 |
|          | 95A900064 | Filter IR Cut LT 14L M320/P2/P3              |
|          | 95A900022 | Filter YAG Cut LT 36L M320/P2/P3             |
|          | 95A900020 | Filter BLU Bandpass 470 nm LT 36L M320/P2/P3 |
|          | 95A900019 | Filter RED Bandpass 635 nm LT 36L M320/P2/P3 |
|          | 95A900021 | Filter IR Bandpass 850 nm LT 36L M320/P2/P3  |
|          | 95A900040 | Filter UV Cut Longpass 415 LT 36L M320/P2/P3 |
|          | 95A900065 | Filter IR Cut LT 36L M320/P2/P3              |

## LICENSES / BRACKETS / CABLES

| CATEGORY        | ORDER NR.   | DESCRIPTION                              |
|-----------------|-------------|------------------------------------------|
| Add-on Licenses | 95A900008   | LICENSE, ENHANCED, SMART CAMERA          |
|                 | 95A900009   | LICENSE, PRO, SMART CAMERA               |
| Brackets        | 93ACC0283   | BK-32-010 SIDE FIX BRACKET M320/P2/P3    |
|                 | 93ACC0282** | BK-32-000 STD FIX BRACKET M320/P2/P3     |
| Cables          | 93A050058   | CAB-DS01-S M12-IP67 TO CBX 1m            |
|                 | 93A050059   | CAB-DS03-S M12-IP67 TO CBX 3 m           |
|                 | 93A050060   | CAB-DS05-S M12-IP67 TO CBX 5 m           |
|                 | 93A051390   | CAB-DS10-S M12-IP67 TO CBX 10 m          |
|                 | 95A900061   | CV-A1-30-F-05 M12 17p, Drag chain, 5 m   |
|                 | 95A900062   | CV-A1-30-F-10 M12 17p, Drag chain, 10 m  |
|                 | 95A900063   | CV-A1-30-F-15 M12 17p, Drag chain, 15 m  |
|                 | 93A050122   | CAB-ETH-X-M01 M12-IP67 GETH-X CAB 1 m    |
|                 | 93A050123   | CAB-ETH-X-M03 M12-IP67 GETH-X CAB 3 m    |
|                 | 93A050124   | CAB-ETH-X-M05 M12-IP67 GETH-X CAB 5 m    |
|                 | 93A050140   | CAB-ETH-X-M10 M12-IP67 GETH-X CAB 10 m   |
|                 | 95A900058   | CV-N1-48-F-05 GigETH-X, Drag chain, 5 m  |
|                 | 95A900059   | CV-N1-48-F-10 GigETH-X, Drag chain, 10 m |
|                 | 95A900060   | CV-N1-48-F-15 GigETH-X, Drag chain, 15 m |
|                 | 93A050128   | CAB-ETH-X-RJ ADAPTER CAB GETH-X to RJ45  |
|                 | 93A050129   | CAB-ETH-X-D ADAPTER CAB GETH-X to ETH-D  |

\*\*Already included in the smart camera package.