



## OptiVID

Video systems



Video optics are non-contact measuring instruments. They make it possible to visualize the edges of a part or to position it without constraint. A very wide range of software will allow you to adapt the symbols or measurement functions corresponding to your application.

This document represents only a small part of our range, our specialty being to offer specific solutions to the needs of our customers.

- Great flexibility in image analysis.
- Fixed or adjustable optics in their magnifications.
- Color cameras from 1.3 to 18 MP. Sensors from 1/9 "to 1" (page 11).
- Several lighting options.
- 24 "All-In-One monitor (PC included in the display).
- Wide range of measurement and comparison software (page 10).

## OptiVID comparison

| Functions of different families                                                                                               | <div>Miniature</div>  | <div>Interchangeable lens</div>  | <div>Zoom</div>  | <div>High magnification</div>  | <div>Wide field</div>  | <div>Telecentric</div>  | <div>High resolution</div>  |
|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| Interchangeability of objectives at the end of optics                                                                         | no                                                                                                     | yes                                                                                                               | yes                                                                                               | yes                                                                                                              | some                                                                                                      | no                                                                                                         | no                                                                                                             |
| Change of magnification without lens dismounting                                                                              | no                                                                                                     | no                                                                                                                | yes                                                                                               | some                                                                                                             | yes                                                                                                       | some                                                                                                       | no                                                                                                             |
| Change of magnification while maintaining the same working distance                                                           | no                                                                                                     | some                                                                                                              | yes                                                                                               | yes                                                                                                              | no                                                                                                        | some                                                                                                       | no                                                                                                             |
| Telecentricity                                                                                                                | no                                                                                                     | no                                                                                                                | no                                                                                                | no                                                                                                               | no                                                                                                        | yes                                                                                                        | no                                                                                                             |
| Big depth of field                                                                                                            | no                                                                                                     | no                                                                                                                | no                                                                                                | no                                                                                                               | no                                                                                                        | yes                                                                                                        | no                                                                                                             |
| Zoom motorization                                                                                                             | no                                                                                                     | no                                                                                                                | no                                                                                                | no                                                                                                               | no                                                                                                        | some                                                                                                       | no                                                                                                             |
| 90° camera                                                                                                                    | no                                                                                                     | some                                                                                                              | some                                                                                              | no                                                                                                               | no                                                                                                        | no                                                                                                         | no                                                                                                             |
| Small footprint                                                                                                               | yes                                                                                                    | some                                                                                                              | no                                                                                                | no                                                                                                               | no                                                                                                        | no                                                                                                         | some                                                                                                           |
| Camera resolution [Mpx]                                                                                                       | 1.9                                                                                                    | 1.3                                                                                                               | 1.3                                                                                               | 1.3                                                                                                              | 1.3                                                                                                       | 4.9                                                                                                        | <b>4.9 or 10.6</b>                                                                                             |
| Field of view range [mm]                                                                                                      | 2.0 x 1.5<br>to<br>50.0 x 37.5                                                                         | 1.8 x 1.4<br>to<br>54.0 x 43.2                                                                                    | 0.36 x 0.29<br>to<br>57.7 x 46.1                                                                  | 0.15 x 0.12<br>to<br>1.18 x 0.94                                                                                 | <b>6.0 x 4.8</b><br>to<br><b>466 x 373</b>                                                                | 2.8 x 2.1<br>to<br>49.3 x 37.0                                                                             | 3.6 x 2.7<br>to<br>59.2 x 42.4                                                                                 |
| Working distance [mm]                                                                                                         | 17<br>to<br>238                                                                                        | 36<br>to<br>168                                                                                                   | 36<br>to<br>356                                                                                   | 6.3<br>to<br>30.3                                                                                                | <b>125</b><br>to<br><b>1400</b>                                                                           | 45.3<br>to<br>159.3                                                                                        | 73.0<br>to<br>380.6                                                                                            |
| Magnification range                                                                                                           | 210X<br>to<br>8X                                                                                       | 220X<br>to<br>5X                                                                                                  | 1095X<br>to<br>5X                                                                                 | <b>2655X</b><br>to<br><b>335X</b>                                                                                | 91X<br>to<br>0.8X                                                                                         | 125X<br>to<br>5X                                                                                           | 99X<br>to<br>7X                                                                                                |
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**"Miniature" OptiVID**  
**Color camera - 1/9" - USB2 - 1.9 Mpx**

