GigE Vision Cameras for vicosys®
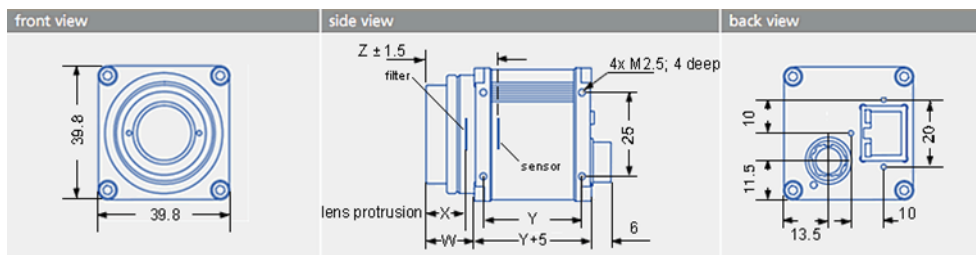
Matrix Vision mvBlueCOUGAR | Monochrome and Colour cameras of BlueCOUGAR series

Product features

- compact GigE-Vision industrial cameras
- High-quality CCD & CMOS Sensors
- Sensor resolution from VGA to 5 Megapixel
- Grey value, colour and NIR (near-infrared)
- Power over Ethernet (PoE) support
- Up to 100 meter cable lengths for maximum flexibility

Engineering drawing

Definition

The cameras of the Matrix Vision BlueCOUGAR series are available as monochrome and also as color cameras (NIR models: monochrome only).
The GigE-Vision cameras of the Matrix Vision BlueCOUGAR series differs only in the characteristics of the chip and the maximum framerate.
Power-over-Ethernet
The cameras of the Matrix Vision BlueCOUGAR series support PoE (Power-over-Ethernet).

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Product features

	BlueCOUGAR series
Data interface	Fast Ethernet (100 Mbit/s) or Gigabit Ethernet (1000 Mbit/s)
External trigger	Yes
Power requirements	PoE (Power over Ethernet or 12VDC supplied via the camera's 6-pin Hirose connector
Weight	110g
Dimensions	39,8 x 39,8 x 35 mm
Lens mount	C-Mount
Temperature	0°C to 45°C

Technical data

Name	mvBlueCOUGAR-X120aG-POE	mvBlueCOUGAR-X120aC-POE	mvBlueCOUGAR-X120bG-POE	mvBlueCOUGAR-X120bC-POE	mvBlueCOUGAR-X120dG-POE	mvBlueCOUGAR-X120dC-POE
Order no.	4-22-372	4-22-373	4-22-374	4-22-375	4-22-376	4-22-377
Sensor	Sony ICX424 with HAD; microlens	Sony ICX424 with HAD; microlens	Sony ICX414 with HAD; microlens	Sony ICX414 with HAD; microlens	Sony ICX415 with HAD; microlens	Sony ICX415 with HAD; microlens
Sensor type	Grau (Mono)	Farbe	Grau (Mono)	Farbe	Grau (Mono)	Farbe
Sensor technologie	Progressive Scan CCD	Progressive Scan CCD	Progressive Scan CCD	Progressive Scan CCD	Progressive Scan CCD	Progressive Scan CCD
Shutter type	Global Shutter	Global Shutter	Global Shutter	Global Shutter	Global Shutter	Global Shutter
Sensor size	1/3"	1/3"	1/2"	1/2"	1/2"	1/2"
Resolution total Resolution effective*	640 x 480 -	640 x 480 -	640 x 480 -	640 x 480 -	776 x 580 -	776 x 580 -
Pixel size	7,4 µm x 7,4 µm	7,4 µm x 7,4 µm	9,9 µm x 9,9 µm	9,9 µm x 9,9 µm	8,3 µm x 8,3 µm	8,3 µm x 8,3 µm
Frame rate	104 fps	104 fps	104 fps	104 fps	87 fps	87 fps
Power consumption	6,49 W/5,5W	6,49 W/5,5W	6,49 W/5,5W	6,49 W/5,5W	6,49 W/5,5W	6,49 W/5,5W

