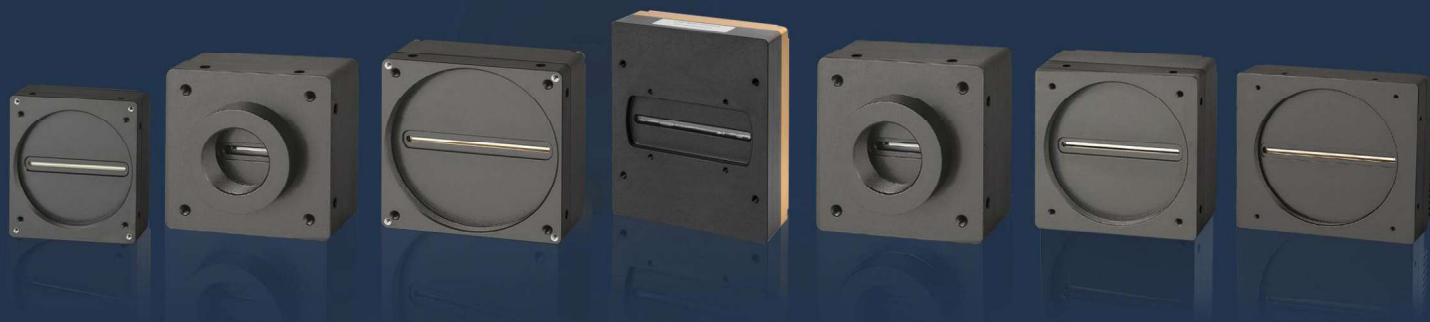


PA Series

Line Scan Camera

PA2KGV-80KM / PA4KGV-80KM / PA7K2CL-8KC / PA8KGV-45KM
PA8KCL-80KM / PA15KCL-18KC / PA15KCL-45KT / PA16KCL-40KM



PA2KGV-80KM

FEATURES

主要特征

- ◎ 55kHz (80kHz with SAccel™)
- ◎ High sensitivity and low noise
- ◎ FFC and contrast expansion
- ◎ 8 bit output
- ◎ GigE Vision interface
- ◎ GUI configuration tool
- ◎ Internal trigger, external trigger, optional
- ◎ Power supply: DC12V-24V ($\pm 10\%$)

APPLICATIONS

应用领域

- ◎ Automated optical inspection
- ◎ High performance sorting systems
- ◎ Materials grading and inspection
- ◎ Web inspection
- ◎ General purpose machine vision

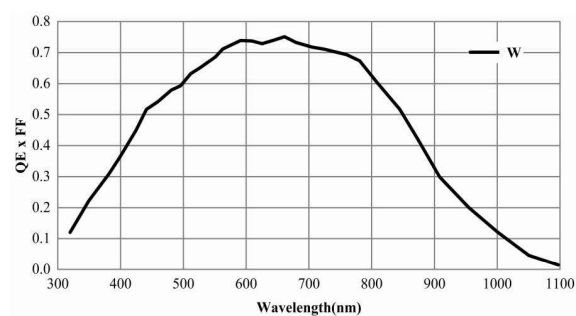
SPECIFICATIONS

产品规格

Model	PA2KGV-80KM
Sensor Type	Global Shutter CMOS
Image Mode	Mono
Optical Size	14.33 mm
Resolution	2048 * 1
Pixel Size	7 μm * 7 μm
Max Line Rate	55kHz (80kHz with SAccel™)
Bit Depth	8 bit
Dynamic Range	≥ 55 dB
Data Rate	115 MB/s
Trigger Mode	External trigger/Internal free run
Exposure Control	Pulse width or Program
Analog Gain	1x-8x
Digital Gain	0.001x-15.999x
Lens Interface	C Mount
Data Interface	GigE Vision
Power Interface	HD15 female connector
Power Supply	DC12V-24V ($\pm 10\%$) 0.3A
Power Consumption	4W
Dimensions	W63.0mm x H63.0mm x D56.8mm
Operating Temperature	0-65°C
Storage Temperature	-20-75°C

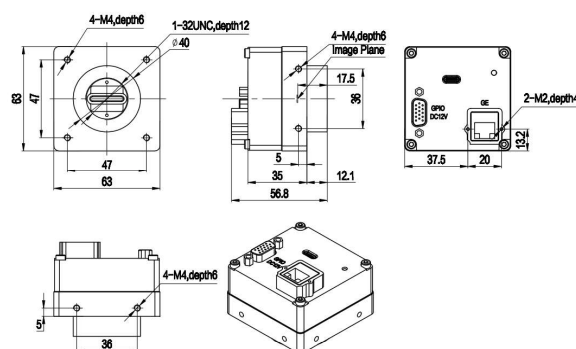
SPECTRAL RESPONSE

光谱响应图



MECHANICAL DIMENSION

机械尺寸图



PA4KGV-80KM

FEATURES

主要特征

- ◎ 27kHz (80kHz with SAccel™)
- ◎ High sensitivity and Low noise
- ◎ FFC and Contrast expansion
- ◎ 8 bit output
- ◎ GigE Vision interface
- ◎ Flexible and simple GUI configuration tool
- ◎ Internal trigger, external trigger, optional
- ◎ Power supply: DC12V-24V(±10%)

APPLICATIONS

应用领域

- ◎ Automated optical inspection
- ◎ High performance sorting systems
- ◎ Materials grading and inspection
- ◎ Web inspection
- ◎ General purpose machine vision



