



TAU SWIR 15XRH

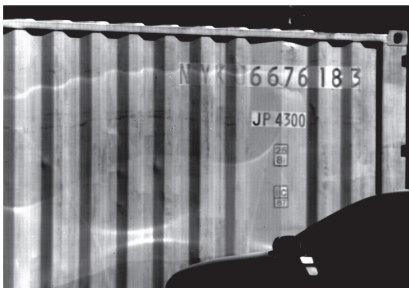
Low-Noise, Shortwave Infrared Camera

The Tau SWIR 15XRH joins FLIR's Tau family of best-in-class small, light weight, low-power camera cores that deliver shortwave infrared imaging with very high sensitivity. Designed for a variety of OEM applications, the Tau SWIR 15XRH provides outstanding image quality and performance for machine vision, a variety of medical, agricultural, semiconductor/ solar panel inspection applications, as well as hightemperature endpoint and defect monitoring.

Tau SWIR 15XRH cameras incorporate a high-resolution (640 × 512) Indium Gallium Arsenide (InGaAs) 15-micron pixel pitch focal plane array that features variable exposure control, nearly zero image lag, and high quantum efficiency.



Oil Rig in Thermal & Visible (upper right)



See through Paint on shipping containers



Easily Identify potential ground threats

KEY FEATURES

- 25 µm Pixels
- Asynchronous Laser Pulse Detection Mode
- <1% Image Lag Frame-to-Frame
- Low Power
- Compact Size and Lightweight
- >1,400 Hz Frame Rate (sub window)
- Affordable SWIR Solution
- Custom Engineering Services Available

BENEFITS

- Large pixel collection area for high sensitivity
- Image multiple 1.06µm and 1550nm lasers both day and night
- Eliminates smear (no persistence)
- Low power budget requirements
- Fits into small space-claim applications
- Works in specialized applications
- Meet your cost targets
- FLIR is your SWIR technology partner

Imaging Specifications

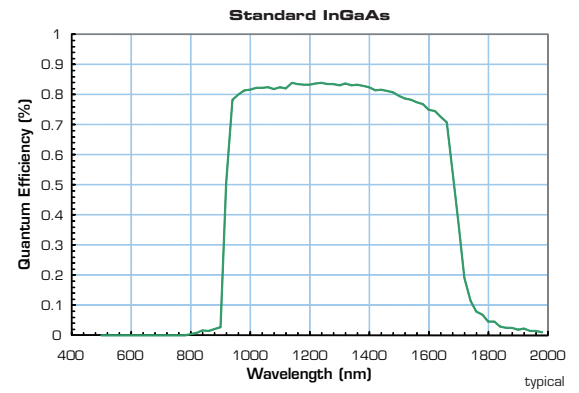
Parameter	Value	Comments
Sensor Type	InGaAs	
Format	640 × 480 (analog) 640 × 512 (digital)	Analog VGA limits to 640 × 480
Pixel Size	15 μm	
Active Area (H × V)	Analog: 0.38" × 0.28" / 9.6 × 7.2 mm	Digital: 0.38" × 0.3" / 9.6 × 7.7 mm
Active Area (Diagonal)	Analog: 0.5" / 12.0 mm	Digital: 0.5" / 12.3 mm
Active Area (Area)	Analog: 0.11"² / 69 mm²	Digital: 0.11"² / 74 mm²
Fill Factor	100%	
Spectral Response	0.6 to 1.7 μm	See QE plot to the right
Noise @ Sensor Temp = +10°C	High Gain (LNIM CDS) < 75e- Medium Gain < 210e- Low Gain < 900e-	Typical
Full Well	Low Gain = 2 Me-, High Gain (LNIM-CDS) = 7 ke-	Typical
Dynamic Range	Low Gain = 60 dB; High Gain = 47 dB	Typical
Operability	>99%	
Max. Frame Rate	30 FPS	
Image Correction	2-point (Offset/Gain) user configurable	
Image Lag	<1% frame-to-frame	Assumes no over-exposure
Digital Data	16-bit LVTTTL or Camera Link®	
Analog Output	NTSC compliant	
Mechanical/Environmental		
Weight	101 g (M42 lens mount) 131 g (C-type lens mount)vv	See Note 1 below
Dimensions	38 × 38 × 48.25 mm	See Note 2 below
Lens Mount	C-Mount or M42 mount	
Operating Temperature (full performance)	-20°C to 55°C	Full performance
Operating Temperature (degraded performance)	Between -40°C to -20°C and 55°C to 71°C	See Note 3 below
Storage Temperature	-50°C to 85°C	
Humidity	<95%	Non-condensing
Power Requirements		
DC Input Voltage	12 VDC	
Power Dissipation	4 Watts typical	At 30°C case temp

Note 1: Much of the camera weight is associated with the housing and lens mounting hardware. Custom core designs can be used to reduce this weight.

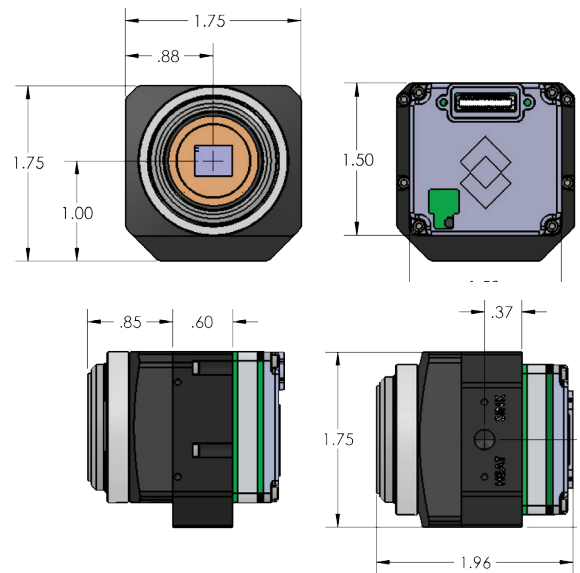
Note 2: Dimensions are typical and depend upon exact lens mount configuration chosen.

Note 3: Degraded performance results in higher random noise in high-gain mode.

Standard InGaAs



Camera Dimensions



SANTA BARBARA

FLIR Systems, Inc.
70 Castilian Drive
Goleta, CA 93117
USA
PH: +1 805.690.5097

PORTLAND

Corporate Headquarters
FLIR Systems, Inc.
27700 SW Parkway Ave.
Wilsonville, OR 97070
USA
PH: +1 866.477.3687

EUROPE

FLIR Systems
Luxemburgstraat 2
2321 Meer
Belgium
PH: +32 (0) 3665 5100

CHINA-SHANGHAI

FLIR Systems Co., Ltd.
K301-302, No 26 Lane
168, Daduhe Road,
Putuo District, Shanghai
200062, P.R.China
PH: +86-21-5169 7628

www.flir.com
NASDAQ: FLIR

Equipment described herein may require US Government authorization for export purposes. Diversion contrary to US law is prohibited. Imagery for illustration purposes only. Specifications are subject to change without notice. ©2014 FLIR Systems, Inc. All rights reserved. (Updated 071315)