

This information is brought to you by:



**ELECTRONIC GROUP, INC**  
480-635-8400 p \* aegis-g2@aegiselect.com  
http://www.aegis-elec.com

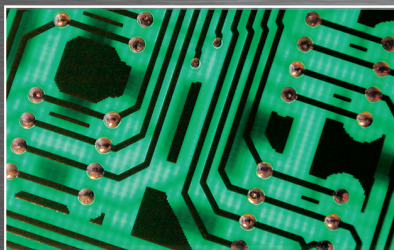
# IK-TF SERIES

IK-TF5P2 / IK-TF7P2

High Resolution 3CCD Progressive Scan

IK-TF5P2

IK-TF7P2



## Features

- New and improved design
- 3CCD Progressive Scan
- Pixel Resolution / Frame Rate
  - ▶ 659 x 494 @ 59.94 fps (IK-TF5P2)
  - ▶ 1024 x 768 @ 29.18 fps (IK-TF7P2)
- Compact one-piece configuration
- Digital Output – Camera Link®
- Electronic Shutter – Manual or Auto
- Electronic noise reduction
- Partial Scanning to increase frame rate
  - ▶ Up to 250 fps
- White Balance – Manual or Auto
- Dual power input – PoCL® or 12VDC
- C-Mount lens mount
- On-screen and RS-232 setup
- Economically Priced

## Applications

- Machine Vision
- Process control
- Inspection
- Factory Automation

## One-Piece, 3CCD, Progressive Scan Color Area Scan Camera

Our IK-TF5P2 and IK-TF7P2 provide accurate colors and high resolution of fast moving objects for a variety of process control, inspection, and machine vision applications. New and improved designs expand digital processing capabilities including electronic noise reduction, auto mode electronic shutter, partial scan frame rates up to 250fps, Power over Camera Link®, and reduced power requirements. We offer two enhanced models to meet your resolution and budget requirements.

**TOSHIBA**  
Leading Innovation >>>

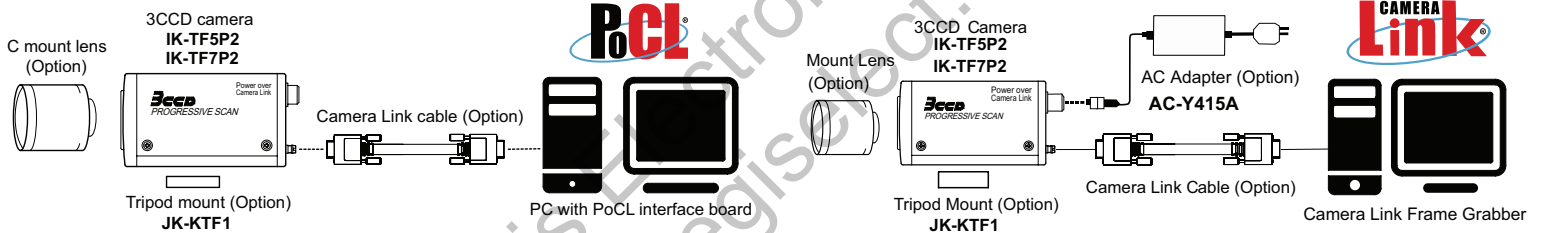
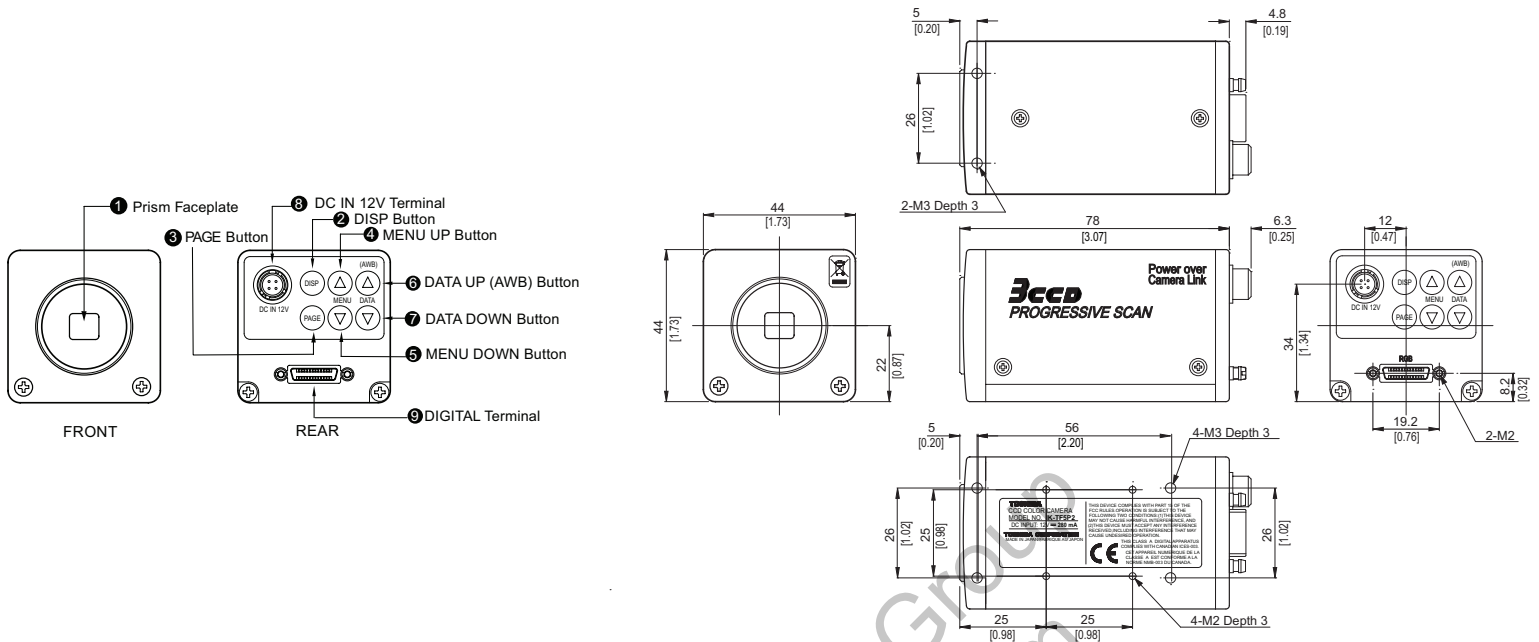
# IK-TF5P2 IK-TF7P2