| ONLY WITH<br>CAMERA DISPLAY SOFTWARE                                                                                                  | Attachment<br>[mm]      | Fields of view<br>(h) x (v)<br>[mm] |   |      | Working<br>distance<br>[mm] | Magnifications<br>on 24" screen |
|---------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-------------------------------------|---|------|-----------------------------|---------------------------------|
|  <div>MA 730-015-051</div> <div>MA 730-015-053</div> | Ø15 h7 x 77<br>aluminum | 2.0                                 | x | 1.5  | 17                          | 210X                            |
|                                                                                                                                       |                         | 3.0                                 | x | 2.3  | 22                          | 140X                            |
|                                                                                                                                       |                         | 4.0                                 | x | 3.0  | 27                          | 105X                            |
|                                                                                                                                       |                         | 5.6                                 | x | 4.2  | 34                          | 75X                             |
|                                                                                                                                       |                         | 6.0                                 | x | 4.5  | 36                          | 70X                             |
|                                                                                                                                       |                         | 7.3                                 | x | 5.5  | 42                          | 60X                             |
|                                                                                                                                       |                         | 8.0                                 | x | 6.0  | 45                          | 55X                             |
|                                                                                                                                       |                         | 10.0                                | x | 7.5  | 54                          | 40X                             |
|                                                                                                                                       | Ø18 g7 x 77<br>steel    | 12.0                                | x | 9.0  | 63                          | 35X                             |
|                                                                                                                                       |                         | 15.0                                | x | 11.3 | 77                          | 30X                             |
|                                                                                                                                       |                         | 19.0                                | x | 14.3 | 95                          | 22X                             |
|                                                                                                                                       |                         | 24.5                                | x | 18.4 | 122                         | 17X                             |
|                                                                                                                                       |                         | 27.0                                | x | 20.3 | 132                         | 16X                             |
|                                                                                                                                       |                         | 32.0                                | x | 24.0 | 156                         | 13X                             |
|                                                                                                                                       |                         | 36.0                                | x | 27.0 | 175                         | 12X                             |
|                                                                                                                                       |                         | 42.0                                | x | 31.5 | 202                         | 10X                             |
|                                                                                                                                       |                         | 50.0                                | x | 37.5 | 238                         | 8X                              |
| Option                                                                                                                                |                         |                                     |   |      |                             |                                 |
| LED ring light incident illuminator : MA 114-044 (for MA 730-015-051 only)                                                            |                         |                                     |   |      |                             |                                 |
| Variant                                                                                                                               |                         |                                     |   |      |                             |                                 |
| All optics can be delivered with a PUR cable                                                                                          |                         |                                     |   |      |                             |                                 |

**"Interchangeable lens" OptiVID**  
**Color camera - 1/1.8" - USB3 - 1.3Mpx**

| STRAIGHT                                                                                                                                                                                      | Attachment<br>[mm] | Fields of view<br>(h) x (v)<br>[mm] |   |      | Working<br>distance<br>[mm] | Magnifications<br>on 24" screen |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------------------------------|---|------|-----------------------------|---------------------------------|
| <br><br><b>MA 730-040</b>                                                                                    | Ø25 x 40           | 54.0                                | x | 43.2 | 168                         | 5X                              |
|                                                                                                                                                                                               |                    | 41.0                                | x | 32.8 | 168                         | 10X                             |
|                                                                                                                                                                                               |                    | 29.6                                | x | 23.7 | 166                         | 15X                             |
|                                                                                                                                                                                               |                    | 20.1                                | x | 16.1 | 166                         | 20X                             |
|                                                                                                                                                                                               |                    | 14.1                                | x | 11.3 | 160                         | 30X                             |
|                                                                                                                                                                                               |                    | 10.2                                | x | 8.1  | 142                         | 40X                             |
|                                                                                                                                                                                               |                    | 7.0                                 | x | 5.6  | 121                         | 55X                             |
|                                                                                                                                                                                               |                    | 4.5                                 | x | 3.6  | 84                          | 90X                             |
|                                                                                                                                                                                               |                    | 3.6                                 | x | 2.9  | 72                          | 110X                            |
| <br><br><b>MA 730-110</b>                                                                                    | Ø25 x 110          | 20.1                                | x | 16.1 | 100                         | 20X                             |
|                                                                                                                                                                                               |                    | 14.1                                | x | 11.3 | 100                         | 30X                             |
|                                                                                                                                                                                               |                    | 10.2                                | x | 8.1  | 100                         | 40X                             |
|                                                                                                                                                                                               |                    | 7.0                                 | x | 5.6  | 100                         | 55X                             |
|                                                                                                                                                                                               |                    | 4.5                                 | x | 3.6  | 92                          | 90X                             |
|                                                                                                                                                                                               |                    | 3.6                                 | x | 2.9  | 82                          | 110X                            |
|                                                                                                                                                                                               |                    | 2.5                                 | x | 2.0  | 62                          | 155X                            |
|                                                                                                                                                                                               |                    | 1.8                                 | x | 1.4  | 36                          | 220X                            |
| <b>Option</b><br>Geared drive, range 40mm : MA 153-5-009 (heavy duty arm stand for geared drive : CLC-048)                                                                                    |                    |                                     |   |      |                             |                                 |
| <b>Variants</b><br>A wide range of other fields of view is available with these tubes but also with a tube of Ø25 x 77<br>All optics can be delivered with a steel tube (aluminum by default) |                    |                                     |   |      |                             |                                 |

| 90° RETURN                                                                                    | Attachment | Fields of view<br>(h) x (v)<br>[mm] |   |     | Working<br>distance<br>[mm] | Magnifications<br>on 24" screen |
|-----------------------------------------------------------------------------------------------|------------|-------------------------------------|---|-----|-----------------------------|---------------------------------|
|  MA 730C-3 | M20x0.75   | 10.1                                | x | 8.1 | 100                         | 40X                             |
|                                                                                               |            | 6.7                                 | x | 5.3 | 103                         | 60X                             |
|                                                                                               |            | 4.0                                 | x | 3.2 | 76                          | 100X                            |
|                                                                                               |            | 2.0                                 | x | 1.6 | 47                          | 195X                            |
| Variants                                                                                      |            |                                     |   |     |                             |                                 |
| All optics can be delivered with a cylindrical or tapered mount (with a cover by default)     |            |                                     |   |     |                             |                                 |

