

## 8K Multi-Line Scan Camera



**2023 V1**

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## 8K Multi-Line Scan Camera

Our 8K multi-line scan camera series features 8K resolution and pixel size covering  $7\mu\text{m} * 7\mu\text{m}$  pixel and  $5\mu\text{m} * 5\mu\text{m}$  pixel. Our products have been applied to inspections of plate and web, railway and traffic, food and medicine, as well as other sorting and appearance inspections.

## Camera with Pixel Size $7\mu\text{m} * 7\mu\text{m}$

### Feature

#### STU8KCL-100KT

- Global shutter CMOS
- Binning/LUT/FFC
- High sensitivity and low noise
- Spatial correction/parallax correction
- Scanning direction configurable
- Real-time temperature monitoring
- Digital gain /offset control
- Camera link interface



STU8KCL-100KT

#### STU8KXP10-200KT

#### STU8KXP10-66KC

- Global shutter CMOS
- High sensitivity and low noise
- Spatial correction/parallax correction
- Scanning direction configurable
- Real-time temperature monitoring
- Rich exposure control modes (external trigger, free run)
- Binning/LUT/FFC/automatic white balance
- CoaXPress10 interface

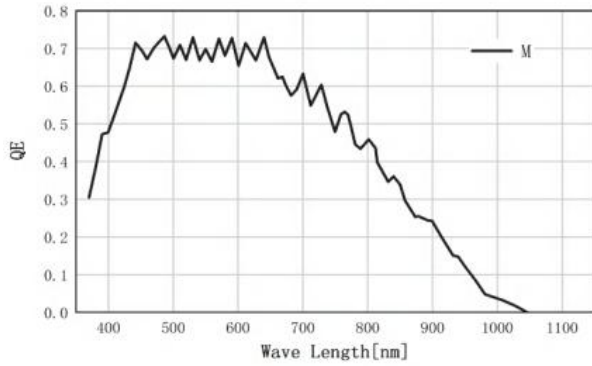


STU8KXP10-200KT  
STU8KXP10-66KC

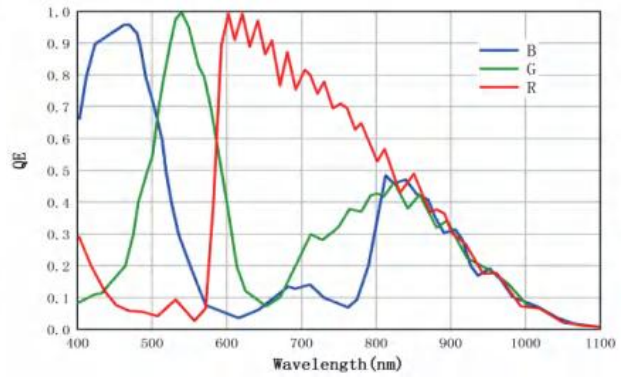
### Application

- Plate and web inspection
- Lithium battery/solar panel inspection
- Railway and traffic application
- Food and medicine inspection
- Other sorting and appearance inspections

## Spectral response

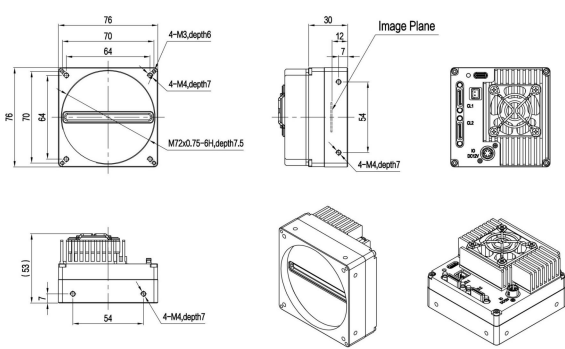


STU8KCL-100KT  
STU8KXP10-200KT

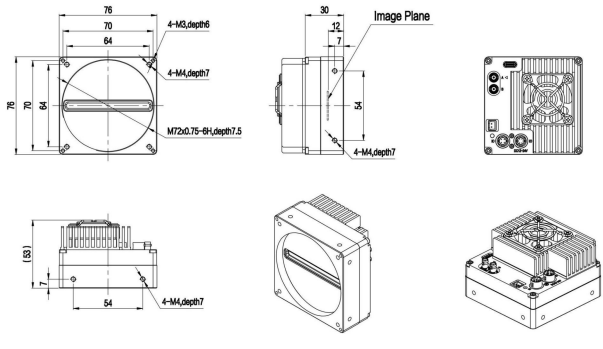


STU8KXP10-66KC

## Drawings



STU8KCL-100KT



STU8KXP10-66KC  
STU8KXP10-200KT

## Camera with Pixel Size 5μm \* 5μm

### Feature

#### STL8KCL-30KF

- ROI/FFC
- Global shutter CMOS
- High sensitivity and low noise
- Camera link interface
- Bi-directional scanning technology
- Spatial correction/parallax correction
- Analog gain/digital gain/offset control