## High Resolution 3CCD Color Cameras

| SPECIFICATIONS           | IK-TF5P2   | IK-TF7P2  |
|--------------------------|--|---|
| Scanning System          | Progressive  |   |
| Image Sensor             | 3 x 1/3" CCD, RGB prism  |   |
| Effective Pixels         | VGA (659 x 494)  | XGA (1024 x 768)  |
| Output Resolution        | H 659 x V 494  | H 1034 x V 779  |
| Pixel size               | 7.4µm x 7.4µm  | 4.65µm x 4.65µm   |
| Sensing Area H V         | 4.9 x 3.7 mm   | 4.8 x 3.6 mm  |
| Frame Rate               | 59.94fps   | 29.18 fps   |
| Partial Scanning         | 250fps (100 lines)<br>199fps (134 lines)<br>174fps (158 lines)<br>126fps (230 lines)<br>121fps (240 lines)<br>93fps (324 lines)<br>Off (59.94) (494 lines) | 90fps (175 lines)<br>80fps (211 lines)<br>70fps (259 lines)<br>60fps (322 lines)<br>50fps (412 lines)<br>42fps (512 lines)<br>40fps (542 lines)<br>Off (30) (768 lines) |
| Binning                  | Off, On, Ext On  | None  |
| Pixel Clock Frequency    | 24.5454 MHz  | 29.5 MHz  |
| Sync Signal Frequency    | H 31.469 kHz V 59.94 kHz   | H 23.229 kHz V 29.18 kHz  |
| Horizontal Resolution    | 480 TV Lines   | 760 TV Lines  |
| Output Signal            | 8 bit Digital RGB<br>Camera Link®  |   |
| Sync Signal Output       | FVAL/LVAL/DVAL<br>(positive polarity) Pixel Clock  |   |
| External Sync Input      | HD: CC3 VD: CC4<br>(LVDS input) Neg polarity   |   |
| External Trigger Input   | CC1 (LVDS input)<br>More than 2µs pulse width  |   |
| Partial Scanning Control | CC2 (LVDS input)   |   |
| Gamma Correction         | On/ Off  |   |
| S/N Ratio                | 62 dB Standard (G)   | 56 dB   |
| White Balance            | AWB, Manual  |   |
| Gain                     | Manual (0 to 18 dB), Off (0dB)   |   |
| Electronic Shutter       | Manual<br>(1/100 to 1/100,000 sec)<br>Synchro Scan<br>(1-512 Frames)   |   |
| Sensitivity              | F6.8 Standard<br>(2,000 Lux, 3,000K)   |   |
| Noise Reduction          | On / Off   |   |
| Minimum Illumination     | 14 Lx (f2.2 +18dB, 3,000K)   |   |
| Lens Mount               | C-Mount flange back<br>17.526mm in air   |   |
| Ambient Temperature      | 0° C – 40° C (32° F - 104° F)  |   |
| Ambient Humidity         | Less than 90%  |   |
| Input Power              | 12 VDC ±10%<br>PoCL® or DC Connector   |   |
| Interface                | Serial data interface<br>TC(RXD) TFG(TXD)  |   |
| Power Consumption        | Approx 3.2W Normal<br>Approx 3.4W Partial Scan   | Approx 3.0W Normal<br>Approx 3.1W Partial Scan  |
| Dimensions W H D         | 44 x 44 x 78 mm<br>1.73 x 1.73 x 3.07"   |   |
| Weight                   | 158g (0.35 lbs)  |   |
| Class                    | FCC Class A, CE  |   |

# IK-TF5P2 IK-TF7P2

## High Resolution 3CCD Color Cameras



| DC IN 12V |      | Digital |         | Function |         | I/O                                  |
|-----------|------|---------|---------|----------|---------|--------------------------------------|
| 1         | +12V | 1       | +12V    | 14       | GND     | -                                    |
| 2         | +12V | 2       | XO-     | 15       | XO+     | O                                    |
| 3         | GND  | 3       | X1-     | 16       | X1+     | O                                    |
| 4         | GND  | 4       | X2-     | 17       | X2+     | O                                    |
|           |      | 5       | Xclk-   | 18       | Xclk+   | O                                    |
|           |      | 6       | X3-     | 19       | X3+     | O                                    |
|           |      | 7       | SerTC+  | 20       | SerTC-  | Serial communication control (RXD)   |
|           |      | 8       | SerTFG- | 21       | SerTFG+ | Serial communication control (TXD) O |
|           |      | 9       | CC1-    | 22       | CC1+    | Trigger pulse input                  |
|           |      | 10      | CC2+    | 23       | CC2-    | Partial scanning control             |
|           |      | 11      | CC3-    | 24       | CC3+    | External HD input                    |
|           |      | 12      | CC4+    | 25       | CC4-    | External VD input                    |
|           |      | 13      | GND     | 26       | +12V    | -                                    |

Connector Used: HR10A-7P-4PB (HIROSE Electronics Co. Ltd) or equivalent

Connector Used: 12226-51000-00 (3M) or equivalent