Name	mvBlueCOUGAR-X122G-POE	mvBlueCOUGAR-X122C-POE	mvBlueCOUGAR-X123G-POE	mvBlueCOUGAR-X123C-POE	mvBlueCOUGAR-X124G-POE
Order no.	4-22-378	4-22-379	4-22-380	4-22-381	4-22-382
Sensor	Sony ICX445 with EXview HAD; microlens	Sony ICX445 with EXview HAD; microlens	Sony ICX267 with HAD; microlens	Sony ICX267 with HAD; microlens	Sony ICX274 with Super HAD; microlens
Sensor type	Grau (Mono)	Farbe	Grau (Mono)	Farbe	Grau (Mono)
Sensor technologie	Progressive Scan CCD	Progressive Scan CCD	Progressive Scan CCD	Progressive Scan CCD	Progressive Scan CCD
Shutter type	Global Shutter	Global Shutter	Global Shutter	Global Shutter	Global Shutter
Sensor size	1/3"	1/3"	1/2"	1/2"	1/1.8"
Resolution total Resolution effective*	1280 x 960 -	1280 x 960 -	1360 x 102 -	1360 x 1024 -	1600 x 1200 -
Pixel size	3,75 µm x 3,75 µm	3,75 µm x 3,75 µm	4,65 µm x 4,65 µm	4,65 µm x 4,65 µm	4,4 µm x 4,4 µm
Frame rate	31 fps	31 fps	30 fps	30 fps	28 fps
Power consumption	6,49 W/5,5W	6,49 W/5,5W	6,49 W/5,5W	6,49 W/5,5W	6,49 W/5,5W

GigE Vision Cameras for vicosys®

| Matrix Vision mvBlueCOUGAR | Monochrome and Colour cameras of BlueCOUGAR series |

Name	mvBlueCOUGAR-X124C-POE	mvBlueCOUGAR-X125aG-POE	mvBlueCOUGAR-X125aC-POE	mvBlueCOUGAR-X100wG-POE	mvBlueCOUGAR-X100wC-POE
Order no.	4-22-383	4-22-384	4-22-385	4-22-386	4-22-387
Sensor	Sony ICX274 with Super HAD; microlens	Sony ICX655 with EXview HAD; microlens	Sony ICX655 with EXview HAD; microlens	Aptina MT9V034	Aptina MT9V034
Sensor type	Farbe	Grau (Mono)	Farbe	Grau (Mono)	Farbe
Sensor technologie	Progressive Scan CCD	Progressive Scan CCD	Progressive Scan CCD	Progressive Scan CMOS	Progressive Scan CMOS
Shutter type	Global Shutter	Global Shutter	Global Shutter	Global Shutter	Global Shutter
Sensor size	1/1.8"	2/3"	2/3"	1/3"	1/3"
Resolution total Resolution effective*	1600 x 1200 -	2448 x 2050 -	2448 x 2050 -	752 x 480 -	752 x 480 -
Pixel size	4,4 µm x 4,4 µm	3,45 µm x 3,45 µm	3,45 µm x 3,45 µm	6 µm x 6 µm	6 µm x 6 µm
Frame rate	28 fps	10 fps	10 fps	117 fps	117 fps
Power consumption	6,49 W/5,5W	6,49 W/5,5W	6,49 W/5,5W	6,49 W/5,5W	6,49 W/5,5W