STL8KCL-30KF

#### STL8KCL-50KX

- Global shutter CMOS
- ROI/FFC/LUT
- Support 2/3/4 lamps exposure
- Scanning direction configurable
- High sensitivity(4 lines/Lamp)
- Rich exposure control modes (external trigger, free-run)
- Simplify application system structure



STL8KCL-50KX

#### STL8KCL-100KT

- Global shutter CMOS
- High sensitivity and low noise
- Camera link interface
- Up to 8 lines integration
- Rich exposure control modes (external trigger, free-run)
- FFC/LUT/ROI



STL8KCL-100KT

#### STL8KXP-43KC

- Global shutter CMOS
- Trilinear color TDI sensor
- High sensitivity and low noise
- CoaXPress interface
- Gamma table
- Auto white balance/FFC/ROI
- Spatial correction/parallax correction



STL8KXP-43KC

### Application

#### STL8KCL-100KT

#### STL8KCL-50KX

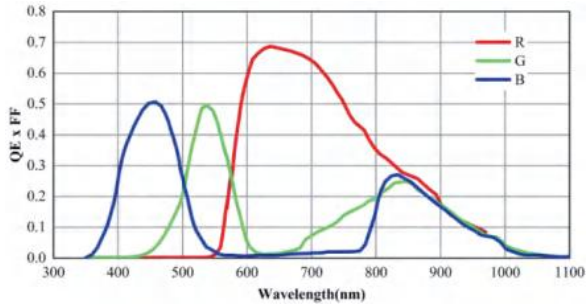
- Lithium battery/solar pane inspection
- Semiconductor inspection
- Print and package inspection
- Plate and web inspection (STL8KCL-100KT only)
- Flat panel display inspection (STL8KCL-50KX only)

#### STL8KCL-30KF

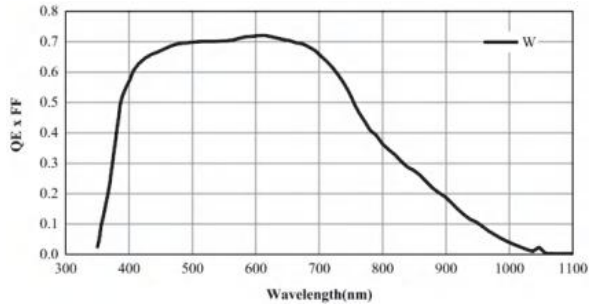
#### STL8KXP-43KC

- Printed circuit board inspection
- Semiconductor inspection
- Print and package inspection
- Food and medicine inspection
- Plate and web inspection