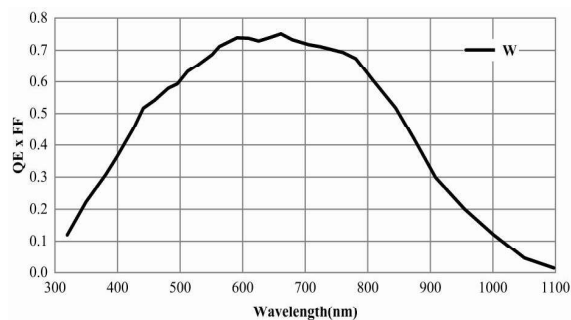
SPECIFICATIONS

产品规格

Model	PA4KGV-80KM
Sensor Type	Global Shutter CMOS
Image Mode	Mono
Optical Size	14.33 mm
Resolution	4096 * 1
Pixel Size	3.5 μm * 3.5 μm
Max Line Rate	27kHz (80kHz with SAccel™)
Bit Depth	8 bit
Dynamic Range	≥53 dB
Data Rate	115 MB/s
Trigger Mode	External trigger/Internal free run
Exposure Control	Pulse width or Program
Analog Gain	1x-8x
Digital Gain	0.001x-15.999x
Lens Interface	C Mount
Data Interface	GigE Vision
Power Interface	HD15 female connector
Power Supply	DC12V-24V(±10%) 0.3A
Power Consumption	4W
Dimensions	W63.0mm x H63.0mm x D56.8mm
Operating Temperature	0-65°C
Storage Temperature	-20-75°C

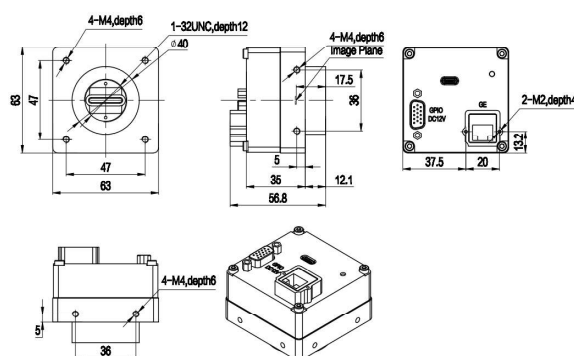
SPECTRAL RESPONSE

光谱响应图



MECHANICAL DIMENSION

机械尺寸图



PA7K2CL-8KC

FEATURES

主要特征

- ◎ Up to 7,500 * 3 Pixels
- ◎ Up to 8.6 kHz Line Rate
- ◎ Bi-directional Scanning
- ◎ FFC
- ◎ Automatic White Balance
- ◎ Camera Link interface
- ◎ GUI configuration tool
- ◎ Internal trigger, External trigger optional
- ◎ Power supply: DC12V \pm 10%

APPLICATIONS

应用领域

- ◎ Document scanning
- ◎ Printing inspection
- ◎ PCB, LCD inspection
- ◎ High quality raw material surface inspection
- ◎ High quality food and drug inspection



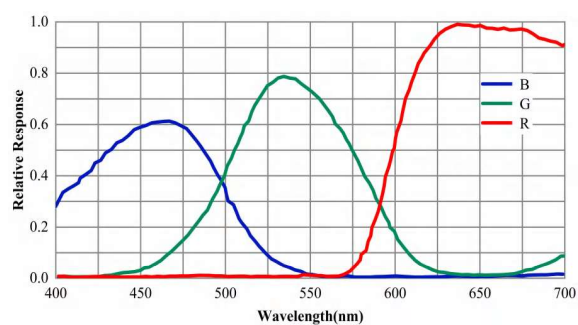
SPECIFICATIONS

产品规格

Model	PA7K2CL-8KC
Sensor Type	Global Shutter CCD
Image Mode	Color
Optical Size	69.93 mm
Resolution	7500 * 3
Pixel Size	9.325 μ m * 9.325 μ m
Max Line Rate	8.6 kHz
Bit Depth	8/10 bit
Dynamic Range	\geq 64 dB
Data Rate	210 MB/s
Trigger Mode	External trigger/Internal free run
Exposure Control	Pulse width or Program
Analog Gain	1x-4x
Digital Gain	0.01x-8.00x
Data Interface	Camera Link
Power Interface	Hirose HR10A(6-pin)
Power Supply	DC12V \pm 10% 2A
Power Consumption	12W
Dimensions	W103.8mm x H118.2mm x D42.4mm
Operating Temperature	0-65 $^{\circ}$ C
Storage Temperature	-20-75 $^{\circ}$ C

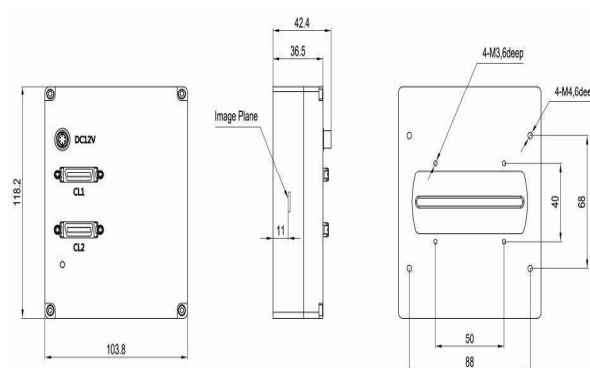
SPECTRAL RESPONSE

光谱响应图



MECHANICAL DIMENSION

机械尺寸图



PA8KGV-45KM

FEATURES

主要特征

- ◎ 13kHz (45kHz with SAccel™)
- ◎ High sensitivity and low noise
- ◎ FFC and Contrast expansion
- ◎ 8 bit output
- ◎ GigE Vision interface
- ◎ GUI configuration tool
- ◎ Internal trigger, External trigger, optional
- ◎ Power supply: DC12V-24V(±10%)