Name	mvBlueCOUGAR-X102bG-POE	mvBlueCOUGAR-X102bC-POE	mvBlueCOUGAR-X102dG-POE	mvBlueCOUGAR-X102dC-POE	mvBlueCOUGAR-X102eG-POE
Order no.	4-22-388	4-22-389	4-22-390	4-22-391	4-22-392
Sensor	Aptina MT9M021	Aptina MT9M021	Aptina MT9M034	Aptina MT9M034	e2v EV76C560 with microlens, radially shifted
Sensor type	Grau (Mono)	Farbe	Grau (Mono)	Farbe	Grau Mono
Sensor technologie	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
Shutter type	Global Shutter	Global Shutter	Global Shutter	Global Shutter	Global Shutter
Sensor size	1/3"	1/3"	1/3"	1/3"	1/1.8"
Resolution total Resolution effective*	1280 x 960 -	1280 x 960 -	1280 x 960 -	1280 x 960 -	1280 x 1024 -
Pixel size	3,75 µm x 3,75 µm	3,75 µm x 3,75 µm	3,75 µm x 3,75 µm	3,75 µm x 3,75 µm	5,3 µm x 5,3 µm
Frame rate	40,6 fps	40,6 fps	40,6 fps	40,6 fps	60 fps
Power consumption	6,49 W/5,5W	6,49 W/5,5W	6,49 W/5,5W	6,49 W/5,5W	6,49 W/5,5W

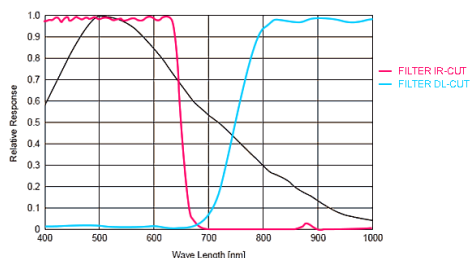| Name	mvBlueCOUGAR-X102eC-POE	mvBlueCOUGAR-X102eGE-POE	mvBlueCOUGAR-X104G-POE	mvBlueCOUGAR-X104C-POE	mvBlueCOUGAR-X104bG-POE
Order no.	4-22-393	4-22-394	4-22-395	4-22-396	4-22-397
Sensor	e2v EV76C560 with microlens, radially shifted	e2v EV76C661	CMOSIS CMV2000	CMOSIS CMV2000	CMOSIS CMV4000
Sensor type	Farbe	Grau (Mono)	Grau (Mono)	Farbe	Grau (Mono)
Sensor technologie	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
Shutter type	Global Shutter	Global Shutter	Global Shutter	Global Shutter	Global Shutter
Sensor size	1/1.8"	1/1.8"	2/3"	2/3"	1"
Resolution total Resolution effective*	1280 x 1024 -	1280 x 1024 -	2048 x 1088 -	2048 x 1088 -	2048 x 2048 -
Pixel size	5,3 µm x 5,3 µm	5,3 µm x 5,3 µm	5,5 µm x 5,5 µm	5,5 µm x 5,5 µm	5,5 µm x 5,5 µm
Frame rate	60 fps	60 fps	34,8 fps	34,8 fps	18,5 fps
Power consumption	6,49 W/5,5W	6,49 W/5,5W	6,49 W/5,5W	6,49 W/5,5W	6,49 W/5,5W

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Name	mvBlueCOUGAR-X104bC-POE	mvBlueCOUGAR-X104eG-POE	mvBlueCOUGAR-X104eC-POE	mvBlueCOUGAR-X105G-POE	mvBlueCOUGAR-X105C-POE
Order no.	4-22-398	4-22-399	4-22-400	4-22-401	4-22-402
Sensor	CMOSIS CMV4000	e2v EV76C570 with microlens, radially shifted	e2v EV76C570 with microlens, radially shifted	Aptina MT9P031	Aptina MT9P031 microlens
Sensor type	Farbe	Grau (Mono)	Farbe	Grau (Mono)	Farbe
Sensor technologie	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
Shutter type	Global Shutter	Global Shutter	Global Shutter	Global Shutter	Global Shutter
Sensor size	1"	1/1.8"	1/1.8"	1/2.5"	1/2.5"
Resolution total Resolution effective*	2048 x 2048 -	1600 x 1200 -	1600 x 1200 -	2592 x 1944 -	2592 x 1944 -
Pixel size	5,5 µm x 5,5 µm	4,5 µm x 4,5 µm	4,5 µm x 4,5 µm	4,5 µm x 4,5 µm	4,5 µm x 4,5 µm
Frame rate	18,5 fps	41,4 fps	41,4 fps	14,4 fps	14,4 fps
Power consumption	6,49 W/5,5W	6,49 W/5,5W	6,49 W/5,5W	6,49 W/5,5W	6,49 W/5,5W

* To improve the display on the monitor, the resolution is adjusted to common monitor resolutions. Thus, the occurrence of black bars is prevented without distorting the image. This only affects cameras whose resolution is slightly larger than the standard monitor resolutions.

