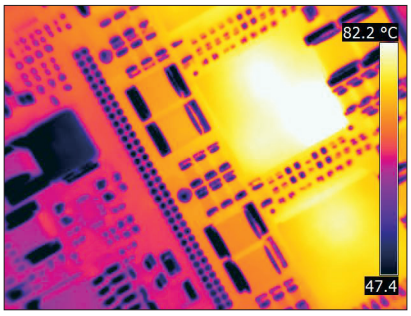
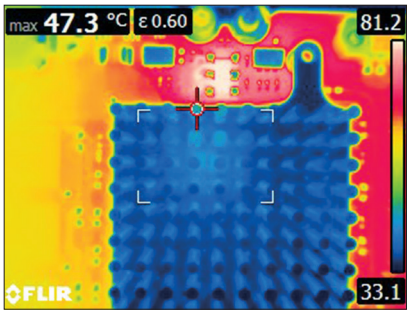
FLIR ETS320™

Thermal Imaging Solution for Electronics Testing

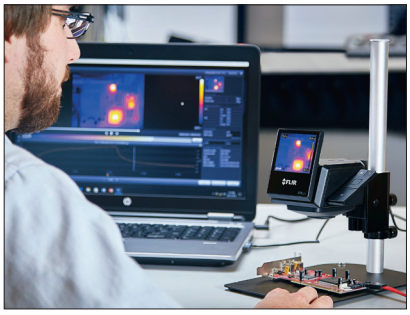
The FLIR ETS320 is an affordable solution for reducing test times and improving product design for electronic board and device evaluation. Whether the goal is R&D or product testing, heat can be an important indicator of how a system is functioning. The ETS320 helps engineers and test technicians collect accurate, reliable data in seconds and analyze it quickly.



Measure small components down to 170 µm per pixel spot size



Determine where to add or remove thermal management devices



Connect over USB a computer to analyze data in FLIR Tools+

Reduce Test Times

The FLIR ETS320 takes the guesswork out of thermal testing, for fast discovery of hot spots and potential points of failure.

- Sensitive enough to detect temperature shifts smaller than 0.06°C
- Wide temperature range, from -20°C to 250°C, for quantifying heat generation and thermal dissipation
- Measures small components down to 170 µm per pixel spot size

Improve Product Design

The FLIR ETS320 promotes design improvements and shortens product development time by detecting design flaws that materialize as heat.

- 320 x 240 IR sensor offers 76,800 points of non-contact temperature measurement
- True 45° field of view for broad initial scans to identify potential problems
- Measurement accuracy of ±3°C promotes quality assurance and factory acceptance of PCBs

Designed for Laboratory Work

The ETS320 is designed for hands-free laboratory testing, with simplified features that allow users to focus on their work instead of on the camera controls.

- Pole mount included for fast and easy setup
- Crisp 3" LCD display provides immediate thermal feedback
- FLIR Tools+ software for instant analysis, including Time vs. Temperature measurement

Key Features:

- 320 x 240 IR resolution (76,800 pixels)
- Vibrant 3" LCD display
- 45° field of view
- ±3% measurement accuracy
- Records standard radiometric JPEGs
- FLIR Tools+ software provided

Specifications

System Overview	ETS320
IR Resolution	320 x 240 (76,800 pixels)
Detector Type	Uncooled microbolometer
Spectral Range	7.5 - 13.0 µm
Thermal Sensitivity/NETD	< 0.06°C
Field of View (FOV)	45° x 34°
Fixed Focus Distance	70 mm ± 10 mm
F-number	1.5
Spot Size @ Min. Focus	170 µm
Image Frequency	9 Hz
Measurement and Analysis	
Object Temperature Range	-20°C to 250°C (-4°F to 482°F)
Accuracy	±3°C or ±3% of reading for ambient temperature 10°C to 35°C (50°F to 95°F)
Spotmeter	Center spot
Area	Box with max/min
Emissivity Correction	Variable from 0.1 to 1.0
Emissivity Table	Table of pre-defined materials
Reflected Apparent Temperature Correction	Automatic, based on input of reflected temperature
Storage of Images	
Image File Formats	Standard radiometric JPEG, 14-bit measurement data included
Video Streaming	
Radiometric IR Video Streaming	Full dynamic to PC (FLIR Tools/Tools+) using USB
Non-Radiometric IR Video Streaming	Uncompressed colorized video using USB
Data Communication Interfaces	
Interfaces	USB Micro: data transfer to and from PC and Mac devices
Power System	
Battery Type	Li-ion battery, charged in camera
Battery Operating Time	Approx. 4 hours at 25°C (77°F) ambient temperature and typical use
Charging Time	2.5 hrs to 90% capacity
Additional Data	
Display	3 in, 320 x 240 pixel color LCD
Operating Temperature Range	10°C to 40°C (50°F to 104°F)
Storage Temperature Range	-40°C to 70°C (-40°F to 158°F)
Directives and Regulations	• Battery Directive 2006/66/EC • EMI/EMC Directive 2014/30/EU • WEEE Directive 2012/19/EC • RoHS2 Directive 2011/65/EC • FCC 47 CFR Part 15 Class B • REACH Regulation EC 1907/2006
Encapsulation, Shock, Vibration	• IP 40 (IEC 60529)
Camera Weight, Incl. Battery	0.575 kg (1.27 lbs)
Camera Size (L x W x H)	22 x 15 x 30 cm (8.7 x 5.9 x 11.8 in)
FLIR ETS320 Includes:	
List of Contents	Camera, mount, stand, power supply, USB cable, FLIR Tools+ software

For the most up-to-date specifications, go to www.flir.com

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

NASHUA
FLIR Systems, Inc.
9 Townsend West
Nashua, NH 06063 USA
PH: +1 603.324.7611

CANADA
FLIR Systems, Ltd.
920 Sheldon Court
Burlington, ON L7L 5K6
Canada
PH: +1 800.613.0507

LATIN AMERICA
FLIR Systems Brasil
Av. Antonio Bardella 320
Sorocaba, SP 18085-852
Brasil
PH: +55 15 3238 7080

CHINA
FLIR Systems Co., Ltd
Rm 1613-16, Tower II
Grand Central Plaza
138 Shatin Rural
Committee Rd.
Shatin, New Territories
Hong Kong
PH: +852 2792 8955

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

www.flir.com
NASDAQ: FLIR