APPLICATIONS

应用领域

- ◎ Automated optical inspection
- ◎ High performance sorting systems
- ◎ Materials grading and inspection
- ◎ Web inspection
- ◎ General purpose machine vision

SPECIFICATIONS

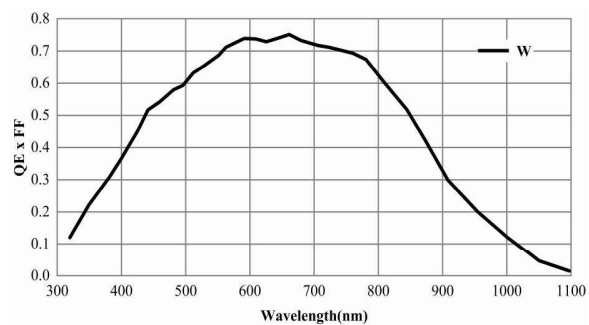
产品规格

Model	PA8KGV-45KM
Sensor Type	Global Shutter CMOS
Image Mode	Mono
Optical Size	57.34 mm
Resolution	8192 * 1
Pixel Size	7 μm * 7 μm
Max Line Rate	13kHz (45kHz with SAccel™)
Bit Depth	8 bit
Dynamic Range	≥54 dB
Data Rate	115 MB/s
Trigger Mode	External trigger/Internal free run
Exposure Control	Pulse width or Program
Analog Gain	1x-8x
Digital Gain	0.001x-15.999x
Lens Interface	M72 * 0.75
Data Interface	GigE Vision
Power Interface	HD15 female connector
Power Supply	DC12V-24V(±10%) 0.4A
Power Consumption	5W
Dimensions	W76.0mm x H76.0mm x D40.1mm
Operating Temperature	0-65°C
Storage Temperature	-20-75°C



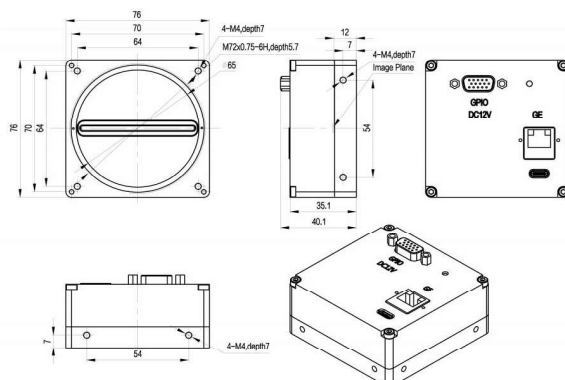
SPECTRAL RESPONSE

光谱响应图



MECHANICAL DIMENSION

机械尺寸图



PA8KCL-80KM

FEATURES

主要特征

- ◎ Up to 80 kHz Line Rate
- ◎ High sensitivity and Low noise
- ◎ FFC and Contrast expansion
- ◎ 8/10 bit output
- ◎ Camera Link interface
- ◎ Serial port control command, GUI configuration tool, optional
- ◎ Internal trigger, External trigger, optional
- ◎ Power supply: DC12V-24V(±10%)

APPLICATIONS

应用领域

- ◎ Automated optical inspection
- ◎ Security system
- ◎ High performance sorting systems
- ◎ Materials grading and inspection
- ◎ Web inspection
- ◎ General purpose machine vision



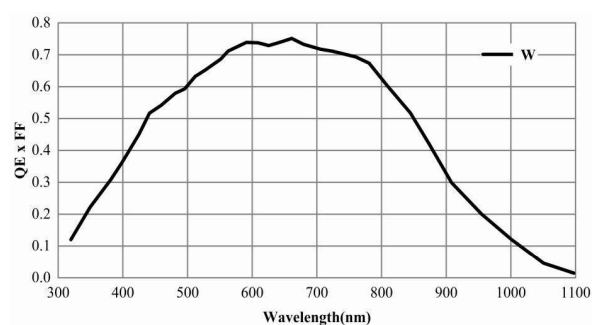
SPECIFICATIONS

产品规格

Model	PA8KCL-80KM
Sensor Type	Global Shutter CMOS
Image Mode	Mono
Optical Size	57.34 mm
Resolution	8192 * 1
Pixel Size	7 μm * 7 μm
Max Line Rate	80 kHz
Bit Depth	8/10 bit
Dynamic Range	≥64 dB
Data Rate	680 MB/s
Trigger Mode	External trigger/Internal free run
Exposure Control	Pulse width or Program
Analog Gain	1x-8x
Digital Gain	0.01x-8.00x
Lens Interface	M72 * 0.75
Data Interface	Camera Link
Power Interface	Hirose HR10A(6-pin)
Power Supply	DC12V-24V(±10%) 0.5A
Power Consumption	5W
Dimensions	W78.0mm x H87.0mm x D40.6mm
Operating Temperature	0-65°C
Storage Temperature	-20-75°C

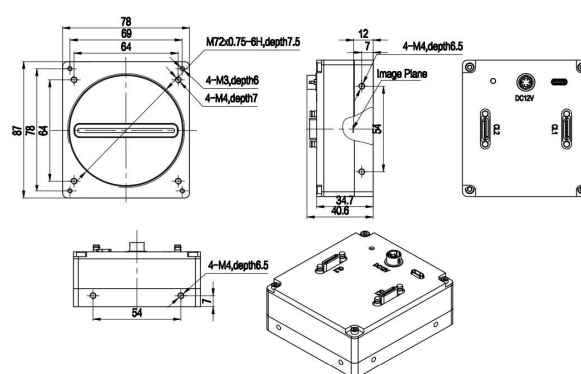
SPECTRAL RESPONSE

光谱响应图



MECHANICAL DIMENSION

机械尺寸图



PA15KCL-18KC

FEATURES

主要特征

- ◎ Up to 18kHz Line Rate, $5.6\mu\text{m} * 5.6\mu\text{m}$
- ◎ True RGB color with high-resolution
- ◎ Bi-directional scanning
- ◎ FFC
- ◎ Auto White Balance
- ◎ Internal trigger, external trigger, optional
- ◎ GUI configuration tool
- ◎ Camera Link interface
- ◎ Power supply: DC12V \pm 10%