◤ Accessories

Order no.	Name	Description
4-40-287	Power supply 12V, COUGAR-X	with digital I/O on separate cable, length: 3m, I/O: 0.5m MV-DC1201 BCS IO REV2
4-40-286	Power supply 12V, COUGAR-X	MV-DC1201 BCS
4-44-160	GigE-Kabel mvBlueCOUGAR-X	with horizontal screw locking, drag chain capable KS-GIGE LS SLK, CAT6, 5m
4-44-161	GigE-Kabel mvBlueCOUGAR-X	with horizontal screw locking, drag chain capable KS-GIGE LS SLK, CAT6, 10m

◤ Scope of delivery

• mvBlueCOUGAR camera

◤ Spectral sensitivity

mvBlueCOUGAR-X120aG-POE

Spectral Sensitivity Characteristics (Excludes lens characteristics and light source characteristics)

mvBlueCOUGAR-X120aC-POE

Spectral Sensitivity Characteristics (Includes lens characteristics, excludes light source characteristics)

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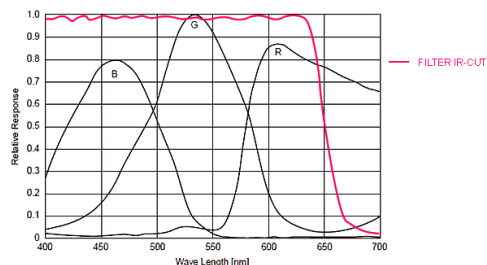| Matrix Vision mvBlueCOUGAR | Monochrome and Colour cameras of BlueCOUGAR series |