| STRAIGHT<br>LED COAXIAL ILLUMINATOR                                                                                                                                                     | Attachment<br>[mm] | Fields of view<br>(h) x (v)<br>[mm] |   |     | Working<br>distance<br>[mm] | Magnifications<br>on 24" screen |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------------------------------|---|-----|-----------------------------|---------------------------------|
|  MA 730E-077-005                                                                                     | Ø25 x 77           | 4.5                                 | x | 3.6 | 93                          | 90X                             |
|                                                                                                                                                                                         |                    | 3.6                                 | x | 2.9 | 79                          | 110X                            |
|                                                                                                                                                                                         |                    | 2.5                                 | x | 2.0 | 56                          | 155X                            |
|                                                                                                                                                                                         |                    | 1.8                                 | x | 1.4 | 37                          | 220X                            |
| Option<br>Geared drive, range 40mm : MA 153-5-009 (heavy duty arm stand for geared drive : CLC-048)                                                                                     |                    |                                     |   |     |                             |                                 |
| Variants<br>A wide range of other fields of view is available with these tubes but also with a tube of Ø25 x 110<br>All optics can be delivered with a steel tube (aluminum by default) |                    |                                     |   |     |                             |                                 |

|                                                                                                                                                                                                                              |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| <b>Options for all optics</b><br>Interchangeable lens : Wide choice of lenses that can be screwed at the end of each OptiVID<br>LED ring light incident illuminator : MA 114-029<br>LED transmitted illuminator : MA 212-092 |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|

**"Zoom" OptiVID**  
**Color camera - 1/1.8" - USB3 - 1.3Mpx**

| 6.5X ZOOM                                                                         |                         | Attachment [mm] | Add. Lenses | Fields of view (h) x (v) Max. [mm] |   | Fields of view (h) x (v) Min. [mm] |      | Working distance [mm] | Magnifications on 24" screen |     |      |   |      |
|-----------------------------------------------------------------------------------|-------------------------|-----------------|-------------|------------------------------------|---|------------------------------------|------|-----------------------|------------------------------|-----|------|---|------|
|                                                                                   |                         |                 |             |                                    |   |                                    |      |                       | Min.                         | -   | Max. |   |      |
|  | MA 730-Z1 Adapter 0.67X | Ø39.7           | 0.25X       | 57.7                               | x | 46.1                               | 8.88 | x                     | 7.11                         | 356 | 5X   | - | 45X  |
|                                                                                   |                         |                 | 0.50X       | 28.8                               | x | 23.1                               | 4.43 | x                     | 3.54                         | 175 | 15X  | - | 90X  |
|                                                                                   |                         |                 | 0.75X       | 19.2                               | x | 15.3                               | 2.97 | x                     | 2.37                         | 113 | 20X  | - | 135X |
|                                                                                   |                         |                 | ---         | 14.4                               | x | 11.5                               | 2.23 | x                     | 1.78                         | 92  | 25X  | - | 175X |
|                                                                                   |                         |                 | 1.50X       | 9.6                                | x | 7.7                                | 1.48 | x                     | 1.19                         | 51  | 40X  | - | 265X |
|                                                                                   |                         |                 | 2.00X       | 7.2                                | x | 5.8                                | 1.11 | x                     | 0.89                         | 36  | 55X  | - | 355X |
|                                                                                   | MA 730-Z1 Adapter 1.00X |                 | 0.25X       | 38.6                               | x | 30.9                               | 5.94 | x                     | 4.75                         | 356 | 10X  | - | 65X  |
|                                                                                   |                         |                 | 0.50X       | 19.3                               | x | 15.4                               | 2.97 | x                     | 2.37                         | 175 | 20X  | - | 135X |
|                                                                                   |                         |                 | 0.75X       | 12.8                               | x | 10.3                               | 1.97 | x                     | 1.58                         | 113 | 30X  | - | 200X |
|                                                                                   |                         |                 | ---         | 9.6                                | x | 7.7                                | 1.48 | x                     | 1.19                         | 92  | 40X  | - | 265X |
|                                                                                   |                         |                 | 1.50X       | 6.5                                | x | 5.2                                | 1.00 | x                     | 0.80                         | 51  | 60X  | - | 395X |
|                                                                                   |                         |                 | 2.00X       | 4.9                                | x | 3.9                                | 0.75 | x                     | 0.60                         | 36  | 80X  | - | 525X |

**Options**

Additional lenses: POC-101. interchangeable; can be purchased separately  
 Geared drive, range 40mm : MA 153-5-027 (heavy duty arm stand for geared drive : CLC-048)  
 Precision column, range 150mm : MA 173-S4  
 LED circular illuminator : MA 114-033 + adapter ring 85-177  
 LED transmitted illuminator : MA 212-092

**Variants**



Optics without additional lenses, lenses 1.5X and 2.00X  
 can be delivered with an LED coaxial illuminator.  
 All these zoom lenses can be supplied angled at 90°  
 and with a cylindrical or tapered mount

