

PixelCam™

OEM Multispectral Cameras

Snapshot Multispectral Imaging

PixelCam™ multispectral cameras provide live imaging of 3-9 spectral bands, off-the-shelf or custom, at video rates. Simultaneous multi-channel “snapshot” acquisition delivers rich, real-time data without scene change or pixel shift. Custom dichroic filter arrays are integrated into the focal plane array at wafer-level to create robust linear and area sensors that extract high-contrast spectral information at specific visible and infrared wavelengths. This breakthrough technology enables easy integration into handheld, mobile and aerial cameras – all with the same frame rate, size, weight and power consumption as monochrome cameras.



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Summary

	VIS+NIR	NIR+SWIR
Spectral response	400-1000 nm	700-1700 nm
Resolution	2 MP: 1600 x 1200 px 4 MP: 2048 x 2048 px	640 x 512 px
Sensor	Si interline CCD 7.4 µm pixel pitch	InGaAs 25 µm pixel pitch
Spectral bands (examples) <i>*Custom spectral bands & mosaics available on request</i>	*4-band: RGB + NIR (760 nm long-wave pass) *6-band: RGB + 3xNIR (740/60 nm, 840/60 nm, 940/60 nm)	*4-band: 900/400 nm, 1200/100 nm, 1400/100 nm, 1650/100 nm *3-band: 900/400 nm, 1350/200 nm, 1625/150 nm
Active area	4 MP: 15.15 mm (H) x 15.15 mm (V), 21.43 mm (diagonal)	16.0 mm (H) x 12.8 mm (V), 20.5 mm (diagonal)
Frame rate overclocked	4 MP: 15 fps at full resolution	30 fps
Optical interface	C mount	Ni-42
Digital output	GigE Vision®	Camera Link®, 14 bit
Dimensions (no lens or mount)	4 MP: 52.5 mm (H) x 52.5 mm (W) x 79.4 mm (D) 2.07" (H) x 2.07" (W) x 3.13" (D)	52.1 mm (H) x 52.1 mm (W) x 64.7 mm (D) 2.1" (H) x 2.1" (W) x 2.6" (D)
Weight	4 MP: 377 g (0.67 lb.)	235 g (0.52 lb.)

Benefits

- Simultaneous multi-band imaging
- Custom VIS-NIR-SWIR spectral bands
- Portable size, weight and power consumption
- Robust, high reliability, scalable production

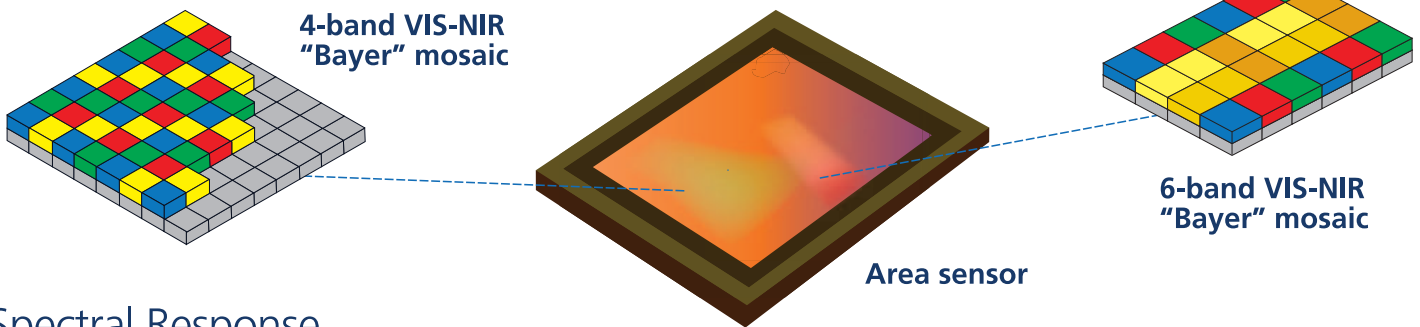
OEM Customization

- Application-specific spectral bands
- Custom pixel-scale mosaic patterning
- Sensor, camera and housing options
- Mechanical and environmental requirements
- Proof-of-concept prototypes to high-volume production

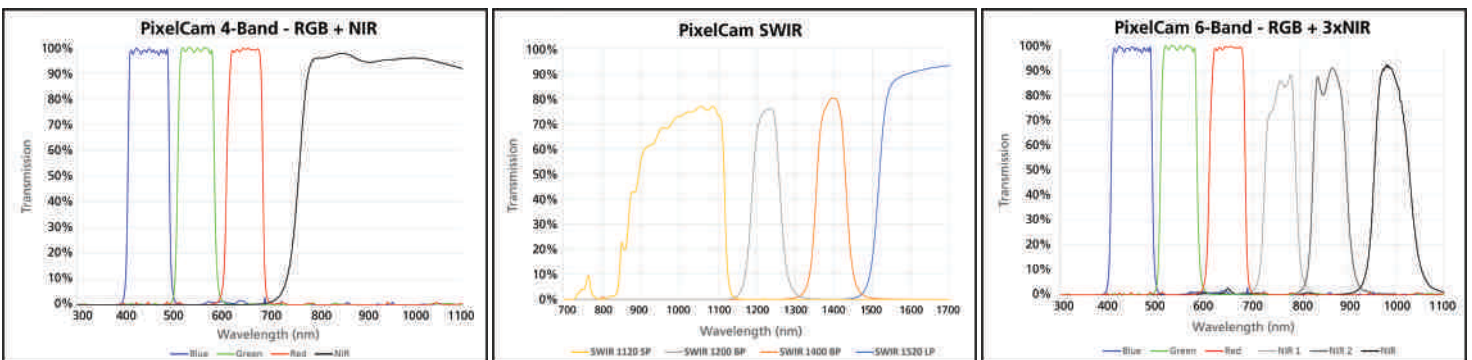
Applications

- Aerial mapping
- Biomedical imaging
- Machine vision
- Product screening
- Remote sensing
- Surveillance and authentication
- Unmanned systems

Dichroic Filter Array



Spectral Response



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