mvBlueCOUGAR-X120bG-POE

Spectral Sensitivity Characteristics (Excludes lens characteristics and light source characteristics)
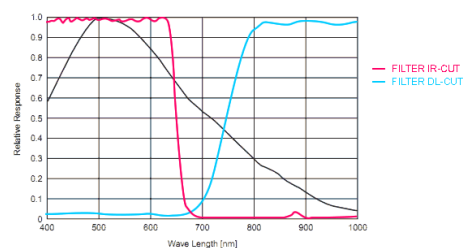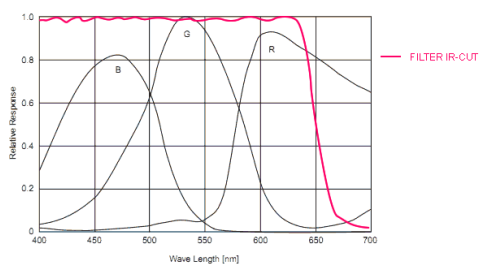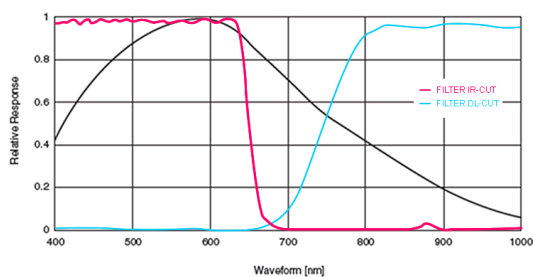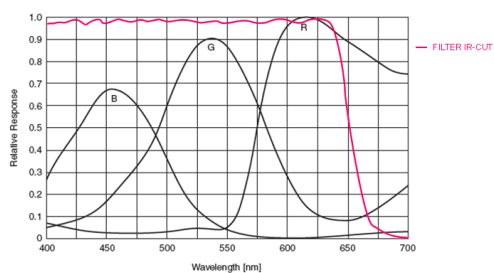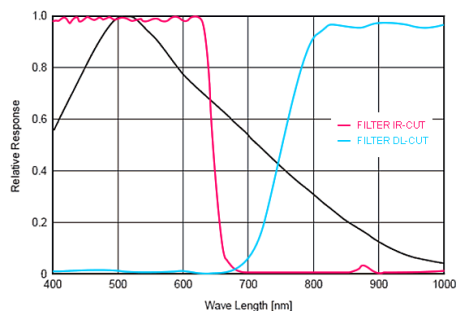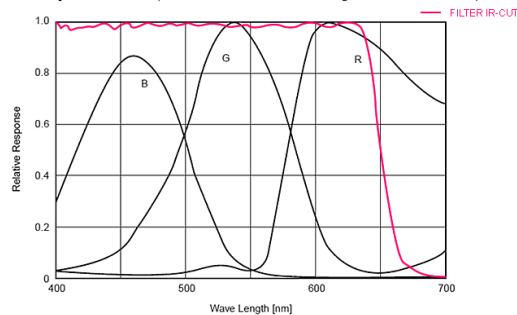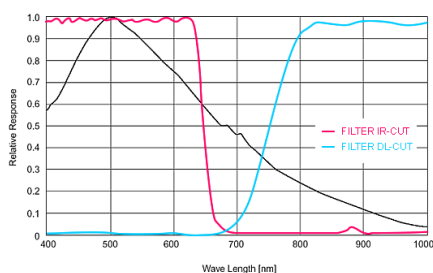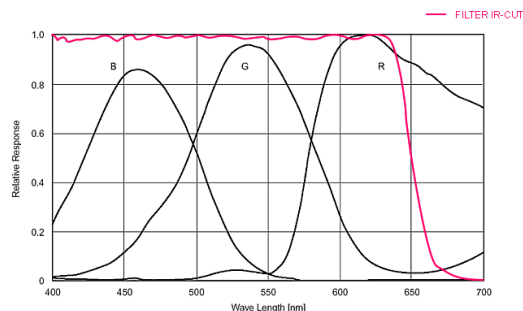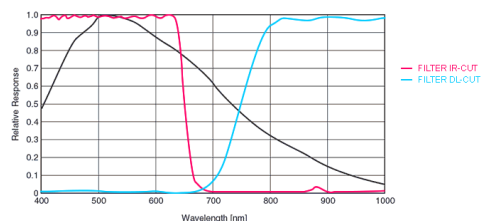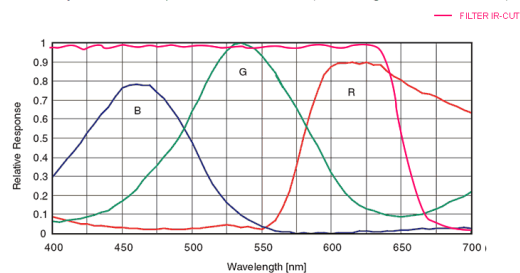

mvBlueCOUGAR-X120bC-POE

Spectral Sensitivity Characteristics (Includes lens characteristics, excludes light source characteristics)

mvBlueCOUGAR-X120dG-POE

Spectral Sensitivity Characteristics (Excludes lens characteristics and light source characteristics)

mvBlueCOUGAR-X120dC-POE

Spectral Sensitivity Characteristics (Excludes lens characteristics and light source characteristics)

mvBlueCOUGAR-X122G-POE

Spectral Sensitivity Characteristics (excludes lens characteristics and light source characteristics)

mvBlueCOUGAR-X122C-POE

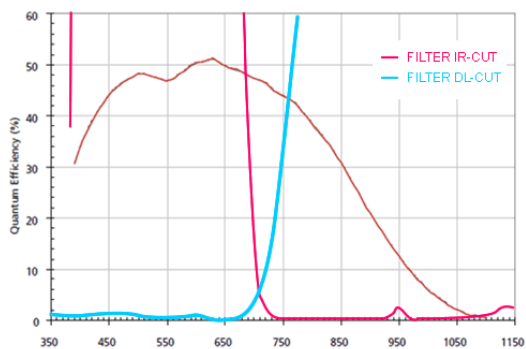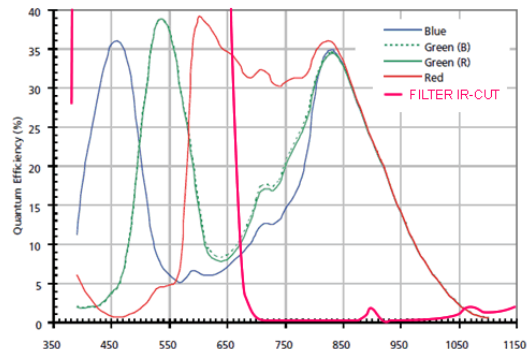**Spectral Sensitivity Characteristics** (excludes lens characteristics and light source characteristics)