APPLICATIONS

应用领域

- ◎ Printing inspection
- ◎ Flat panel inspection
- ◎ Electronics inspection
- ◎ Web inspection
- ◎ General purpose machine vision



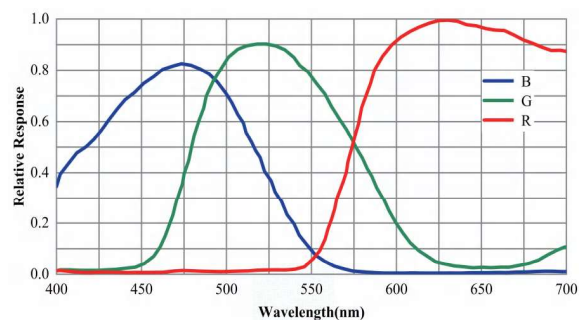
SPECIFICATIONS

产品规格

Model	PA15KCL-18KC
Sensor Type	Global Shutter CMOS
Image Mode	Color
Optical Size	86.38 mm
Resolution	3/6Tap:15424*3 ; 9Tap:15420*4
Pixel Size	$5.6\mu\text{m} * 5.6\mu\text{m}$
Max Line Rate	18 kHz
Bit Depth	8/10 bit
Dynamic Range	≥ 55 dB
Data Rate	765 MB/s
Trigger Mode	External trigger/Internal free run
Exposure Control	Pulse width or Program
Analog Gain	1x-3.34x
Digital Gain	0.01x-8.00x
Lens Interface	M95 * 1
Data Interface	Camera Link
Power Interface	Hirose HR10A (6-pin)
Power Supply	DC12V \pm 10% 3A
Power Consumption	15W
Dimensions	W120.0mm x H110.0mm x D66.0mm
Operating Temperature	0-65°C
Storage Temperature	-20-75°C

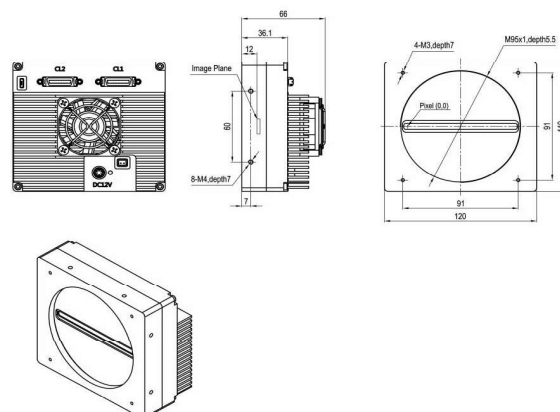
SPECTRAL RESPONSE

光谱响应图



MECHANICAL DIMENSION

机械尺寸图



PA15KCL-45KT

FEATURES

主要特征

- ◎ Up to 15424 pixels, $5.6\mu\text{m} \times 5.6\mu\text{m}$
- ◎ Up to 45kHz Line Rate
- ◎ High sensitivity and low noise
- ◎ FFC
- ◎ In 1, 2 up to 4 Lines Integration
- ◎ Internal trigger, external trigger, optional
- ◎ Serial port control command, GUI configuration tool, optional
- ◎ Camera Link interface
- ◎ Power supply: $\text{DC12V} \pm 10\%$

APPLICATIONS

应用领域

- ◎ Printing inspection
- ◎ PCB / FPD / Wafer inspection
- ◎ High quality raw material surface inspection
- ◎ OCR or sorting
- ◎ Other industrial inspection

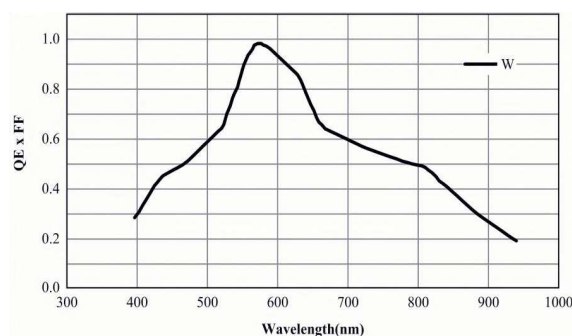
SPECIFICATIONS

产品规格

Model	PA15KCL-45KT
Sensor Type	Global Shutter CMOS
Image Mode	Mono
Optical Size	86.38 mm
Resolution	2/4/8tap:15424*3 ; 10tap:15360*4
Pixel Size	$5.6\mu\text{m} \times 5.6\mu\text{m}$
Max Line Rate	45 kHz
Bit Depth	8/10 bit
Dynamic Range	$\geq 68\text{ dB}$
Data Rate	820 MB/s
Trigger Mode	External trigger/Internal free run
Exposure Control	Pulse width or Program
Analog Gain	1x-3.34x
Digital Gain	0.01x-8.00x
Lens Interface	M95 * 1
Data Interface	Camera Link
Power Interface	Hirose HR10A (6-pin)
Power Supply	$\text{DC12V} \pm 10\%$ 2A
Power Consumption	16W
Dimensions	W120.0mm x H110.0mm x D66.0mm
Operating Temperature	0-65°C
Storage Temperature	-20-75°C

