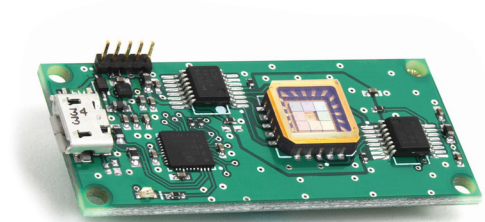


Multispectral Sensors for Compact Devices

PixelSensor™ multispectral sensors use on-chip filtering to pack up to 8 wavelength-selective photodiodes into a compact 9 mm x 9mm array for simple integration into optical devices. A single PixelSensor replaces multiple components, helping OEMs shrink multi-wavelength instruments for applications including in vitro diagnostics, biochemical assays and colorimetry applications.



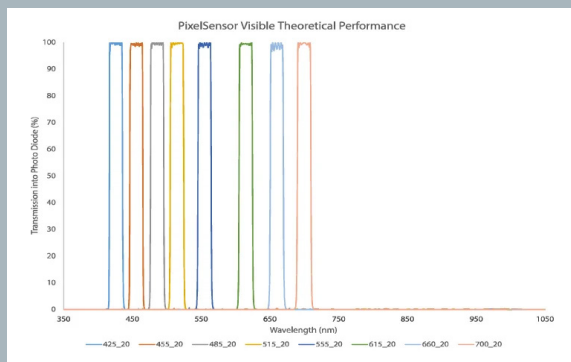
PixelSensor’s wafer-level optical filters split the spectrum into 8 discrete color bands and suppress out-of-band background light, improving contrast and sensitivity. PixelSensor offers narrowband selectivity (400-1000 nm), is available in OEM versions with user-defined spectral bands, and can be specified with optional electronics board and accessories for rapid prototyping and development.

PCR Fluorescence Sensor Evaluation Kit

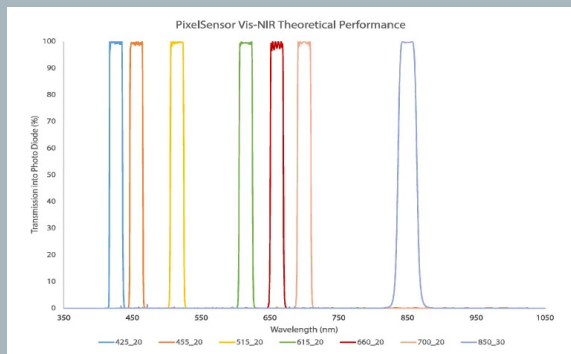
- Compact, robust sensor for POC testing at patient bedside, medical facilities and mobile labs
- Ideal for quantitative polymerase chain reaction (qPCR) testing
- Up to 8 sensor arrays in a 9 mm x 9 mm footprint
- 20-pin LCC package for surface or socket mounting
- Evaluation kit with electronics board, software and sampling optics

Characteristic	Symbol	Test	Min.	Typical	Max.	Unit
Dark current	I_D	$V_R=10V$	-	2	8	nA
Shunt resistance	R_{SH}	$V_R=10mV$	-	100	-	M Ω
Junction capability	C_J	$V_R=0V, f=100kHz$ $V_R=50V, f=100kHz$	-	6 0.6	7 0.7	pF
Spectral range	λ_{range}	Spot scan	400	-	1100	nm
Breakdown voltage	V_{BR}	$I=10\mu A$	-	75	-	V
Noise equivalent power	NEP	$V_R=5V @ \lambda=peak$	-	5×10^{-14}	-	
Response time	T_r	$RL=50 \Omega, V_R=50V$	-	6.0	-	ns
Absolute maximum rating						
Reverse voltage	V_{BR}	-	-	75	-	V
Operating temperature	T_O	-	-40	-	+80	$^{\circ}C$

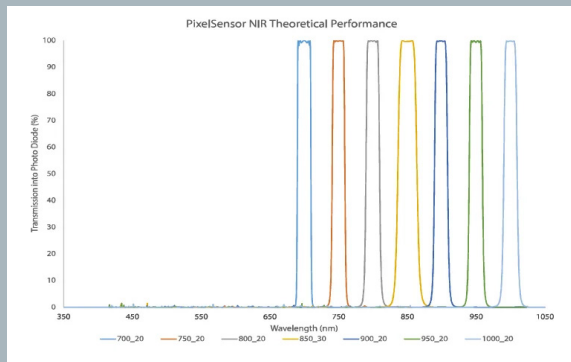
VIS Spectral Response



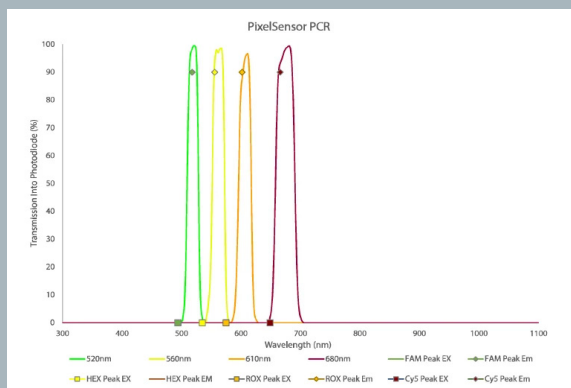
VIS-NIR Spectral



NIR Spectral



PCR Spectral



LCC Sensor

Spectral filters	Standard and custom 10-100 nm FWHM
Photodiodes	Si, 1.0 x 0.8 mm
Package	LCC 20

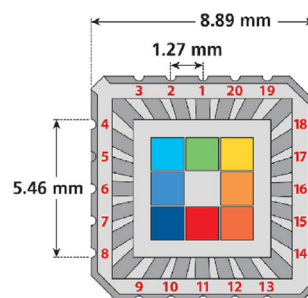
Optional Evaluation Housing

Mechanical fixture including:

- 15.2 mm light guide
- SM05 lens adapter
- Fiber optic adapter for 74-UV collimating lens



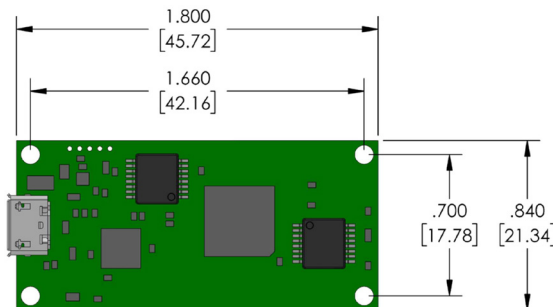
LCC Dimensions



OEM Board Specifications

Integration time	1-1024 ms
Gain reference	20-5120 nA
Interface	USB 2.0
Protocol	HID-compliant
Software	Windows 32-/64-bit compatible

OEM Board Dimensions (inches/mm)



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