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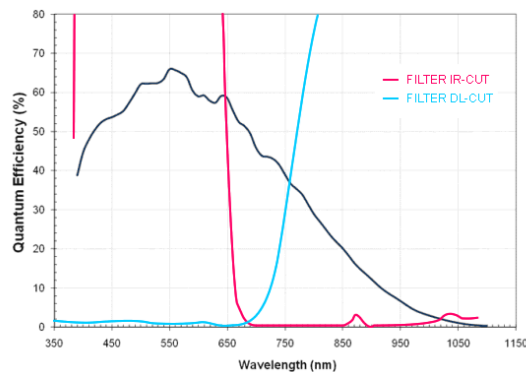Matrix Vision mvBlueCOUGAR | Monochrome and Colour cameras of BlueCOUGAR series
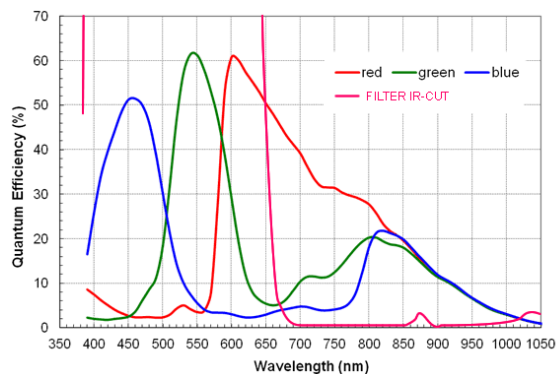
mvBlueCOUGAR-X123G-POE
Spectral Sensitivity Characteristics (excludes lens characteristics and light source characteristics)

mvBlueCOUGAR-X123C-POE
Spectral Sensitivity Characteristics (excludes lens characteristics and light source characteristics)

mvBlueCOUGAR-X124G-POE
Spectral Sensitivity Characteristics (excludes lens characteristics and light source characteristics)

mvBlueCOUGAR-X124C-POE
Spectral Sensitivity Characteristics (excludes lens characteristics and light source characteristics)

mvBlueCOUGAR-X125aG-POE
Spectral Sensitivity Characteristics (Excludes lens characteristics and light source characteristics)

mvBlueCOUGAR-X125aC-POE
Spectral Sensitivity Characteristics (Includes lens characteristics, excludes light source characteristics)

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mvBlueCOUGAR-X100wG-POE
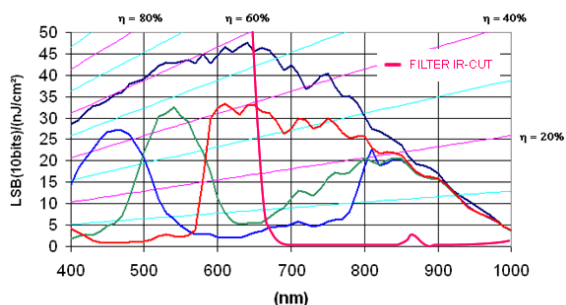