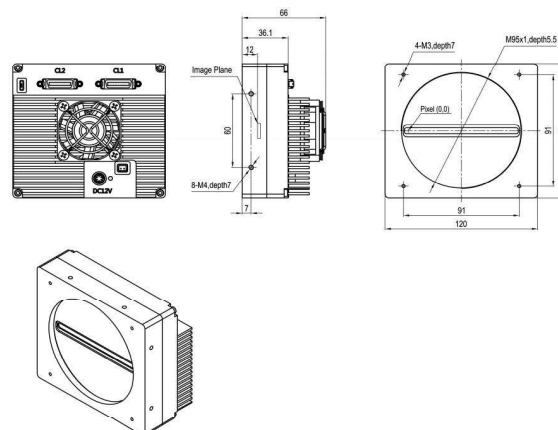
SPECTRAL RESPONSE

光谱响应图



MECHANICAL DIMENSION

机械尺寸图



PA16KCL-40KM

FEATURES

主要特征

- ◎ Up to 16384 pixels
- ◎ Up to 40kHz Line Rate
- ◎ High sensitivity and low noise
- ◎ FFC / LUT
- ◎ Camera Link interface
- ◎ Internal trigger, external trigger, optional
- ◎ Serial port control command, GUI configuration tool, optional
- ◎ Power supply: DC12V-24V(±10%)

APPLICATIONS

应用领域

- ◎ Automated optical inspection
- ◎ Materials grading and inspection systems
- ◎ PCB / FPD / Wafer inspection
- ◎ High performance sorting systems
- ◎ Web inspection
- ◎ General purpose machine vision

SPECIFICATIONS

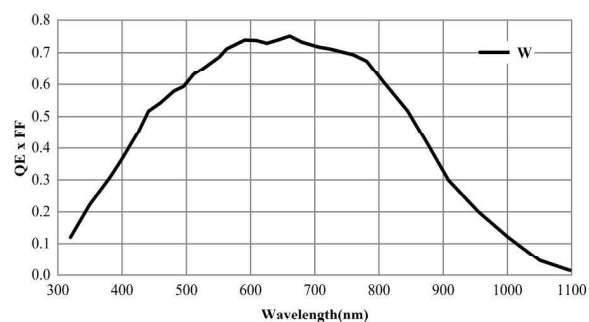
产品规格

Model	PA16KCL-40KM
Sensor Type	Global Shutter CMOS
Image Mode	Mono
Optical Size	57.34 mm
Resolution	16384 * 1
Pixel Size	3.5 μm * 3.5 μm
Max Line Rate	40 kHz
Bit Depth	8/10 bit
Dynamic Range	≥66 dB
Data Rate	680 MB/s
Trigger Mode	External trigger/Internal free run
Exposure Control	Pulse width or Program
Analog Gain	1x-4x
Digital Gain	0.01x-8.00x
Lens Interface	M72 * 0.75
Data Interface	Camera Link
Power Interface	Hirose HR10A(6-pin)
Power Supply	DC12V-24V(±10%) 0.5A
Power Consumption	5W
Dimensions	W82.0mm x H82.0mm x D43.7mm
Operating Temperature	0-65°C
Storage Temperature	-20-75°C



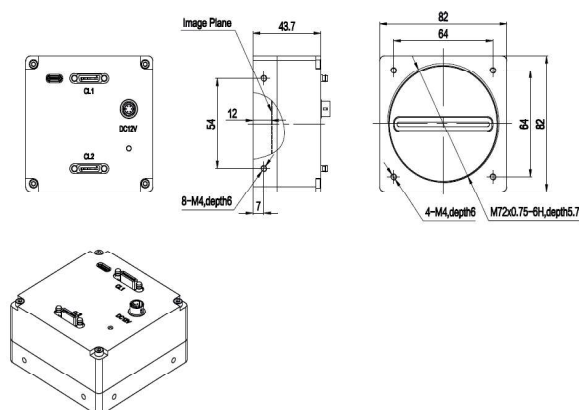
SPECTRAL RESPONSE

光谱响应图



MECHANICAL DIMENSION

机械尺寸图



P/L Series

Line Scan Camera

PL4KGV-30KC / PL4KCL-68KC / PL4KCL-200KT
PL8KCL-30KF / PL8KCL-50KX / PL8KCL-100KT / PL8KCXP-43KC



PL4KGV-30KC

FEATURES

主要特征

- ◎ 15kHz (30kHz with SAccel™)
- ◎ High sensitivity and Low noise
- ◎ FFC / ROI / LUT / Bining
- ◎ 8/10/12 bit output
- ◎ GigE Vision interface
- ◎ Flexible and simple GUI configuration tool
- ◎ Internal trigger, external trigger, optional
- ◎ Temperature monitor
- ◎ Power supply: DC12V-24V(±10%)

APPLICATIONS

应用领域

- ◎ Automated optical inspection
- ◎ High performance sorting systems
- ◎ Materials grading and inspection
- ◎ Web inspection
- ◎ General purpose machine vision

