T8040
CCD 43 MP
Camera Link®

Imperx: *T8040*

The Tiger T8040 CCD camera is an advanced, compact, and durable interline CCD camera providing 8080 x 5400 resolution and frame rates up to 2.7 fps. This 43MP camera uses the ON Semiconductor KAI-43140 image sensor with 4.5-micron pixels in a 36mm x 24mm image area for use with Standard 35mm optics. It includes programmable image resolution, frame rates, gain, offset, external triggering, strobe output, temperature monitoring, and user programmable and loadable LUT. The camera's low-noise, excellent uniformity, and low dark current produce image quality prized in Flat Panel inspection, metrology, and surveillance applications. Optional active forced air cooling is available.

Specifications

Feature	Description
Interfaces available	Camera Link Medium, CoaXPress
Resolution	8040 x 5360, 8080 x 5400 max
Sensor	ON Semiconductor KAI-43140
Sensor Format	CCD, 43.3 mm
Pixel Size	4.5 µm
Frame Rate	2.7 fps
Dynamic Range	> 60 dB
Bit Depth	8, 10, 12 bit
Noise	Read Noise: > 13 electrons rms
Analog Gain Control	Manual, Auto: 0-30dB
Black Level Control	Manual, 1024 steps, Auto
Digital Gain	1x -4x, .001 steps
Digital Offset	-511 to +512
White Balance	Manual, auto, off
Shutter Speed	1 µs step, 1/100,000 to 1/5 sec (nom)
Exposure Control	Manual, Auto, External
Long Integration	Up to 16 seconds
Regions of Interest (ROI)	2 ROIs, any line to any line, any pixel to any pixel
Binning H/V	1x, 2x, 4x (Independent for H & V)
Trigger Inputs	External (TTL/Opto via IN1/IN2), pulse generator, software, computer
Trigger Options	Edge, pulse width, internal exposure, up to 16 seconds trigger delay, debounce
Trigger Modes	Standard, double, fast
External Inputs/Ouputs	2 IN (OPTO, LVTTL) / 2 OUT (OPTO, TTL)
Strobe Output	2 strobes, programmable position and duration
Pulse Generator	Yes, programmable

Feature	Description
Data Corrections	Bad pixel correction, four 12-bit LUTs, 2 FFC, black level, vertical smear
Minimum Illuminations	1 Lux, F/ 1.4
Lens Mount	F-Mount (Default), M42, EOS Canon
Supply Input Range	12VDC (6V - 30V), 1.5 A inrush
Power Consumption (Ruggedized)	12V, 0.7A - 0.75A
Power Consumption (Industrial)	12V, 0.62A - 0.67A
Size - Width/Height/Length	69.5mm x 69.5mm x 51.5mm
Weight	TBD
Vibration, Shock (Ruggedized)	100G (20-200Hz) XYZ/ 1000G
Vibration, Shock (Industrial)	20G (20-200Hz) XYZ / 200G
Environmental (Ruggedized)	-40ºC to +85ºC Operating, -50ºC to +90ºC Storage
Environmental (Industrial)	-10ºC to +60ºC Operating, -50ºC to +90ºC Storage
Humidity	10% to 90% non-condensing
MTBF	TBD
Regulatory	FCC Part 15 Class A, CE, RoHS

IMPERX
Industrial Cameras & Imaging Systems

## Imperx: *T8040 Applications*

The T8040 incorporates a number of unique features tailored to reduce system complexity, maximize interface bandwidth, and expand the usable operational range.

Aerospace ● Satellites ● Surveillance ● Military and Non-Military Ground Vehicles ● Ball Grid Array ● Printed Circuit Board Inspection ● Telepresence ● Machine Vision ● Reconnaissance ● Intelligent Traffic Systems ● Aerial Imaging ● Open Road Tolling Systems ● Situational Awareness ● Scientific ● Particle Velocimetry

