

Imagine the invisible

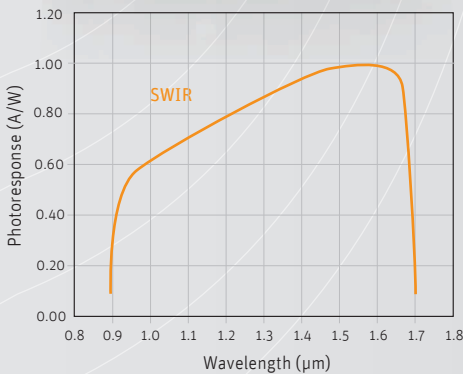
Scientific



# Xeva-1.7-320 TE3

Advanced research  
in SWIR imaging

## Stable TE3-cooled SWIR research where every photon counts



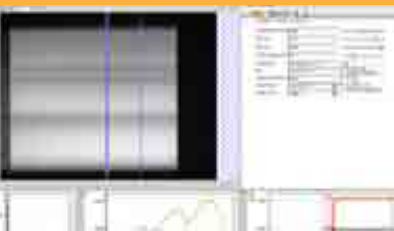
In one compact housing, the Xeva-1.7-320 TE3 digital camera combines a thermo-electrically cooled InGaAs detector head and the control and communication electronics.

The Xeva-1.7-320 TE3 unit is available with standard (up to 1.7 µm) InGaAs detector arrays and comes in various speed versions: 60 Hz, 100 Hz and 350 Hz. It allows you to choose the most suitable detector-camera configuration for your specific application.

The camera head interfaces to a PC via standard USB 2.0 or CameraLink.

Each camera is delivered with a graphical user interface Xeneth, which offers direct access to various camera settings such as exposure time and operating temperature. The software tools include two-point uniformity correction and bad pixel replacement.

### Designed for use in



⌘ R&D SWIR



⌘ Food inspection



⌘ Art inspection



### Applications

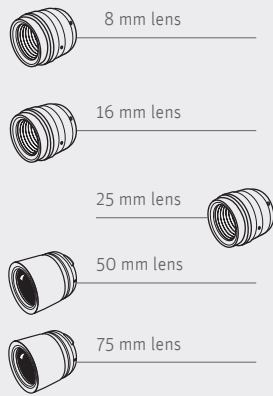
- Wafer inspection
- R&D (SWIR range)
- Hyperspectral imaging
- Low-light-level analysis
- Semiconductor inspection
- Solar cell inspection EL/PL

### Benefits & Features

- Spectrometer compatible
- Thermal imaging of hot objects
- High sensitivity for low-light conditions
- Extending SWIR imaging to the visible
- Cooled operation for low light-level imaging
- Flexible programming in an open architecture
- CameraLink and triggering for high speed imaging
- Extended coverage from SWIR into the visible range

# Broad range of accessories available to simplify your research

## ▸ Lens & filter options



## ▸ Inputs



## ▸ Outputs

## ▸ Software



- Xeneth advanced
- Xeneth SDK
- Xeneth Radiometric (optional)

## ▸ Specifications

Array specifications	Xeva-1.7-320 TE3
Array Type	InGaAs
Spectral band	Standard: 0.9 to 1.7 $\mu\text{m}$ ; Optional: 0.4 to 1.7 $\mu\text{m}$
# Pixels	320 x 256
Pixel Pitch	30 $\mu\text{m}$
Array Cooling	TE3-cooled down to 223K
Pixel operability	> 99%

Camera specifications	60 Hz	100 Hz	350 Hz
Lens (included)	16mm f/1.4		
Focal length	C-Mount, spectrograph fixation holes (Broad selection of lenses are available)		
Optical interface			
Imaging performance			
Frame rate	60 Hz	100 Hz	350 Hz
Integration type	Snapshot		
Exposure time range	1 $\mu\text{s}$ up to 100 seconds (TE3; Low gain)		
Noise level: Low gain	6 AD counts on 14 bit		
High gain	15 AD counts on 14 bit		
S/N ratio: Low gain	68 dB		
High gain	60 dB		
A to D conversion resolution	12 bit or 14 bit		
Interfaces			
Camera control	USB 2.0		
Image acquisition	USB 2.0 / CameraLink		
Trigger	TTL levels		
Graphical User Interface (GUI)	Xeneth Advanced		
Power requirements			
Power consumption	< 4 Watt, cooler: 30 Watt max		
Input voltage	12 V		
Physical characteristics			
Camera cooling	Forced convection cooling		
Ambient operating temperature	0 to 50 °C		
Dimensions	90 W x 110 H x 110 L mm <sup>3</sup>		
Weight camera head	App. 1.8 kg		
Weight power supply	300 g		

## ▸ Product selector guide

Part number	Digital output Interface	Analog interface	Frame Rate (Hz)	ADC	Xeneth Radiometric option
XEN-000101	USB 2.0	No	100	12 bit	Yes
XEN-000103		PAL			No
XEN-000160		NTSC			No
XEN-000108	CameraLink	No	60	14 bit	No
XEN-000109			100		
XEN-000110			350		