SPECIFICATIONS

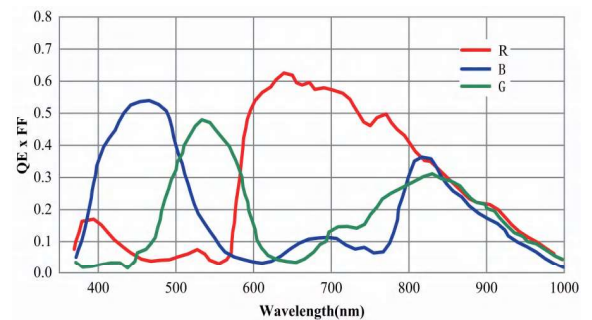
产品规格

Model	PL4KGV-30KC
Sensor Type	Global Shutter CMOS
Image Mode	Color
Optical Size	28.67 mm
Resolution	4096 * 2
Pixel Size	7 μm * 7 μm
Max Line Rate	15kHz (30kHz with SAccel™)
Bit Depth	8/10/12 bit
Dynamic Range	≥65.6 dB
Data Rate	124 MB/s
Trigger Mode	External trigger/Internal free run
Exposure Control	Pulse width or Program
Analog Gain	1/2/3/4x
Digital Gain	0.004x-8.00 x
Lens Interface	M42 * 1
Data Interface	Camera Link
Power Interface	HD15 female connector
Power Supply	DC12V-24V(±10%) 3A
Power Consumption	4.9W
Dimensions	W62.0mm x H62.0mm x D32.48mm
Operating Temperature	0-65°C
Storage Temperature	-20-75°C



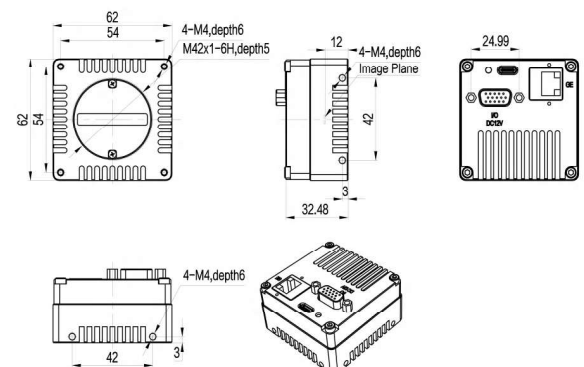
SPECTRAL RESPONSE

光谱响应图



MECHANICAL DIMENSION

机械尺寸图



PL4KCL-200KT

FEATURES

主要特征

- ◎ Line Rate up to 200kHz
- ◎ High sensitivity and Low noise
- ◎ FFC / ROI / LUT / Bining
- ◎ 8/10/12 bit output
- ◎ GigE Vision interface
- ◎ Flexible and simple GUI configuration tool
- ◎ Internal trigger, external trigger, optional
- ◎ Temperature monitor
- ◎ Power supply: DC5V-24V ($\pm 10\%$)

APPLICATIONS

应用领域

- ◎ Automated optical inspection
- ◎ High performance sorting systems
- ◎ Materials grading and inspection
- ◎ Web inspection
- ◎ General purpose machine vision

SPECIFICATIONS

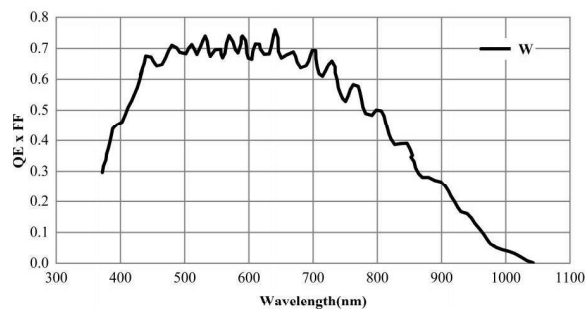
产品规格

Model	PL4KCL-200KT
Sensor Type	Global Shutter CMOS
Image Mode	Mono
Optical Size	28.67 mm
Resolution	4096 * 2
Pixel Size	7 μm * 7 μm
Max Line Rate	200 kHz
Bit Depth	8/10/12 bit
Dynamic Range	≥ 66.2 dB
Data Rate	820 MB/s
Trigger Mode	External trigger/Internal free run
Exposure Control	Pulse width or Program
Analog Gain	1/2/5/10x
Digital Gain	0.004x-8.00x
Lens Interface	M42 * 1
Data Interface	Camera Link
Power Interface	HD15 female connector
Power Supply	DC5V-24V ($\pm 10\%$) 3A
Power Consumption	5.7W
Dimensions	W62.0mm x H62.0mm x D31.0mm
Operating Temperature	0-65°C
Storage Temperature	-20-75°C



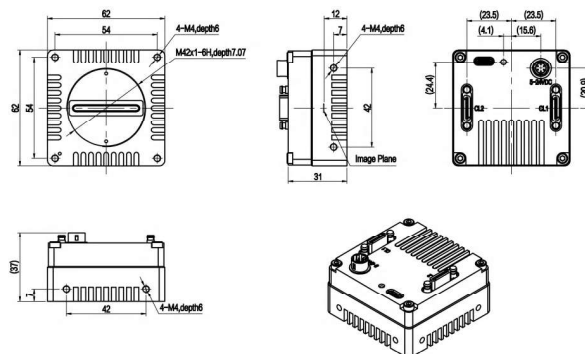
SPECTRAL RESPONSE

光谱响应图



MECHANICAL DIMENSION

机械尺寸图



PL8KCL-30KF

FEATURES

主要特征

- ◎ Quadlinear color TDI sensor
- ◎ Line Rate up to 30kHz
- ◎ Four colors: RGBG (four line per color)
- ◎ High sensitivity and low noise
- ◎ True exposure control
- ◎ Bidirectional scanning
- ◎ Auto White Balance / FFC / ROI
- ◎ Power supply : DC12V \pm 10%

APPLICATIONS

应用领域

- ◎ Film and web inspection
- ◎ Printing inspection
- ◎ Flat panel display inspection
- ◎ Printed circuit board inspection
- ◎ Electronics inspection



