

## Line Scan Sensor Heads

with integrated coaxial illumination



### FEATURES

Modular system consisting of line scan camera, lens and LED illumination unit according to customer specifications

- Monochrome camera, from 2048 to 8160 pixels
- Color camera, up to 3x4080 pixels
- Field of view up to 90 mm
- LED illumination: Red or white
- Passive cooling

## DESCRIPTION

The Sensor Heads from Schäfter + Kirchhoff consist of a line scan camera, a lens and coaxial LED line illumination. They are often used for machine vision applications. The system is configured according to customer's requirements in order to best realize the application. Both monochrome as well as color line scan cameras are available. Based on this, the appropriate LED line illumination is selected (red, 640 nm, for monochrome; white, 5000 K, for color). The included objective lens is chosen to match the specified field of view. Due to the very good coaxial coupling of the LED line illumination into the beam path of the camera, both bright-field and dark-field imaging is possible.

The LED line illumination is supplied by a 24 V DC voltage and can be controlled via LAN or serial interface. The control via an analog input is also possible. Due to the LED Chip-On-Board technology and the low-noise power electronics a very homogeneous and stable illumination is achieved. The passive cooling of the LEDs is also suitable for harsh environments.

Please contact us for an individual offer.

## TECHNICAL DATA

### Line Scan Sensor Heads

#### Camera

<b>Pixels</b>	From 2048 to 8160 / 3x4080
<b>Sensor type</b>	Monochrome / color (triple line)
<b>Features</b>	Shading correction / white balancing, LUT
<b>LED Illumination</b>	
<b>Supply voltage</b>	24 V DC
<b>Max. power consumption</b>	48 W
	72 W
<b>max. LED power, electric</b>	38 W
	57 W
<b>Line Length</b>	96 mm
	146 mm
<b>Line width</b>	0.8 mm
<b>Free working distance</b>	49 mm
<b>Max. temperature</b>	60 °C
<b>Intensity stability</b>	< 0.5 %
<b>Intensity control</b>	LAN / RS232 / Analog input / Trimmer
Customized specification on request.	

## ORDER OPTIONS

Order Code	Field of View	Resolution	Depth of Focus	Free Working Distance	Line Color	Supply Voltage	Power Consumption / LED Power	Heat Sink Orientation
	[mm]	[µm / pixel]	[mm]	[mm]		[V DC]	[W]	
SK2048GSD+LED-80-49	80	40.0	0.5	49	Red	24	48 / 38	Vertical / Horizontal
SK8160GKO+LED-41-49	41	5.0	0.12	49	Red	24	48 / 38	Vertical / Horizontal
SK8160GKO+LED-60-49	60	7.3	0.19	49	Red	24	48 / 38	Vertical / Horizontal
SK8160G+LED-R-90-01	90	11.0	0.5	49	Red	24	72 / 57	Vertical / Horizontal
SK8160G+LED-W-90-01	90	11.0	0.5	49	White	24	72 / 57	Vertical / Horizontal
SK12240G+LED-W-90-01	90	22.0	0.5	49	White	24	72 / 57	Vertical / Horizontal

## TECHNOTES

- [Line Scan Camera Basics \(10\)](#)  
[What are Line Scan Cameras? How do you create an image? etc.](#)
- [What are Line Scan Cameras?](#)  
[Introduction and advantages of Line Scan Cameras](#)
- [Creating an image using Line Scan Cameras](#)  
[How to create an image, definition of line frequency, and how to improve an image](#)
- [Optical resolution](#)  
[Definition and comparison to conventional area cameras](#)
- [Synchronization](#)  
[Reasons for synchronization and definition of different synchronization modes](#)
- [Shading correction and white balance](#)  
[Why do you need shading correction and how to use white balance](#)
- [Sensor alignment](#)  
[How to properly align the line scan camera sensor](#)
- [Blooming and Anti-Blooming Correction](#)  
[What is blooming and how to correct it](#)
- [Spectral sensitivity](#)  
[Spectral sensitivity of different line sensors](#)
- [True color imaging technologies](#)  
[Color Calibration of RGB cameras](#)
- [Bright and dark-field illumination](#)  
[Details about the different illumination techniques.](#)
- [Choosing the appropriate camera interface](#)  
[How to chose between GigE, GigEVision, USB3.0 and CameraLink.](#)
- [Setting up a Line Scan Camera](#)  
[Evaluation of correct focus](#)
- [Machine Vision Applications of Line Scan Cameras](#)  
[Applications of Line Scan Cameras](#)

## RELATED PRODUCTS

<b>GIGE LINE SCAN CAMERAS</b>	GigE interface
<b>GIGE VISION LINE SCAN CAMERAS</b>	GigE Vision interface
<b>USB3.0 LINE SCAN CAMERAS</b>	USB3.0 interface

This is a printout of the page <https://sukhamburg.com/products/linescancamera/sensorheads.html> from 5/2/2024

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