

# FLIR A315

Automation: speed up your design cycle with infrared

*The FLIR A315 camera has features and functions that make it the natural choice for anyone who uses PC software to solve problems and for whom 320 × 240 pixel resolution is sufficient. Among its main features are GigE Vision™ and GenICam™ compliance, which makes it plug-and-play when used with software packages such as IMAQ Vision and Halcon.*

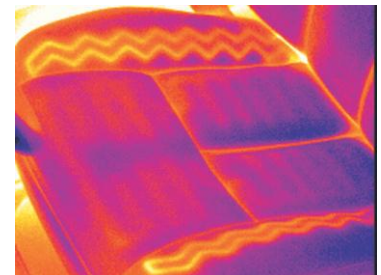


### Key Features:

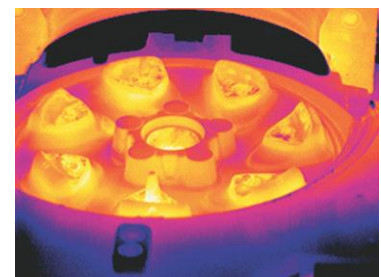
- Affordable
- GigE compliant GenICam
- compliant
- Trigg/synchronization/GPIO
- 16-bit 320 × 240 images @ 60 Hz, signal, temperature linear, and radiometric
- Compliant with any software that supports GenICam, including National Instruments IMAQ Vision and Stemmers Common Vision Blox
- Lenses: 25° included, 15° and 45° optional

### Typical applications:

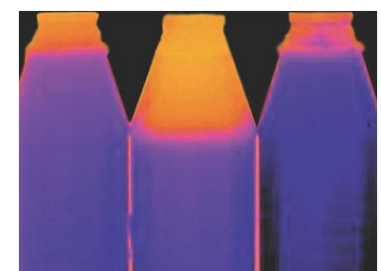
- High-end infrared machine vision that needs temperature measurement
- Slag detection Food
- processing
- Electronics testing
- Power resistor testing
- Automotive



Automotive - car seat heating



Engines manufacturing



Food processing

### IR Automation in Automobile Industry

Cars and commercial vehicles, engine manufacturing and subcontractors serving the industry:

- Soldering and welding
- Car seat heating
- Verification of window defrosting
- Heating, air conditioning functions
- Casting of plastic or metallic parts
- Quality checking of laminated parts such as dashboards
- Quality checking of leather upholstery
- Friction control of tires

### IR Automation in Electronics

Electronics design, PCB and component manufacture and electronics assembly:

- PCB testing, validation and verification
- Power electronics design
- Fault tracing in board assemblies

