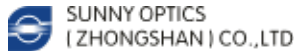


## LENSES

## Wide-Angle Optics

### ACHIEVE THE BEST WIDE-ANGLE IMAGE QUALITY IN ANY DEVICE

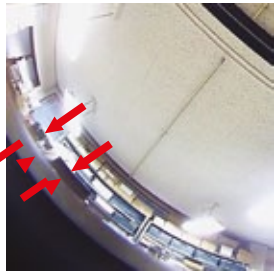
Highest quality off-the-shelf Wide, Super-Wide, and Ultra-Wide angle lenses with Augmented resolution, controlled MTF and distortion, and high relative illumination from the world's leading suppliers.



### SEE MORE, SMARTER

Capture the whole scene, with up to over 240 degrees FoV panomorph lenses, and get superior results to those from traditional wide-angle and fisheye lenses.

#### FISHEYE

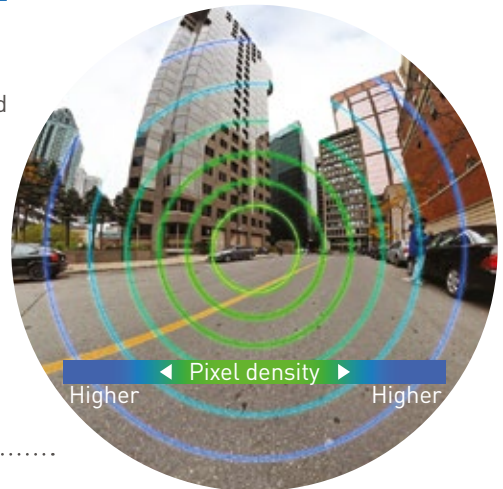


#### PANOMORPH



### AUGMENTED RESOLUTION, SUPERIOR IMAGE QUALITY

Patented panomorph technology uses advanced design techniques, combining numerous controlled optical parameters such as MTF, distortion, and Relative Illumination, to ensure the best image quality across the field of view, from the center to the edge.



### ADAPTIVE DEWARPING

Achieve pleasing, accurate photos and videos with real-time Adaptive Dewarping to correct distortion, straighten lines, preserve the field of view, and maintain object proportions.

### A LENS ADAPTED FOR EVERY DEVICE

Easily integrate these advanced lens designs into mobile devices, vehicles, drones, security cameras, robotics, IoT appliances, industrial machines, or any other vision application.



## OFF-THE-SHELF PANOMORPH LENSES

### HIGH RESOLUTION M12 MOUNT LENSES

#### CBC E1222KRY

|              |                   |
|--------------|-------------------|
| Manufacturer | CBC Group (Japan) |
| FOV          | 185°              |
| Focal Length | 1.2mm             |
| Mount        | M12               |
| TTL          | 29.9mm            |
| F/#          | 2.2               |



|                 |                 |
|-----------------|-----------------|
| RPL             | C9VVT           |
| Target Sensor   | 1/1.7"          |
| Image Footprint | 5.38mm x 5.38mm |
| Lens Ø          | 24.8mm          |
| Barrel Ø        | 29.2mm          |
| Ratio           | 1:1             |



#### EVETAR E3279A

|              |                               |
|--------------|-------------------------------|
| Manufacturer | Evetar/Leading Optics (China) |
| FOV          | 190°                          |
| Focal Length | 1.29mm                        |
| Mount        | M12                           |
| TTL          | 29.82mm                       |
| F/#          | 2.4                           |



|                 |               |
|-----------------|---------------|
| RPL             | B9VVT         |
| Target Sensor   | 1/1.7"        |
| Image Footprint | 5.4mm x 5.4mm |
| Lens Ø          | 26mm          |
| Barrel Ø        | 32mm          |
| Ratio           | 1:1           |



#### SUNNY OPTICS SYD2B25A-400



|              |                                  |
|--------------|----------------------------------|
| Manufacturer | Sunny Optics (Zhongshan) (China) |
| FOV          | 220°                             |
| Focal Length | 1.14mm                           |
| Mount        | M12                              |
| TTL          | 40mm                             |
| F/#          | 2.2                              |

|                 |               |
|-----------------|---------------|
| RPL             | C4VWV         |
| Target Sensor   | 1/2.3"        |
| Image Footprint | 4.5mm x 4.5mm |
| Lens Ø          | 24.9mm        |
| Barrel Ø        | 30mm          |
| Ratio           | 1:1           |



### MINIATURE CUSTOM MOUNT LENSES

#### KOLEN KL08618

|              |               |
|--------------|---------------|
| Manufacturer | Kolen (Korea) |
| FOV          | 187°          |
| Focal Length | 0.74mm        |
| Mount        | Custom        |
| TTL          | 5.0mm         |
| F/#          | 2.1           |



|                 |               |
|-----------------|---------------|
| RPL             | C2TTV         |
| Target Sensor   | 1/4"          |
| Image Footprint | 2.6mm x 2.6mm |
| Lens Ø          | 4.5mm         |
| Barrel Ø        | 8.5mm         |
| Ratio           | 1:1           |



#### SUNNY OPTICS D2005A-499



|              |                                  |
|--------------|----------------------------------|
| Manufacturer | Sunny Optics (Zhongshan) (China) |
| FOV          | 190°                             |
| Focal Length | 1.1mm                            |
| Mount        | Custom                           |
| TTL          | 7.5mm                            |
| F/#          | 2.1                              |

|                 |                 |
|-----------------|-----------------|
| RPL             | D0ZZV           |
| Target Sensor   | 1/2.8"          |
| Image Footprint | 3.84mm x 3.84mm |
| Lens Ø          | 7.26mm          |
| Barrel Ø        | 14.6mm          |
| Ratio           | 1:1             |