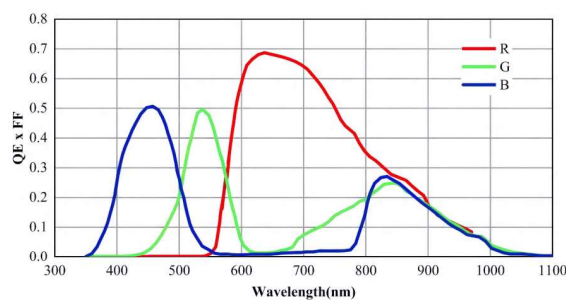
SPECIFICATIONS

产品规格

Model	PL8KCL-30KF
Sensor Type	Global Shutter CMOS
Image Mode	Color
Optical Size	41.60 mm
Resolution	8320 * 16
Pixel Size	5 μ m * 5 μ m
Max Line Rate	30 kHz
Bit Depth	8/10 bit
Dynamic Range	\geq 58 dB
Data Rate	747 MB/s
Trigger Mode	External trigger/Internal free run
Exposure Control	Pulse width or Program
Analog Gain	1x-4x
Digital Gain	1x-8x
Lens Interface	M72 * 0.75 / F Mount
Data Interface	Camera Link
Power Interface	Hirose HR10A(6-pin)
Power Supply	DC12V \pm 10% 3.5A
Power Consumption	18W
Dimensions	W79.6mm x H139.5mm x D71.5mm
Operating Temperature	0-55 $^{\circ}$ C
Storage Temperature	-20-75 $^{\circ}$ C

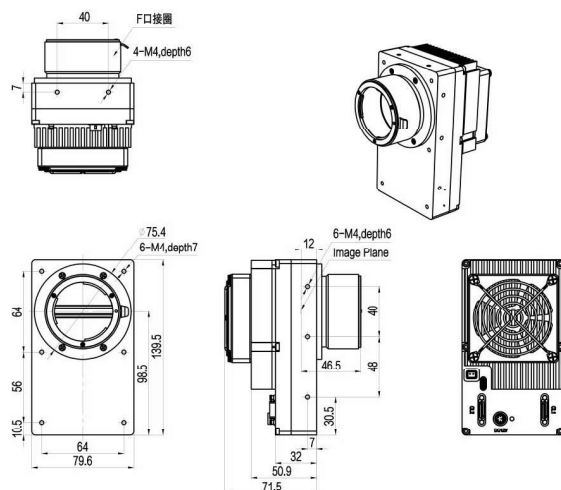
SPECTRAL RESPONSE

光谱响应图



MECHANICAL DIMENSION

机械尺寸图



PL8KCL-50KX

FEATURES

主要特征

- ◎ 8320*16 Pixels, $5\mu\text{m} * 5\mu\text{m}$
- ◎ Support 2 lamps, 3 lamps, 4 lamps exposure
- ◎ Regions of Interest (ROI)
- ◎ FFC and LUT
- ◎ High sensitivity (4lines/Lamp)
- ◎ True exposure control
- ◎ Simplify application system structure
- ◎ Power supply : $\text{DC12V} \pm 20\%$

APPLICATIONS

应用领域

- ◎ Flat panel display inspection
- ◎ Printed circuit board inspection
- ◎ Semiconductor wafer
- ◎ Life sciences
- ◎ Web inspection

SPECIFICATIONS

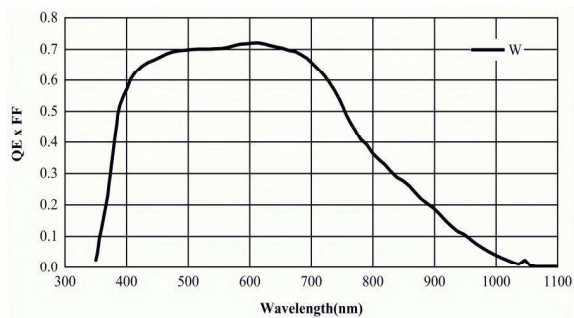
产品规格

Model	PL8KCL-50KX
Sensor Type	Global Shutter CMOS
Image Mode	Mono
Optical Size	41.60 mm
Resolution	8320 * 16
Pixel Size	$5\mu\text{m} * 5\mu\text{m}$
Max Line Rate	50 kHz
Bit Depth	8/10 bit
Dynamic Range	$\geq 52\text{ dB}$
Data Rate	840 MB/s
Trigger Mode	External trigger/Internal free run
Exposure Control	Pulse width or Program
Analog Gain	1x-4x
Digital Gain	1x-8x
Lens Interface	M72 * 0.75 / F Mount
Data Interface	Camera Link
Power Interface	Hirose HR10A(6-pin)
Power Supply	$\text{DC12V} \pm 20\%$ 3A
Power Consumption	16W
Dimensions	W79.6mm x H139.5mm x D71.5mm
Operating Temperature	0-55°C
Storage Temperature	-20-75°C



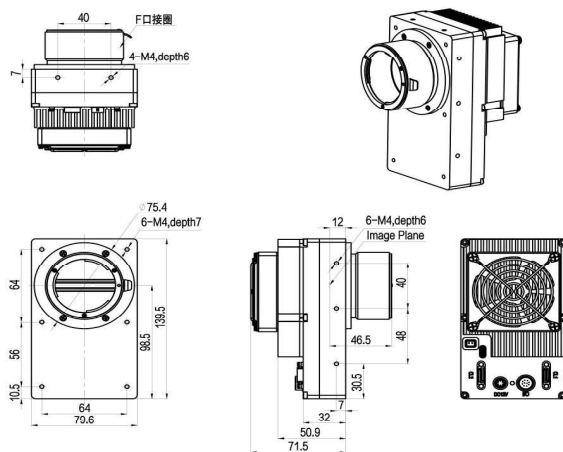
SPECTRAL RESPONSE

光谱响应图



MECHANICAL DIMENSION

机械尺寸图



PL8KCL-100KT

FEATURES

主要特征

- ◎ 8320*8 Pixels, 5 μ m *5 μ m
- ◎ Up to 100kHz Line Rate
- ◎ In 1,4 up to 8 Lines Integration
- ◎ High sensitivity and low noise
- ◎ True exposure control
- ◎ Regions of Interest (ROI)
- ◎ FFC and LUT
- ◎ Camera Link Interface
- ◎ Power supply : DC12V \pm 20%

