

16,384 Pixels, 40kHz Scan rate, Camera Link compliant

DIGITAL LINESCAN CAMERA

TL-16KACL





(Lens optional)

Overview

- The TL-16KACL inherits the specifications of the conventional model TL-16000CL, and has additional secifications the binning mode and the switching function of clock speed.
- Approximately twice the sensitivity is achieved by the vertical binning function.
- Since the configuration of the Camera Link (Base /Ful | Conf igurat ion) and clock speed(85/80/40MHz) are selectable, this camera can be set to a suitable video output format for the system.

 Since this model inherits the external dimentions and other specifications of the conventional model, it is easy to replace.
- Industrial digital Line scan camera equipped with a CMOS image sensor which has linearly arranged 16,000 photodiodes.
- High-resolution and High-speed CMOS Line Scan Camera featuring 16,384 image pixels, 40/35 kHz scan rate and 640 MHz data rate.

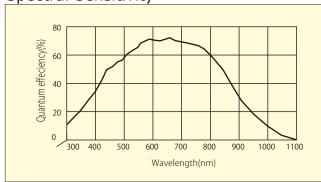
Features

- Since various models of capture boards from board manufacturers can be connected, it is easy to get high-precision images from the camera.
- \blacksquare 3.5 μ m square pixel size provides high-definition images.
- Equipped with Global shutter function and FFC function.
- Anti-blooming function is incorporated.
- Clear image data is obtained by the small difference of the characteristics of the odd and even-numbered pixels.
- Dark current correction circuit helps to obtain stable images even when the ambient temperature changes.
- DC 12V single power operation.
- Reduction in size and weight is achieved by original design.

Applications

- LCD panel inspection equipment applications
- Image processing device for image inspection
- Measuring equipment such as appearance inspection device or dimensional measurement device
- Surface inspection device for sheet-like object
- High-resolution pattern inspection instrument
- Data entry device for image processing unit employ ing computer

Spectral Sensitivity

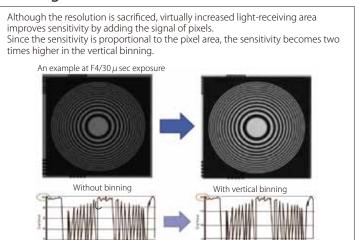


Specifications

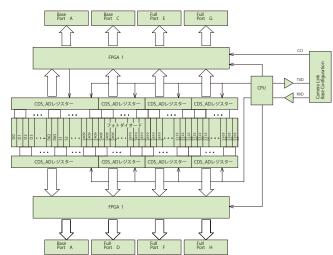
Image sensor	Global shutter CMOS	
Number of pixels	16384	
Pixel size	3.5μm × 3.5μm	
Photo array length	57.344 mm	
Scan rate	Full 40kHz (85MHz×8TAP)	
(Data rate)	Full 35kHz (80MHz×8TAP)	
	Full 17.5kHz (40MHz×8TAP)	
Line transfer pulse input	25µsec (Min)	
Video output (Digital output)	8Bit Full Configuration	
Sensitivity	gain1=1.2, gain2=4.8 DN/nJ/cm2	
Saturation exposure	23 ke-(typical value)	
Dynamic range	60dB (on the element)	
Output ununiformity	10% standard at 50% of saturation output	
Power supply	+12V±0.5V (0.6A or less)	
Operational ambient temperature	0°C to +40	
Operational humidity range	85 % Max	
Storage teperature range	-10°C to +65°C	
Weight	720g or less	
External dimension	100 (W) × 100 (H) × 34 (D)mm	
Lens mount	M72, P=0.75mm	
	FFC compensation	
Additional function	Vertical binning , averaging	
	Switchable clock speed	



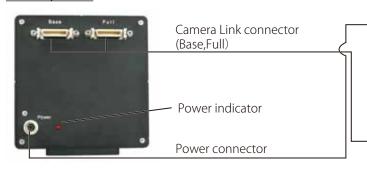
Binning



Block Diagram of Image sensor



Back panel



The TL-16KACL does not have horizontal binning function.

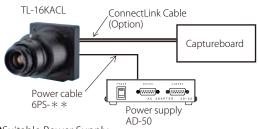
Connectors

Power connector (HR 10A-7R-6S)

Pin No.	Signal name	Pin No.	Signal name
1	+12V	4	GND
2	+12V	5	GND
3	+12V	6	GND

◆ Camera Link connector (3M/MDR-26 FEMALE)
 The camera is connected to Frame grabber board with two Camera Link cables. (Base connector, Full connector)

Configuration Diagram



- Suitable Power Supply
 AD50 Power Supply is suitable for this Line Scanner.
- Suitable Cable

Power cable 6PS -- * *

** represents the cable length (m).

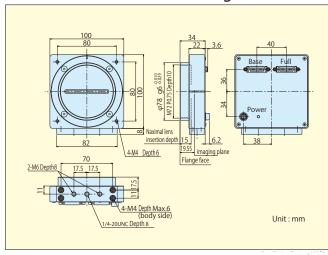
Camera Link cable (Separately sold)

14B26-SZLB-200-OLC (2M)

14B26-SZLB-300-OLC (3M)

14B26-SZLB-500-OLC (5M)

Dimensional Outline Drawing



- It may be changed without a notice about all items (product name, a model, specifications, external form dimensions, materials, the price) explained by this catalogue.
- •We do not take responsibility about any accident damage by an error in the use of deficiency in the construction and deficiency of the maintenance check and this product, the natural disaster (surge, including lightning-induced).

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