#### JMO 16002 (Sockeye)



|              |                                                            |
|--------------|------------------------------------------------------------|
| Manufacturer | Zhong Yang Technology Co., Ltd. (JMO) Corporation (Taiwan) |
| FOV          | 125°                                                       |
| Focal Length | 2.0mm                                                      |
| Mount        | Custom                                                     |
| TTL          | 5.6mm                                                      |
| F/#          | 1.9                                                        |

|                 |                  |
|-----------------|------------------|
| RPL             | D844V            |
| Target Sensor   | 1/3.1"           |
| Image Footprint | Diameter: 5.96mm |
| Lens Ø          | 3.7mm            |
| Barrel Ø        | 6.8mm            |
| Ratio           | 1:1              |



### ASSURED COMPATIBILITY

Each Immervision Enables certified lens is assigned a unique RPL (Registered Panoramic Lens) ID that describes all the panomorph lens characteristics.

To learn how to incorporate panomorph technology into your next product visit [www.immervision.com](http://www.immervision.com)

## DEEP SEEING [dēp-sēiNG]

Deep Seeing enables smart devices with augmented vision. By capturing high quality visual and contextual data in new ways, it unlocks the potential of artificial intelligence. Like superhuman eyes for your smart device.

### HIGH RESOLUTION M12 MOUNT LENSES

#### HQO PL-M01-V08

|              |               |
|--------------|---------------|
| Manufacturer | H.Q.O (Korea) |
| FOV          | 182°          |
| Focal Length | N/A           |
| Mount        | M12           |
| TTL          | 35.8mm        |
| F/#          | 2.0           |



|                 |                 |
|-----------------|-----------------|
| RPL             | A8TRT           |
| Target Sensor   | 1/2.8"          |
| Image Footprint | 5.11mm x 3.82mm |
| Lens Ø          | 29.5mm          |
| Barrel Ø        | 35.0mm          |
| Ratio           | 4:3             |



#### CBC L1028KRW

|              |                   |
|--------------|-------------------|
| Manufacturer | CBC Group (Japan) |
| FOV          | 180°              |
| Focal Length | 1.05mm            |
| Mount        | M12               |
| TTL          | 29.88mm           |
| F/#          | 2.8               |



|                 |               |
|-----------------|---------------|
| RPL             | B5SST         |
| Target Sensor   | 1/2.5"        |
| Image Footprint | 4.1mm x 4.1mm |
| Lens Ø          | 20.0mm        |
| Barrel Ø        | 27.0mm        |
| Ratio           | 1:1           |



#### CBC L1028KDRW (IP66)

|              |                   |
|--------------|-------------------|
| Manufacturer | CBC Group (Japan) |
| FOV          | 180°              |
| Focal Length | 1.05mm            |
| Mount        | M12               |
| TTL          | 29.88mm           |
| F/#          | 2.8               |



|                 |               |
|-----------------|---------------|
| RPL             | B5SST         |
| Target Sensor   | 1/2.5"        |
| Image Footprint | 4.1mm x 4.1mm |
| Lens Ø          | 20.0mm        |
| Barrel Ø        | 27.0mm        |
| Ratio           | 1:1           |



#### CBC L1028KRW-180

|              |                   |
|--------------|-------------------|
| Manufacturer | CBC Group (Japan) |
| FOV          | 180°              |
| Focal Length | 1.05mm            |
| Mount        | M12               |
| TTL          | 29.88mm           |
| F/#          | 2.8               |



|                 |        |
|-----------------|--------|
| RPL             | B6SST  |
| Target Sensor   | 1/2.5" |
| Image Footprint | N/A    |
| Lens Ø          | 18.2mm |
| Barrel Ø        | 27.0mm |
| Ratio           | 1:1    |



#### CBC H1328KP

|              |                   |
|--------------|-------------------|
| Manufacturer | CBC Group (Japan) |
| FOV          | 180°              |
| Focal Length | 1.3mm             |
| Mount        | M12               |
| TTL          | 33.3mm            |
| F/#          | 2.8               |



|                 |               |
|-----------------|---------------|
| RPL             | B4QOV         |
| Target Sensor   | 1/2"          |
| Image Footprint | 4.6mm x 4.6mm |
| Lens Ø          | 19.5mm        |
| Barrel Ø        | 23.5mm        |
| Ratio           | 1:1           |



#### CBC T0928KRW

|              |                   |
|--------------|-------------------|
| Manufacturer | CBC Group (Japan) |
| FOV          | 180°              |
| Focal Length | 0.95mm            |
| Mount        | M12               |
| TTL          | 30.8mm            |
| F/#          | 2.8               |



|                 |        |
|-----------------|--------|
| RPL             | B8QQT  |
| Target Sensor   | 1/3"   |
| Image Footprint | N/A    |
| Lens Ø          | 19.4mm |
| Barrel Ø        | 27.0mm |
| Ratio           | 1:1    |



### CS-MOUNT PANOMORPH LENSES

#### IMMERVISION IMV1-1/3 & IMV1-1/3NI

|              |                      |
|--------------|----------------------|
| Manufacturer | Immervision (Canada) |
| FOV          | 182°                 |
| Focal Length | 4:3                  |
| Mount        | CS                   |



|                 |                 |
|-----------------|-----------------|
| RPL             | A0IFV           |
| Target Sensor   | 1/3"            |
| Image Footprint | 4.62mm x 3.45mm |
| Lens Ø          | 2.8             |