mvBlueCOUGAR-X100wC-POE
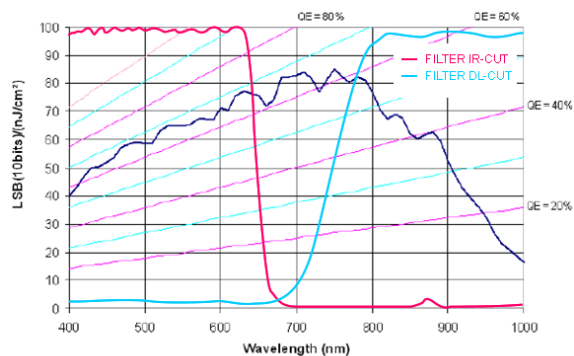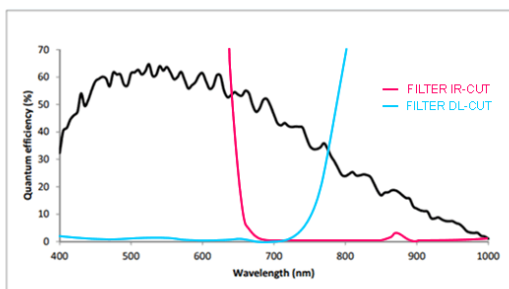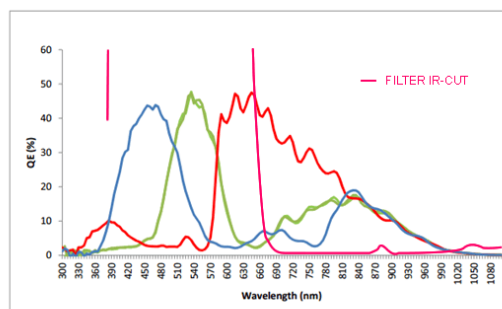

mvBlueCOUGAR-X102bG-POE

mvBlueCOUGAR-X102bC-POE

mvBlueCOUGAR-X102eC-POE

mvBlueCOUGAR-X102eGE-POE

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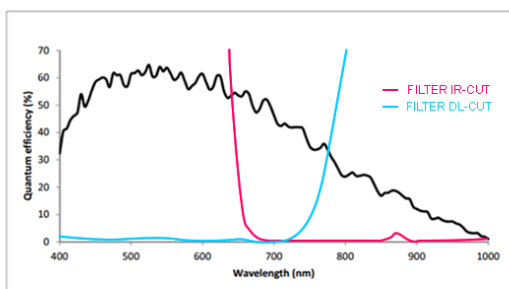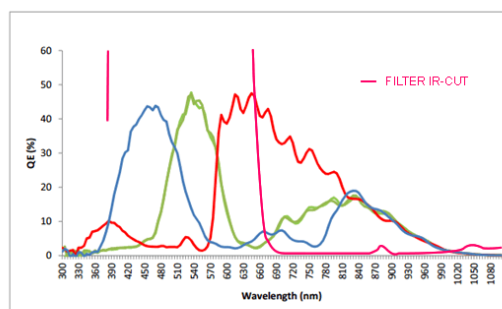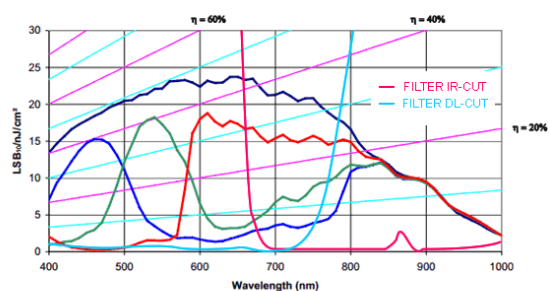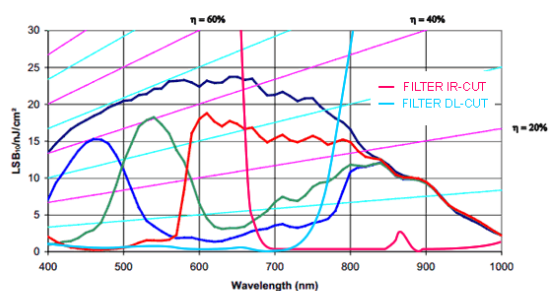
mvBlueCOUGAR-X104G-POE

mvBlueCOUGAR-X104C-POE

mvBlueCOUGAR-X104bG-POE

mvBlueCOUGAR-X104bC-POE

mvBlueCOUGAR-X104eG-POE

mvBlueCOUGAR-X104eC-POE

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