## Spectral response

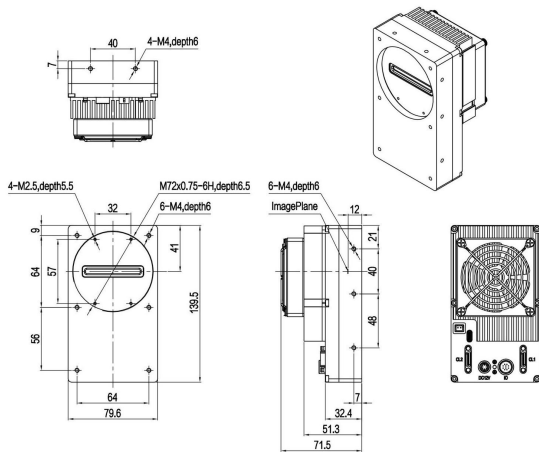


STL8KCL-30KF  
STL8KCXP-43KC

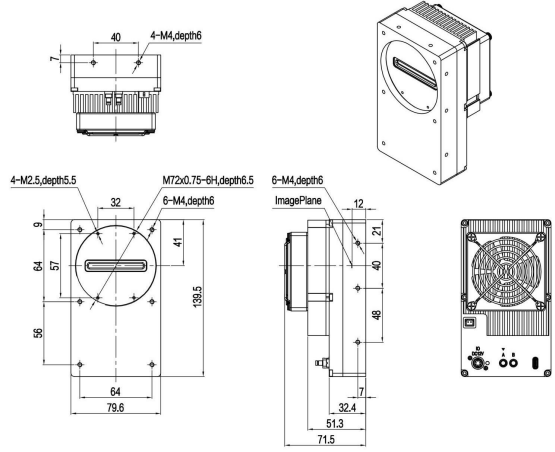


STL8KCL-100KT  
STL8KCL-50KX

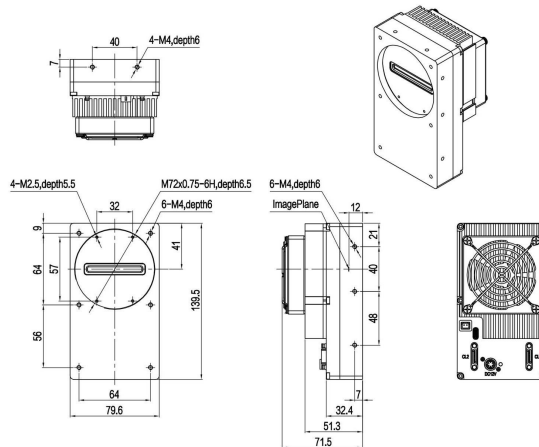
## Drawings



STL8KCL-50KX



STL8KCXP-43KC



STL8KCL-30KF  
STL8KCL-100KT

## Specifications

| Model                  | STU8KCL-100KT  | STU8KCP10-200KT  | STU8KCP10-66KC                                 | STL8KCL-100KT                        | STL8KCP-43KC                  | STL8KCL-50KX                                 | STL8KCL-30KF                  |
|------------------------|--|--|--|--------------------------------------|-------------------------------|--|-------------------------------|
| Sensor                 | Global Shutter CMOS  |  |  |                                      |                               |  |                               |
| Image Mode             | Mono   | Mono   | Color  | Mono                                 | Color                         | Mono   | Color                         |
| Optical Size           | 57.34 mm   | 57.34 mm   | 57.34 mm                                       | 41.60 mm                             | 41.60 mm                      | 41.60 mm                                     | 41.60 mm                      |
| Resolution             | 8192* 2  | 8192* 2  | 8192 * 3                                       | 8320 * 8                             | 8320 * 12                     | 8320 * 16                                    | 8320 * 16( 4 rows per RGBC)   |
| Pixel Size             | 7µm *7µm   | 7µm *7µm   | 7µm * 7µm                                      | 5µm * 5µm                            | 5µm * 5µm                     | 5µm * 5µm                                    | 5µm * 5µm                     |
| Max Line Rate          | 100kHz@10Tap<br>71.4kHz@8Tap<br>40.8kHz@4Tap<br>20.4kHz@2Tap | 197kHz@8bit<br>191kHz@10bit<br>159kHz@12bit                  | 66.7kHz@8bit<br>63.8kHz@10bit<br>53.1kHz@12bit | 100kHz@4Line TDI<br>60kHz@8Line TDI  | 43kHz@8bit<br>39kHz@10bit     | 50kHz@2Lamps<br>33kHz@3Lamps<br>25kHz@4Lamps | 34kHz / 43kHz ROI             |
| Bit Depth              | 8/10/12 bit  | 8/10/12 bit  | 8/10/12 bit                                    | 8/10/12 bit                          | 8/10 bit                      | 8/10 bit                                     | 8/10 bit                      |
| Dynamic Range          | ≥64.7 dB   | Single line mode:63.0dB ,<br>Double line average mode:65.3dB | ≥63.0 dB                                       | ≥54 dB                               | ≥52 dB                        | ≥52 dB                                       | ≥58 dB                        |
| Data Rate              | 850 MB/s   | 1953 MB/s  | 1957 MB/s                                      | 850 MB/s                             | 1216.8 MB/s                   | 840 MB/s                                     | 830 MB/s                      |
| Trigger Mode           | Free-run/external pulse/external PWM                         | Line Trigger/frame Trigger                                   |  | Free-run/external pulse/external PWM |                               |  |                               |
| Exposure Control       | Program/pulse width  |  |  |                                      |                               |  |                               |
| ExposureTime           | 3.013µs - 63997µs<br>(Step: 0.012µs)                         | 3.013µs-63997µs<br>(Step:0.012µs)                            | 3.013µs-63997µs<br>(Step:0.012µs)              | 3µs - 63997µs<br>( step: 1µs)        | 1µs - 797µs<br>( step: 0.1µs) | 1µs - 63997µs<br>( step: 1µs)                | 1µs - 63997µs<br>( step: 1µs) |
| Analog Gain            | /  | /  | /  | 1/2/4x                               | 1/2/4x                        | 1/2/4x                                       | 1/2/4x                        |
| Digital Gain           | 0.01-8.00x   | 0.01-8.00x   | 0.01-8.00x                                     | 1-8x                                 | 0.1-8.0x                      | 1-8x   | 1-8x                          |
| Data Interface         | Camera Link  | CoaxPress10  | CoaxPress10                                    | Camera link                          | CoaxPress                     | Camera Link                                  | Camera Link                   |
| Lens Interface         | M72 * 0.75   |  |  | M72 * 0.75 / F Mount                 |                               |  |                               |
| Power Interface        | Hirose HR10A-7R-6PB(Male)                                    |  |  |                                      |                               |  |                               |
| Power Supply           | DC12V±10% 1.5A   | DC12-24V(±10%)2A   | DC12-24V(±10%) 2A                              | DC12V±10% 2.5A                       | DC12V±10% 3A                  | DC12V±10% 3A                                 | DC12V±10% 3A                  |
| Power Dissipation      | 11.1 W   | 15.0 W   | 15.0 W   | 18.0 W                               | 21.0 W                        | 21.0 W                                       | 21.0 W                        |
| Dimensions (W*H*D)(mm) | 76x76x53   | 76x76x53   | 76x76x53                                       | 79.6x139.5x71.5                      | 79.6x139.5x71.5               | 79.6x139.5x71.5                              | 79.6x139.5x71.5               |
| Operating Temperature  | 0-65℃  | 0-65℃  | 0-65℃  | 0-55℃                                | 0-60℃                         | 0-55℃  | 0-55℃                         |
| Storage Temperature    | -20-75℃  |  |  |                                      |                               |  |                               |