| 12X ZOOM                                                                            |                         | Attachment [mm] | Add. Lenses | Fields of view (h) x (v) Max. [mm] |   |      | Fields of view (h) x (v) Min. [mm] |   |      | Working distance [mm] | Magnifications on 24" screen |   |       |
|-------------------------------------------------------------------------------------|-------------------------|-----------------|-------------|------------------------------------|---|------|------------------------------------|---|------|-----------------------|------------------------------|---|-------|
|                                                                                     |                         |                 |             |                                    |   |      |                                    |   |      |                       | Min.                         | - | Max.  |
|  | MA 730-Z2 Adapter 0.67X | Ø45.3           | 0.25X       | 69.9                               | x | 55.9 | 5.79                               | x | 4.63 | 336                   | 5X                           | - | 70X   |
|                                                                                     |                         |                 | 0.50X       | 34.9                               | x | 27.9 | 2.89                               | x | 2.32 | 160                   | 10X                          | - | 135X  |
|                                                                                     |                         |                 | 0.75X       | 23.3                               | x | 18.7 | 1.93                               | x | 1.54 | 107                   | 15X                          | - | 205X  |
|                                                                                     |                         |                 | ---         | 17.5                               | x | 14.0 | 1.44                               | x | 1.15 | 86                    | 25X                          | - | 275X  |
|                                                                                     |                         |                 | 1.50X       | 11.7                               | x | 9.3  | 0.96                               | x | 0.77 | 50                    | 35X                          | - | 410X  |
|                                                                                     |                         |                 | 2.00X       | 8.7                                | x | 7.0  | 0.72                               | x | 0.58 | 37                    | 45X                          | - | 545X  |
|                                                                                     | MA 730-Z2 Adapter 1.00X |                 | 0.25X       | 46.7                               | x | 37.4 | 3.88                               | x | 3.10 | 336                   | 10X                          | - | 100X  |
|                                                                                     |                         |                 | 0.50X       | 23.4                               | x | 18.7 | 1.94                               | x | 1.55 | 160                   | 15X                          | - | 205X  |
|                                                                                     |                         |                 | 0.75X       | 15.6                               | x | 12.5 | 1.29                               | x | 1.03 | 107                   | 25X                          | - | 305X  |
|                                                                                     |                         |                 | ---         | 11.7                               | x | 9.3  | 0.96                               | x | 0.77 | 86                    | 35X                          | - | 410X  |
|                                                                                     |                         |                 | 1.50X       | 7.8                                | x | 6.3  | 0.65                               | x | 0.52 | 50                    | 50X                          | - | 610X  |
|                                                                                     |                         |                 | 2.00X       | 5.8                                | x | 4.7  | 0.49                               | x | 0.39 | 37                    | 70X                          | - | 810X  |
|                                                                                     | MA 730-Z2 Adapter 1.33X |                 | 0.25X       | 35.2                               | x | 28.2 | 2.92                               | x | 2.33 | 336                   | 10X                          | - | 135X  |
|                                                                                     |                         |                 | 0.50X       | 17.6                               | x | 14.1 | 1.45                               | x | 1.16 | 160                   | 20X                          | - | 270X  |
|                                                                                     |                         |                 | 0.75X       | 11.8                               | x | 9.4  | 0.98                               | x | 0.78 | 107                   | 35X                          | - | 405X  |
|                                                                                     |                         |                 | ---         | 8.8                                | x | 7.0  | 0.73                               | x | 0.59 | 86                    | 45X                          | - | 540X  |
|                                                                                     |                         |                 | 1.50X       | 5.8                                | x | 4.7  | 0.49                               | x | 0.39 | 50                    | 70X                          | - | 810X  |
|                                                                                     |                         |                 | 2.00X       | 4.3                                | x | 3.5  | 0.36                               | x | 0.29 | 37                    | 90X                          | - | 1095X |

**Options**

Additional lenses: POC-102. interchangeable; can be purchased separately  
 Geared drive, range 40mm : MA 153-5-028 (heavy duty arm stand for geared drive : CLC-048)  
 Precision column, range 150mm : MA 173-S5  
 LED ring light incident illuminator : MA 114-033 + adapter ring 85-060  
 LED transmitted illuminator : MA 212-092

**Variants**



Optics without additional lenses, lenses 1.5X and 2.00X  
 can be delivered with an LED coaxial illuminator.  
 Zoom optics with a 0.67X and 1.00X adapter can be delivered  
 angled at 90° and with a cylindrical or tapered mount

**"High magnification" OptiVID**  
**Color camera - 1/1.8" - USB3 - 1.3Mpx**

| 1 LENS<br>LED COAXIAL ILLUMINATOR                                                                | Attachment<br>[mm] | Fields of view<br>(h) x (v)<br>[mm] |   |      | Working<br>distance<br>[mm] | Magnifications<br>on 24" screen |
|--------------------------------------------------------------------------------------------------|--------------------|-------------------------------------|---|------|-----------------------------|---------------------------------|
|  MA 730E-008-10 | Ø39.65             | 1.18                                | x | 0.94 | 30.3                        | 335X                            |
|                                                                                                  |                    | 0.60                                | x | 0.48 | 10.6                        | 650X                            |
|                                                                                                  |                    | 0.30                                | x | 0.24 | 12                          | 1325X                           |
|                                                                                                  |                    | 0.15                                | x | 0.12 | 6.3                         | 2655X                           |
| Options                                                                                          |                    |                                     |   |      |                             |                                 |
| Fine displacement geared drive, range 40mm : MA 154-5-018                                        |                    |                                     |   |      |                             |                                 |
| Fine displacement column, range 25mm : MA 430-023-14                                             |                    |                                     |   |      |                             |                                 |
| LED transmitted illuminator : MA 212-092                                                         |                    |                                     |   |      |                             |                                 |

| 4 LENSES ON REVOLVER<br>LED COAXIAL ILLUMINATOR                                                                                                                                 | Attachment<br>[mm] | Fields of view<br>(h) x (v)<br>[mm] |   |      | Working<br>distance<br>[mm] | Magnifications<br>on 24" screen |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------------------------------|---|------|-----------------------------|---------------------------------|
| <br><br>MA 730E-REV-019-02                                                                     | Ø39.65             | 1.18                                | x | 0.94 | 30.3                        | 335X                            |
|                                                                                                                                                                                 |                    | 0.60                                | x | 0.48 | 10.6                        | 650X                            |
|                                                                                                                                                                                 |                    | 0.30                                | x | 0.24 | 12                          | 1325X                           |
|                                                                                                                                                                                 |                    | 0.15                                | x | 0.12 | 6.3                         | 2655X                           |
| <b>Options</b><br>Fine displacement geared drive, range 40mm : MA 154-5-018<br>Fine displacement column, range 25mm : MA 430-023-14<br>LED transmitted illuminator : MA 212-092 |                    |                                     |   |      |                             |                                 |
| <b>Variants</b><br>This product can also be ordered with 2 or 3 lenses                                                                                                          |                    |                                     |   |      |                             |                                 |

