

Mini-CameraLink Ultra-Compact Progressive Scan Black and White CCD Camera

KP-F200SCL KP-F30SCL



Ultra Compact 29 mm cube camera with mini SDR type CameraLink connector.

- The small SDR connector for digital output allows the camera size to be drastically reduced to a 29 mm cube. This reduction in camera size permits use in vision systems where space is at a premium.

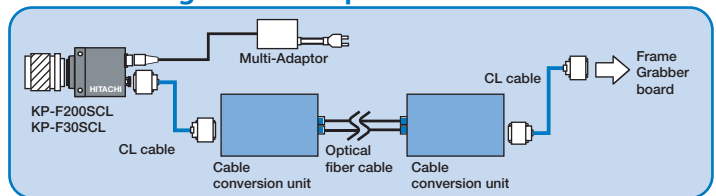
High resolution and high frame rates

- **KP-F200SCL** 2.01 million pixels for high resolution (UXGA) at 15 frames per second. Designed for High Resolution Inspection.
- **KP-F30SCL** 330,000 pixels for a high frame rate of 60 frames per second at standard resolution (VGA). Designed for high speed inspection.

Remote operation by serial control

- Selectable 10 or 8 bit per pixel output at the CameraLink connector.
- Variable Speed Shutter selectable in 1H steps.
- Frame on demand function
- Remote control

Connection using optical cable transmission for long distance operation.



Comparison with conventional CameraLink

The conventional CameraLink output system model

KP-F200SCL
KP-F30SCL
(Mini-CameraLink)



Small SDR (Mini-CameraLink) Connector [24.4 x 9.0 mm]

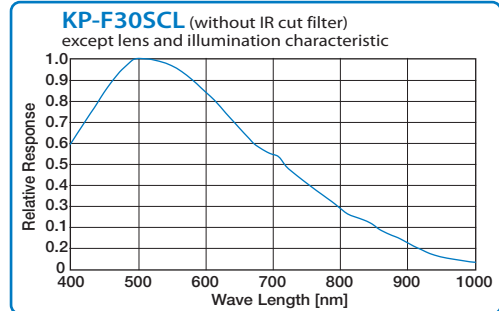
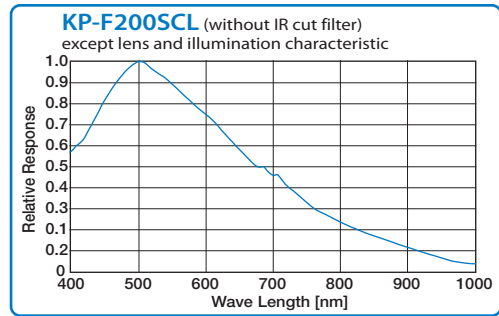


Conventional MDR-26 CameraLink Connector [39.7 x 12.9 mm]