APPLICATIONS

应用领域

- ◎ Parcel sorting
- ◎ Print inspection
- ◎ Flat panel display inspection
- ◎ PCB inspection
- ◎ Raw material surface inspection
- ◎ Other industrial inspection

SPECIFICATIONS

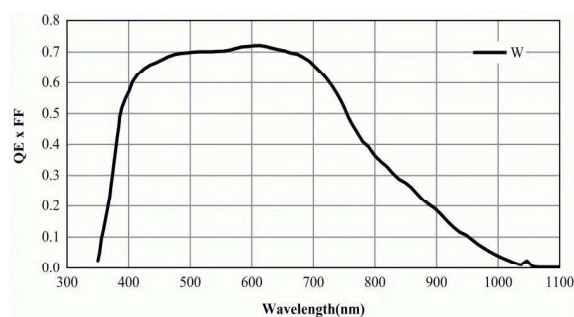
产品规格

Model	PL8KCL-100KT
Sensor Type	Global Shutter CMOS
Image Mode	Mono
Optical Size	41.60 mm
Resolution	8320 * 8
Pixel Size	5 μ m * 5 μ m
Max Line Rate	100 kHz
Bit Depth	8/10/12 bit
Dynamic Range	\geq 54 dB
Data Rate	850 MB/s
Trigger Mode	External trigger/Internal free run
Exposure Control	Pulse width or Program
Analog Gain	1x-4x
Digital Gain	1x-8x
Lens Interface	M72 * 0.75 / F Mount
Data Interface	Camera Link
Power Interface	Hirose HR10A(6-pin)
Power Supply	DC12V \pm 20% 3.5A
Power Consumption	16W
Dimensions	W79.6mm x H139.5mm x D71.5mm
Operating Temperature	0-55 $^{\circ}$ C
Storage Temperature	-20-75 $^{\circ}$ C



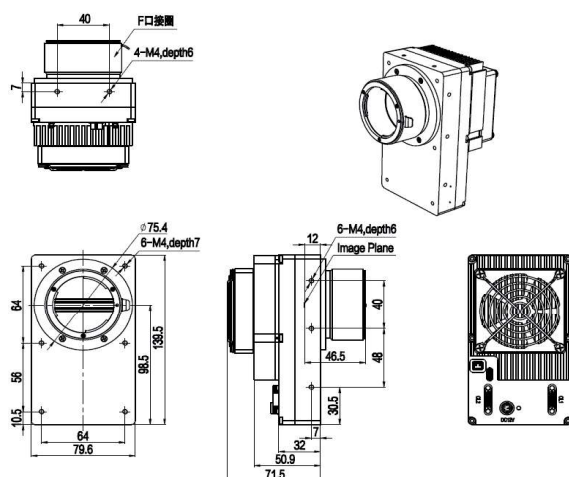
SPECTRAL RESPONSE

光谱响应图



MECHANICAL DIMENSION

机械尺寸图



PL8KCP-43KC

FEATURES

主要特征

- ◎ Trilinear color TDI sensor
- ◎ Line Rate up to 43kHz
- ◎ Three colors: RGB (four line per color)
- ◎ High sensitivity and low noise
- ◎ True exposure control
- ◎ Bidirectional scanning
- ◎ Auto White Balance / FFC / ROI / Binning
- ◎ CoaXPress interface
- ◎ Power supply : DC12V \pm 20%

APPLICATIONS

应用领域

- ◎ Film and web inspection
- ◎ Printing inspection
- ◎ Flat panel display inspection
- ◎ Printed circuit board inspection
- ◎ Electronics inspectio

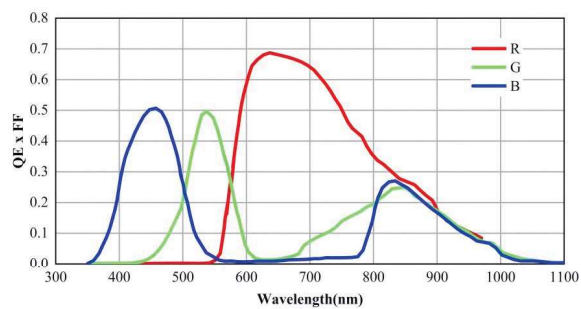
SPECIFICATIONS

产品规格

Model	PL8KCXP-43KC
Sensor Type	Global Shutter CMOS
Image Mode	Color
Optical Size	41.60 mm
Resolution	8320 * 12
Pixel Size	5 μm * 5 μm
Max Line Rate	43 kHz
Bit Depth	8/10 bit
Dynamic Range	≥52.8 dB
Data Rate	1216.8 MB/s
Trigger Mode	External trigger/Internal free run
Exposure Control	Pulse width or Program
Analog Gain	1/2/4x
Digital Gain	0.1x-8.0x
Lens Interface	M72 * 0.75 / F Mount
Data Interface	CoaXPress
Power Interface	Hirose HR10A(6-pin)
Power Supply	DC12V±20% 3.5A
Power Consumption	21W
Dimensions	W79.6mm x H139.5mm x D71.5mm
Operating Temperature	0-65℃
Storage Temperature	-20-75℃

SPECTRAL RESPONSE

光谱响应图



MECHANICAL DIMENSION

机械尺寸图