**"Wide field" OptiVID**  
**Color camera - 1/1.8" - USB3 - 1.3Mpx**

| ZOOM<br>6 : 1                                                                               | CLOSE<br>UP<br>lens | Attachment<br>[mm] | Fields of view<br>(h) x (v) Max.<br>[mm] | Fields of view<br>(h) x (v) Min.<br>[mm] | Working<br>distance<br>[mm] | Magnifications<br>on 24" screen<br>Min. - Max. |
|---------------------------------------------------------------------------------------------|---------------------|--------------------|------------------------------------------|------------------------------------------|-----------------------------|------------------------------------------------|
|  MA 730-Z6 | No                  | Ø47                | 466 x 373                                | 80.6 x 64.4                              | 1400                        | 0.8X - 4.9X                                    |
|                                                                                             |                     |                    | 403 x 322                                | 68.9 x 55.1                              | 1200                        | 1.0X - 5.7X                                    |
|                                                                                             |                     |                    | 334 x 267                                | 57.2 x 45.8                              | 1000                        | 1.2X - 6.9X                                    |
|                                                                                             |                     |                    | 265 x 212                                | 44.5 x 35.6                              | 800                         | 1.5X - 8.8X                                    |
|                                                                                             |                     |                    | 196 x 157                                | 34.5 x 27.6                              | 600                         | 2.0X - 11.4X                                   |
|                                                                                             | Yes                 |                    | 102 x 81                                 | 17.5 x 14.0                              | 300                         | 3.9X - 23X                                     |
|                                                                                             |                     |                    | 93 x 75                                  | 15.9 x 12.7                              | 275                         | 4.2X - 25X                                     |
|                                                                                             |                     |                    | 85 x 68                                  | 14.3 x 11.4                              | 250                         | 4.6X - 28X                                     |
|                                                                                             |                     |                    | 75 x 60                                  | 12.7 x 10.2                              | 225                         | 5.2X - 31X                                     |
|                                                                                             |                     |                    | 65 x 52                                  | 11.1 x 8.9                               | 200                         | 6.1X - 35X                                     |
|                                                                                             |                     |                    | 56 x 45                                  | 9.8 x 7.8                                | 175                         | 7.0X - 40X                                     |
|                                                                                             |                     |                    | 46 x 36                                  | 8.0 x 6.4                                | 150                         | 8.6X - 50X                                     |
|                                                                                             |                     |                    | 35 x 28                                  | 6.0 x 4.8                                | 125                         | 11.3X - 65X                                    |

**Options**

Geared drive, range 40mm : MA 153-5-040 (heavy duty arm stand for geared drive : CLC-048)

LED ring light incident illuminator : MA 114-024 + adapter ring 85-143

| <b>ZOOM<br/>10 : 1</b>                                                                                   | <b>Attachment<br/>[mm]</b> | <b>Fields of view<br/>(h) x (v) Max.<br/>[mm]</b> | <b>Fields of view<br/>(h) x (v) Min.<br/>[mm]</b> | <b>Working<br/>distance<br/>[mm]</b> | <b>Magnifications<br/>on 24" screen<br/>Min. - Max.</b> |
|----------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------------------------|---------------------------------------------------|--------------------------------------|---------------------------------------------------------|
|  <b>MA 730-Z6-020</b> | Ø46                        | 283 x 226                                         | 29.7 x 23.7                                       | 435                                  | 1.4X - 13X                                              |
|                                                                                                          |                            | 179 x 144                                         | 18.7 x 14.9                                       | 287                                  | 2.2X - 21X                                              |
|                                                                                                          |                            | 69 x 55                                           | 7.2 x 5.8                                         | 137                                  | 5.7X - 55X                                              |

**Options**

Geared drive, range 40mm : MA 153-5-056 (heavy duty arm stand for geared drive : CLC-048)

LED ring light incident illuminator : MA 114-024 + adapter ring 63-101

| <b>ZOOM<br/>3 : 1</b>                                                                                    | <b>Attachment<br/>[mm]</b> | <b>Fields of view<br/>(h) x (v) Max.<br/>[mm]</b> | <b>Fields of view<br/>(h) x (v) Min.<br/>[mm]</b> | <b>Working<br/>distance<br/>[mm]</b> | <b>Magnifications<br/>on 24" screen<br/>Min. - Max.</b> |
|----------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------------------------|---------------------------------------------------|--------------------------------------|---------------------------------------------------------|
|  <b>MA 730-Z6-101</b> | Ø45.3                      | 24 x 19                                           | 7.2 x 5.8                                         | 98                                   | 17X - 55X                                               |
|                                                                                                          |                            | 19 x 15                                           | 5.6 x 4.5                                         | 83                                   | 21X - 70X                                               |
|                                                                                                          |                            | 15 x 12                                           | 4.3 x 3.5                                         | 73                                   | 27X - 91X                                               |

**Options**

Geared drive, range 40mm : MA 153-5-028 (heavy duty arm stand for geared drive : CLC-048)