Absolute Quantum Efficiency

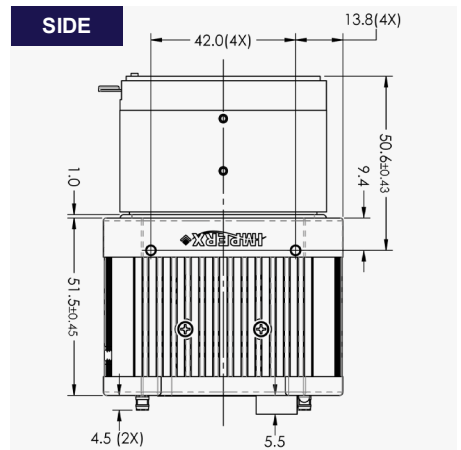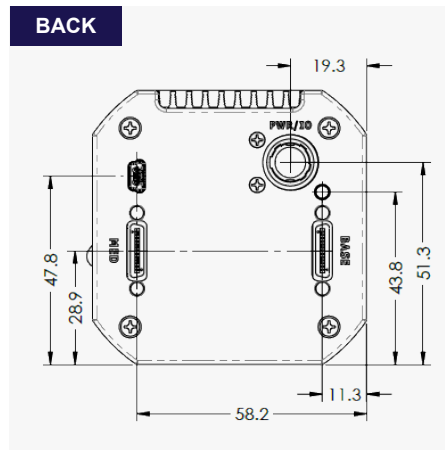Monochrome with Microlens KAI-43140
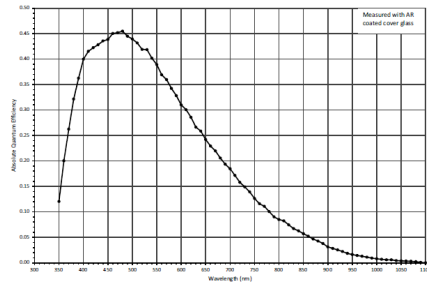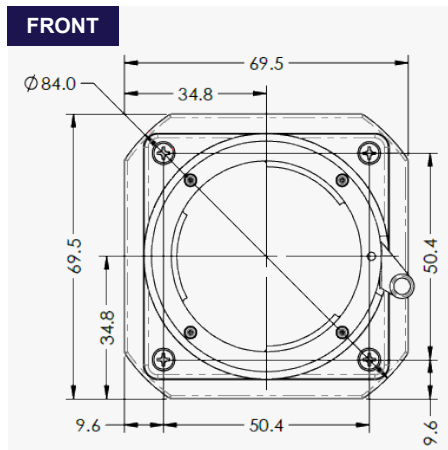

Color (Bayer RGB) with Microlens KAI-43140
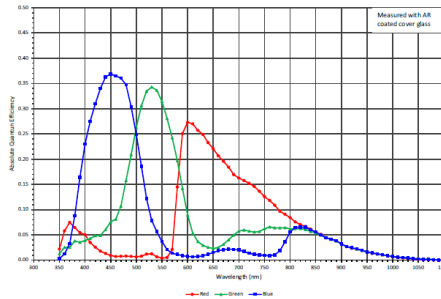
Color (TRUESENSE Sparse CFA) with Microlens KAI-43140
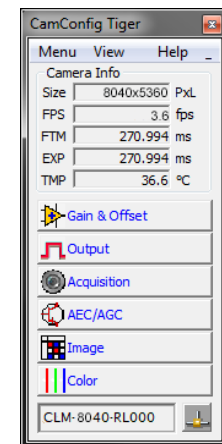

Dimensions

FRONT

BACK

SIDE
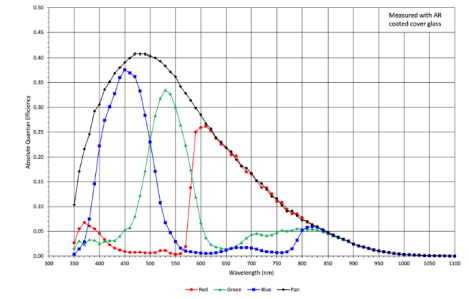
Ordering Information

Interface Available
Camera Link® Medium (CLM)
CoaXPress® (CXP)

Sensor Types available
Monochrome
Bayer Color
Sparse CFA

Lens Mounts	
F-Mount (default)	EF Canon
M42	

Ordering	
Ruggedized	Industrial

Accessories (Sold separately)
PS12v04A-Power Supply w/ 1 input and 1 output

Camera Link GUI

Hirose Connectors

Power and I/O Interface

1. 12V DC Return
2. +12V DC
3. Reserved
4. Reserved
5. OUT2 OPTO -
6. OUT1 TTL Gnd
7. OUT1 TTL Signal
8. IN1 OPTO +
9. IN2 TTL Signal
10. IN1 OPTO -
11. IN2 TTL Gnd
12. OUT2 OPTO +

Connector: Hirose HR 10A-10R-12PB(71)
* Not Connected for CXP

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