# FLIR A315 Technical Specifications

Imaging and optical data	
Field of view (FOV)	25° x 18.8°
Minimum focus distance	0.4m
Focal Length	18mm
Spatial resolution	1.36mrad
Lens identification	Automation
F-number	1.3
Thermal sensitivity/ NETD	<0.05°C @ +30°C/ 50mK
Image frequency	60Hz
Focus	Automatic or manual (built in motor)
Detector data	
Detector type	FocalPlane Array (FPA), uncooled microbolometer
Spectral range	7.5-13µm
IR resolution	320 x 240pixels
Detector pitch	25µm
Detector time constant	Typical 12ms
Measurement	
Object temperature range	-20°C to +120°C 0 to +350°C
Accuracy	±2°C or ±2% of reading
Measurement analysis	
Atmosphere transmission correction	Automatic, based on inputs for distance, atmospheric temperature and relative humidity
Optics transmission correction	Automatic, based on signals from internal sensors
Emissivity correction	Variable from 0.01 to 1.0
Reflected apparent temperature correction	Automatic, based on input of reflected temperature
External optics/ windows correction	Automatic, based on input of optics/ window transmission and temperature
Measurement corrections	Global object parameters
Ethernet	
Ethernet	Control and image
Ethernet, type	Gigabit Ethernet
Ethernet, standard	IEEE 802.3
Ethernet, connector type	RJ-45
Ethernet, communication	TCP/IP socket-based FLIR proprietary and GenICam protocol
Digital input/ output	
Digital input, purpose	Image tag (start/ stop/ general), Input ext. device (programmatically read)
Digital input	2 opto-isolated, 10-30 VDC
Digital output, purpose	Output to ext. device (programmatically set)
Digital output	2 opto-isolated, 10-30 VDC, max 100mA
Digital I/O, isolation voltage	500VRMS
Digital I/O, supply voltage	12/24 VDC, max 200 mA
Digital I/O, connector type	6-pole jackable screw terminal
Power system	
External power operation	12/24 VDC, 24W absolute max
External power, connector type	2-pole jackable screw terminal
Voltage	Allowed range 10-30 VDC
Environmental data	
Operating temperature range	-15°C to +50°C
Storage temperature range	-40°C to +70°C
Humidity (operating and storage)	IEC 60068-2-30/24 h 95% relative humidity +25°C to +40°C
EMC	- EN 61000-6-2:2001 (Immunity) - EN 61000-6-3:2001 (Emission) - FCC 47 CFR Part 15 Class B (Emission)
Encapsulation	IP 40 (IEC 60529)
Bump	25g (IEC 60068-2-29)
Vibration	2g (IEC 60068-2-6)
Physical data	
Weight	0.7kg
Camera size (L x W x H)	170 x 70 x 70mm
Tripod mounting	UNC1/4"-20 (on three sides)
Base mounting	2 x M4 thread mounting holes (on three sides)
Housing material	Aluminium

Scope of delivery	
Packaging, contents	Hard transport case or cardboard box Infrared camera with lens Calibration certificate Ethernet™ cable Mains cable Power cable, pig-tailed Power supply Printed Getting Started Guide Printed Important Information Guide User documentation CD-ROM Utility CD-ROM Warranty extension card or Registration card

Supplies & Accessories	
IR lens f = 30 mm, 15° incl. case	
IR lens f = 10 mm, 45° incl. case	
Close-up 4x (100 µm) incl. case	
Close-up 2x (50 µm) incl. case	
Lens 76 mm (6°) with case and mounting support for A/SC3XX	
Lens 4 mm (90°) with case and mounting support for A/SC3XX	
Close-up 1x (25 µm) incl. case and mounting support for A/SC3XX	
High temp. option +1200°C/+2192°F for FLIR T/B2XX to T/B4XX and A/SC3XX Series	
Power supply for A/SC3XX and A/SC6XX	
Power cord EU	
Power cord US	
Power cord UK	
Ethernet cable CAT-6, 2m/6.6 ft.	
Power cable, pigtailed	
Hard transport case for A/SC3XX and A/SC6XX series	
Delivery Box for A/SC3XX	
ThermoVision™ System Developers Kit Ver. 2.6	
ITC Advanced General Thermography Course – attendance, 1 pers.	
ITC Advanced General Thermography Course – group of 10 pers.	
ITC Level 1 Thermography Course – attendance, 1 pers.	
ITC Level 1 Thermography Course – group of 10 pers.	
ITC Level 2 Thermography Course – attendance, 1 pers.	
ITC Level 2 Thermography Course – group of 10 pers.	



Accessories

Specifications and prices subject to change without notice. Copyright © 2010 FLIR Systems. All right reserved including the right of reproduction in whole or in part in any form.

**LE Laboratory Equipment Sdn Bhd**  
509, Bolck A, Mentari Business Park A,  
Jalan PJS 8/5, Bandar Sunway,  
P. O. Box 3172,  
47509, Subang Jaya, Selangor Darul Ehsan  
Malaysia  
Tel: 603-5621 1036 Fax: 603-5621 1037  
Email: sales@le.com.my  
Web: www.le.com.my