LED ring light incident illuminator : MA 114-033

**"Telecentric" OptiVID**  
**Color camera - 1/1.8" - USB3 - 6.4Mpx**

| 1 LENS                                                                            |                | Attachment<br>[mm] | Fields of view<br>(h) x (v)<br>[mm] |   |      | Working<br>distance<br>[mm] | Magnifications<br>on 24" screen | Field depths<br>[mm] |
|-----------------------------------------------------------------------------------|----------------|--------------------|-------------------------------------|---|------|-----------------------------|---------------------------------|----------------------|
|  | MA 735-002-006 | Ø45.3              | 7.4                                 | x | 5.0  | 63.3                        | 65X                             | 0.9                  |
|  | MA 735-002-012 |                    | 14.0                                | x | 9.4  | 45.3                        | 35X                             | 2                    |
|  | MA 735-002-026 |                    | 30.5                                | x | 20.5 | 103.5                       | 15X                             | 11                   |
|  | MA 735-002-056 |                    | 64.8                                | x | 43.6 | 159.3                       | 5X                              | 51                   |

**Options**

LED ring light incident illuminator for versions: -006 and -012 = MA 114-033 / -026 = MA 114-049 + 85-467-01 / -056 = MA 114-050  
 LED transmitted illuminator for versions -006 to -026 = MA 212-092 / -056 = MA 212-106

| 4 LENSES ON<br>MOTORIZED BIG ZOOM                                                   |               | Attachment<br>[mm] | Fields of view<br>(h) x (v)<br>[mm] |   |      | Working<br>distance<br>[mm] | Magnifications<br>on 24" screen | Field depths<br>[mm] |
|-------------------------------------------------------------------------------------|---------------|--------------------|-------------------------------------|---|------|-----------------------------|---------------------------------|----------------------|
|  | MA 735-Z4-001 | 2x<br>Ø69.5        | 7.4                                 | x | 5.0  | 157.8                       | 65X                             | 0.7                  |
|                                                                                     |               |                    | 14.8                                | x | 10.0 |                             | 30X                             | 2.8                  |
|                                                                                     |               |                    | 29.6                                | x | 19.9 |                             | 15X                             | 11                   |
|                                                                                     |               |                    | 59.3                                | x | 39.9 |                             | 10X                             | 45                   |

**Options**

Protection and attachment enclosure : MA 700-038  
 LED ring light incident illuminator MA 114-051 + adapter ring 85-467-03. LED transmitted illuminator MA 212-106

| 4 LENSES ON<br>MOTORIZED SMALL ZOOM                                                 |               | Attachment<br>[mm] | Fields of view<br>(h) x (v)<br>[mm] |   |      | Working<br>distance<br>[mm] | Magnifications<br>on 24" screen | Field depths<br>[mm] |
|-------------------------------------------------------------------------------------|---------------|--------------------|-------------------------------------|---|------|-----------------------------|---------------------------------|----------------------|
|  | MA 735-Z4-002 | 2x<br>Ø69.5        | 3.7                                 | x | 2.5  | 74                          | 125X                            | 0.2                  |
|                                                                                     |               |                    | 7.4                                 | x | 5.0  |                             | 65X                             | 0.7                  |
|                                                                                     |               |                    | 14.8                                | x | 10.0 |                             | 30X                             | 2.8                  |
|                                                                                     |               |                    | 29.6                                | x | 19.9 |                             | 15X                             | 11                   |

**Alternative solution including this optics**

MA 185-043 line of measuring systems includes Z-axis optics and various measuring X-Y tables

**Options**

Precision column, range 150mm : MA 175-S7-011  
 Protection and attachment enclosure : MA 700-038  
 LED ring light incident illuminator : MA 114-050 + adapter ring 85-467-02. LED transmitted illuminator : MA 212-092

**Alternative solutions including all these optics**

The line of Titan View control devices includes these optics with Z-axis and their lighting