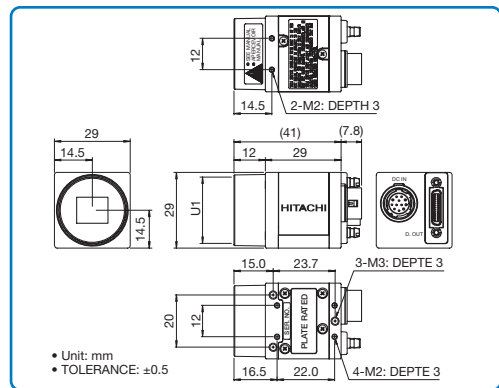
Main Specifications

| | KP-F200SCL | KP-F30SCL |
|-------------------------------|---|--|
| Imaging device | 1/1.8-inch interline CCD | 1/3-inch interline CCD |
| Total pixels | 1688 (H) x 1248 (V) | 692 (H) x 504 (V) |
| Effective pixels | 1628 (H) x 1236 (V) | 659 (H) x 494 (V) |
| Pixel pitch | 4.4 μm (H) x 4.4 μm (V) [square lattice] | 7.4 μm (H) x 7.4 μm (V) [square lattice] |
| Imaging area | 7.16 mm (H) x 5.44 mm (V) | 4.88 mm (H) x 3.66 mm (V) |
| Scanning system | Non-interlaced | |
| Aspect ratio | 4 : 3 | |
| Frame rate | 15frames/second (full pixel readout) | 60frames/second (full pixel readout) |
| Scanning frequency | Horizontal: 18.75 kHz Vertical: 15 Hz | Horizontal: 31.468 kHz Vertical: 60 Hz |
| Synchronization | Internal | |
| Lens mount | C mount | |
| Flange focal distance | 17.526 mm | |
| Video output | Digital output Camera Link Data : Base configuration 10bit x 1 CLK=36.000MHz | Digital output Camera Link Data : Base configuration 10bit x 1 CLK=24.5454MHz |
| Resolution | Horizontal 1200 lines Vertical 1200 lines | Horizontal 500 lines Vertical 490 lines |
| Electronic shutter speed | 1/15, 1/60, 1/100, 1/250, 1/1000, 1/2000, 2000, 1/10000, 1/50000 second factory setting is off (1/15 second) or 547 steps changeable by variable shutter (minimum 1/100000 seconds) | 1/60, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000, 1/50000 second factory setting is off (1/60 second) or 1280 steps changeable by variable shutter (minimum 1/100000 seconds) |
| Gamma compensation | $\gamma = 1$ | |
| Frame on demand | Remote setting (fixed shutter, and one trigger) Factory setting is all off | Remote setting (fixed shutter, one trigger, and reset control mode) Factory setting is all off. |
| Power supply voltage | DC12V ± 1V | |
| Current consumption | Approx. 210 mA | Approx. 160 mA |
| Ambient | operating: 0 to + 40°C (+32 to ; 104°F), less than 90 % RH storage: -10 to + 50°C (+14 to +122°F), less than 70 % RH *If operated continuously, be sure to use at less than +40°C (104°F) for long term stable performance. | |
| Vibration endurance | 98 m/s ² (10 to 60Hz, amplitude: 0.98mm constant / 60 to 200Hz, amplitude: variable) (10 to 150Hz, sweep:1 min, XYZ, 30 min) | |
| Shock endurance | 686 m/s ² (Drop test, once each top, bottom, left and right) | |
| External dimensions | 29(W) x 29(H) x 29(D) mm | |
| Mass | Approx. 53 g | |
| Remote control | Signal system | |
| Control items | 1. Control system: Start-stop synchronization system 2. Transmission rate: 9600 bps 3. Data length: 8 bits 4. Start bit: 1 5. Stop bits: 1 6. Parity: None 7. Bit transfer: LSB first | |
| Communications control system | Full control by remote control software, data send/receive by text data transfer to camera microprocessor (BSC system handshake) | |
| Control items | 1. Shutter speed 2. FD (frame on demand): On/off 3. Mode: Fixed shutter, One trigger, Reset control mode(KP-F30SCL only) 4. Digital output: 8bit/10bit 5. Gain: 463steps (1 step: Approx. 0.04dB) 6. HD reset: On/off (factory setting is on) 7. Partial scan | |

Spectral sensitivity characteristic



Dimensions



Optional accessories

| | | | |
|-------------------------|---|-------------|-----------|
| 12 pin plug | HR10A-10P-12S(01) | | |
| Multi-adaptor | JC-100 | | |
| Dummy glass (AR coated) | ARC1214 | | |
| Camera cable | | Molded type | |
| | 2 m | C-201-KSM | C-201-KSS |
| | 5 m | C-501-KSM | C-501-KSS |
| | 10 m | C-102-KSM | C-102-KSS |
| | *In the CE Marking region, use the shield type. | | |
| Tripod adaptor | TA-F200 | | |

CAUTION: To ensure safe operation, please read the instruction manual before using this product.

These Specifications are subject to change without notice.

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