**"High resolution" OptiVID**  
**Color camera - 1/1.8" - USB3 - 6.4Mpx**

| STRAIGHT                                                                                  |                | Attachment<br>[mm] | Fields of view<br>(h) x (v)<br>[mm] |   |      | Working<br>distance<br>[mm] | Magnifications<br>on 24" screen |
|-------------------------------------------------------------------------------------------|----------------|--------------------|-------------------------------------|---|------|-----------------------------|---------------------------------|
|          | MA 730-001-101 | Ø45.3              | 68.4                                | x | 46.0 | 380.6                       | 6.8X                            |
|                                                                                           | MA 730-001-105 |                    | 52.6                                | x | 35.4 | 245.6                       | 8.9X                            |
|                                                                                           | MA 730-002-105 |                    | 52.6                                | x | 35.4 | 383.5                       | 8.9X                            |
|                                                                                           | MA 730-002-101 |                    | 51.3                                | x | 34.5 | 380.8                       | 9.1X                            |
|                                                                                           | MA 730-001-101 |                    | 36.8                                | x | 24.8 | 172.8                       | 12.7X                           |
|                                                                                           | MA 730-006-101 |                    | 35.5                                | x | 23.9 | 165.0                       | 13.2X                           |
|                                                                                           | MA 730-002-105 |                    | 30.3                                | x | 20.3 | 230.8                       | 15.5X                           |
|                                                                                           | MA 730-006-101 |                    | 29.6                                | x | 19.9 | 143.0                       | 15.8X                           |
|                                                                                           | MA 730-003-201 |                    | 25.7                                | x | 17.3 | 98.0                        | 18.3X                           |
|                                                                                           | MA 730-003-201 |                    | 24.3                                | x | 16.4 | 93.0                        | 19.2X                           |
|                                                                                           | MA 730-001-105 |                    | 21.1                                | x | 14.2 | 102.8                       | 22X                             |
|                                                                                           | MA 730-003-201 |                    | 20.8                                | x | 14.0 | 83.0                        | 23X                             |
|                                                                                           | MA 730-003-201 |                    | 16.1                                | x | 10.8 | 73.0                        | 29X                             |
|                                                                                           | MA 730-007-101 |                    | 14.8                                | x | 10.0 | 150.0                       | 32X                             |
|                                                                                           | MA 730-007-105 |                    | 12.6                                | x | 8.5  | 136.0                       | 37X                             |
|                                                                                           | MA 730-007-101 |                    | 9.2                                 | x | 6.2  | 110.0                       | 51X                             |
|                                                                                           | MA 730-007-105 |                    | 8.2                                 | x | 5.5  | 105.0                       | 57X                             |
|                                                                                           | MA 730-003-201 |                    | 7.9                                 | x | 5.3  | 98.0                        | 59X                             |
|                                                                                           | MA 730-003-201 |                    | 7.2                                 | x | 4.9  | 93.0                        | 65X                             |
|                                                                                           | MA 730-003-201 |                    | 6.2                                 | x | 4.2  | 83.0                        | 76X                             |
|                                                                                           | MA 730-003-201 |                    | 4.7                                 | x | 3.2  | 73.0                        | 99X                             |
| Options                                                                                   |                |                    |                                     |   |      |                             |                                 |
| Geared drive, range 40mm : MA 153-5-028 (heavy-duty arm stand for geared drive : CLC-048) |                |                    |                                     |   |      |                             |                                 |
| LED ring light incident illuminator : MA 114-033                                          |                |                    |                                     |   |      |                             |                                 |
| LED transmitted illuminator : MA 212-092                                                  |                |                    |                                     |   |      |                             |                                 |
| Variants                                                                                  |                |                    |                                     |   |      |                             |                                 |
| These optics can also be ordered with higher resolution cameras                           |                |                    |                                     |   |      |                             |                                 |

## Software comparison

| Functions                                    | VideoRET PLUS<br> | VideoMES<br> | M3<br> | VideoDOC<br> | VideoGEN<br> | VideoPIC<br> |
|----------------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Displaying a reticle / cross                 | ✓                                                                                                  | ✓                                                                                             | ✓                                                                                       | ✓                                                                                               | ✓                                                                                               | ✓                                                                                               |
| Saving an image                              | ✓                                                                                                  | ✓                                                                                             | ✓                                                                                       | ✓                                                                                               | ✓                                                                                               | ✓                                                                                               |
| Saving measurements                          | ✓                                                                                                  | -                                                                                             | ✓                                                                                       | ✓                                                                                               | -                                                                                               | -                                                                                               |
| Measuring / displaying angles                | ✓                                                                                                  | ✓                                                                                             | ✓                                                                                       | ✓                                                                                               | -                                                                                               | -                                                                                               |
| Distance measurement                         | ✓                                                                                                  | ✓                                                                                             | ✓                                                                                       | ✓                                                                                               | -                                                                                               | -                                                                                               |
| Importing and comparing DXF drawing          | ✓                                                                                                  | -                                                                                             | ✓                                                                                       | -                                                                                               | -                                                                                               | -                                                                                               |
| Diameter and radius measurement              | ✓                                                                                                  | -                                                                                             | ✓                                                                                       | ✓                                                                                               | -                                                                                               | -                                                                                               |
| Measurement protocol                         | ✓                                                                                                  | -                                                                                             | ✓                                                                                       | ✓                                                                                               | -                                                                                               | -                                                                                               |
| Display of Z axis                            | -                                                                                                  | -                                                                                             | ✓                                                                                       | -                                                                                               | -                                                                                               | -                                                                                               |
| Programming of measurement sequences         | -                                                                                                  | -                                                                                             | ✓                                                                                       | -                                                                                               | -                                                                                               | -                                                                                               |
| Displaying and moving up to 3 pairs of lines | -                                                                                                  | -                                                                                             | -                                                                                       | -                                                                                               | ✓                                                                                               | -                                                                                               |

## OptiVID cameras

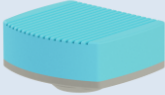
We have defined for each family of video systems a camera choice that is relevant to the physical capacity of each lens. However, for particular cases, it may be interesting to choose another camera. This is possible for all our families with the exception of OptiVID "miniatures" because the color micro-camera is integrated into the mechanics.

It is for example financially interesting to choose an **"HDMI"** camera because it allows to connect directly to a monitor and thus save on the cost of a computer.

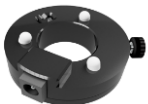
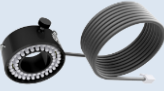
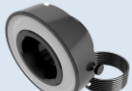
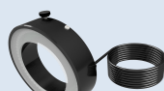
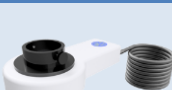
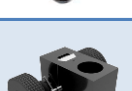
Note that our **USB3 cables** have lengths of 3m and 5m. Beyond 5m, it is strongly recommended to favor an efficient **GigE** (Ethernet) connection, for up to 100m.

As the cameras almost all have a different CCD surface, it is necessary, in case of a camera change, to calculate the visual field again. Of course we are at your disposal to support you in this step, if necessary.

Other cameras are available: PAL, DVI, USB2, USB3, GigE, HDMI, with other CCD sensors.

| Type                                                                                                                        | Resolution               | Connection         | Picture              | Cables                                                           | Software possibilities                            | Comments                                                                                                                                                                                     |
|-----------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------|----------------------|------------------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CAM-120-272</b><br><b>1/1.8"</b><br>    | 1.3 Mpx<br>1280x1024 px  | USB3               | Color<br>60 fps      | 3 or 5m long.<br><br>Screwed connectors<br>straight<br>or angled | All                                               | This product is the most used in our line of products because it is reliable and has an excellent performance - price ratio.                                                                 |
| <b>CAM-120-284</b><br><b>1/1.8"</b><br>  | 6.4 Mpx<br>3088x2076 px  | USB3               | Color<br>58 fps      | 3 or 5m long.<br><br>Screwed connectors<br>straight<br>or angled | All                                               | This product is our standard for optics requiring high resolution while maintaining a high frame rate.                                                                                       |
| <b>CAM-120-230</b><br><b>1/2.3"</b><br>  | 18.1 Mpx<br>4912x3624 px | USB3               | Color<br>21 fps      | 3 or 5m long.<br><br>Screwed connectors<br>straight<br>or angled | All                                               | This product allows you to digitally zoom your image captures                                                                                                                                |
| <b>CAM-120-170</b><br><b>1/1.8"</b><br>  | 6.4 Mpx<br>3088x2076 px  | GigE<br>(Ethernet) | Monochrome<br>18 fps | 6m to 100m long.<br><br>Straight connector                       | All                                               | This product is suitable for cable lengths exceeding 5m                                                                                                                                      |
| <b>CAM-220-220</b><br><b>1/2.86"</b><br> | 2.1 Mpx<br>1920x1080 px  | HDMI               | Color<br>60 fps      | 0.5m to 2m long.<br><br>Straight connector                       | None<br>(Only a cross is generated by the camera) | This product connects directly to a screen (without PC). Compared to CAM-120-272, the visual field is 22% smaller in length and 45% smaller in height. It includes a mouse and SD card slot. |

## Options

|                                                                                     |                                                                                            |                                                                                     |                                                                                                              |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
|    | <b>3-LED ring light incident illuminator</b><br>Internal Ø25<br>MA 114-047                 |    | <b>Adapter ring for incident illuminator Ø40 on zoom Z1</b><br>Without coaxial illuminator<br>85-177         |
|     | <b>54-LED ring light incident illuminator</b><br>Internal Ø25<br>MA 114-029                |    | <b>Adapter ring for incident illuminator Ø25 and Ø40 on zoom Z1</b><br>With coaxial illuminator<br>85-176-02 |
|     | <b>84-LED ring light incident illuminator</b><br>Internal Ø40<br>MA 114-033                |    | <b>Adapter ring for incident illuminator Ø40 on zoom Z2</b><br>Without coaxial illuminator<br>85-062         |
|    | <b>LED ring light incident illuminator</b><br>Internal Ø61<br>MA 114-049                   |    | <b>Adapter ring for incident illuminator Ø40 on zoom Z2</b><br>With coaxial illuminator<br>85-060            |
|    | <b>LED ring light incident illuminator</b><br>Internal Ø66<br>MA 114-024                   |    | <b>Adapter ring</b><br>MA 730-Z6 + incident illuminator Ø66<br>85-143                                        |
|     | <b>LED ring light incident illuminator</b><br>Internal Ø80<br>MA 114-050                   |    | <b>Adapter ring</b><br>MA 735-002-026 + incident ill. Ø80 - Ø61<br>85-467-01                                 |
|    | <b>LED ring light incident illuminator</b><br>Internal Ø116<br>MA 114-051                  |   | <b>Adapter ring</b><br>MA 735-Z4-002 + incident ill. Ø80 - Ø56<br>85-467-02                                  |
|   | <b>Fluorescent ring light</b><br>Attachment & internal Ø40<br>MA 114-FL                    |  | <b>Adapter ring</b><br>MA 735-Z4-001 + incident ill. Ø116 - Ø99<br>85-467-03                                 |
|  | <b>LED transmitted illuminator</b><br>Attachment & exterior Ø30<br>MA 212-095              |  | <b>Quick-displacement column</b><br>for Ø25 / 39.7 / 45.3<br>MA 333-S1 / S4 / S5                             |
|  | <b>LED trans. telecentric illuminator</b><br>Attachment & exterior Ø56<br>MA 212-092       |  | <b>Precision column</b><br>Range 150mm<br>for Ø25 / 39.7 / 45.3<br>MA 173-S1 / S4 / S5                       |
|  | <b>LED trans. telecentric illuminator</b><br>Attachment Ø45.3 & exterior Ø80<br>MA 212-106 |  | <b>Heavy-duty arm stand</b><br>for geared drive MA 153-5<br>Z range 350 / 450 / 550mm<br>CLC-048             |
|  | <b>Geared drive</b><br>Range 40mm<br>Internal Ø25<br>MA 153-5-009                          |  | <b>Precision column for MA 730-Z4-002</b><br>Range 150mm<br>MA 175-S7-011                                    |
|  | <b>Geared drive</b><br>Range 40mm<br>Internal Ø39.7<br>MA 153-5-027                        |  | <b>Protection and attachment enclosure</b><br>for MA 730-Z4<br>MA 700-038                                    |
|  | <b>Geared drive</b><br>Range 40mm<br>Internal Ø45.3<br>MA 153-5-028                        |  | <b>Rotation mechanism ±90°</b><br>for geared drive MA 153-5<br>67-071                                        |