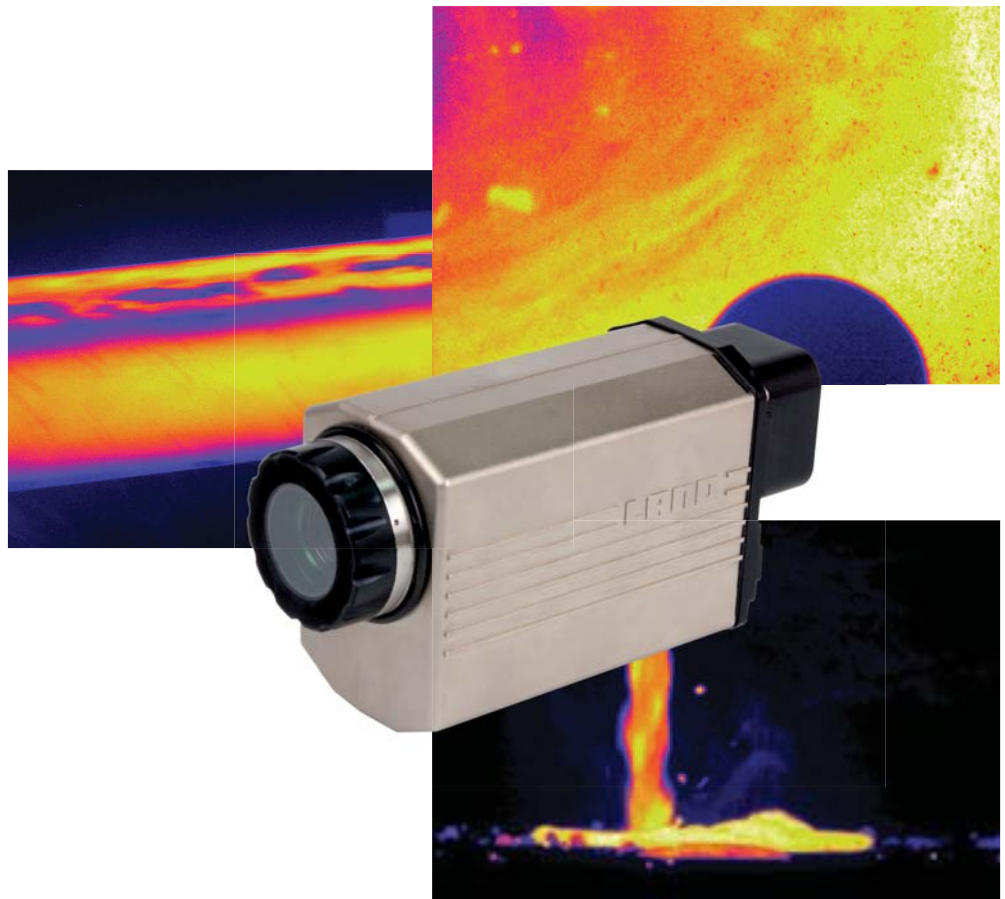


# LAND

*Thermal Imaging and Temperature Measurement for Continuous  
Process Monitoring and Quality Control*

## ***FTI-E 1000***



**Near Infrared Fixed Thermal Imaging and  
Temperature Measurement Camera**

# FTI-E 1000

NIR Fixed Thermal Imaging and Temperature Measurement Camera

**Fixed Thermal Imager for high temperature measurement and thermal imaging.**

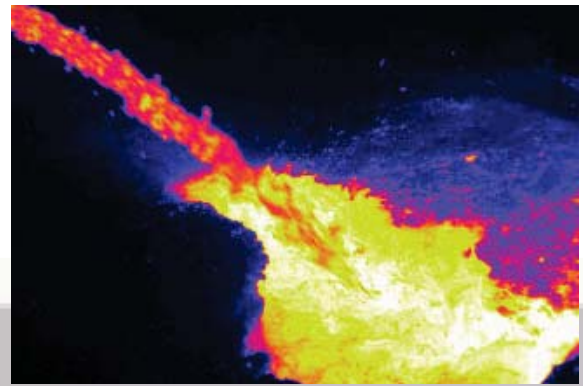
**Direct Ethernet cable connection to PC running LIPS NIR for display, recording, alarms, analysis and manipulation of thermal images**

## Intelligent Design

### Features - Benefits

- High resolution radiometric thermal imager - *giving detailed temperature information transmitted via a high speed digital connection*
- Choice of robust housing suitable for harsh industrial environments- *ensuring ultimate measurement reliability and availability*
- Choice of 4 models ranging from 600 to 3000°C / 1100 to 5400°F, plus 4 field of view options - *suitable for a wide range of applications*
- High temperature measurement accuracy - *enabling optimum process control*
- Simple installation and ease of use - *minimises cost and complexity*
- 2 Year Warranty - *guarantee of reliability*
- Export Licence Free - *rapid, hassle-free shipping*
- Range of 5 Close-up lenses (focal range from 100mm / 4in upwards) available - *match your product exactly to your application*
- NOTE: Can directly replace an existing short wavelength, high temperature spot thermometer\*

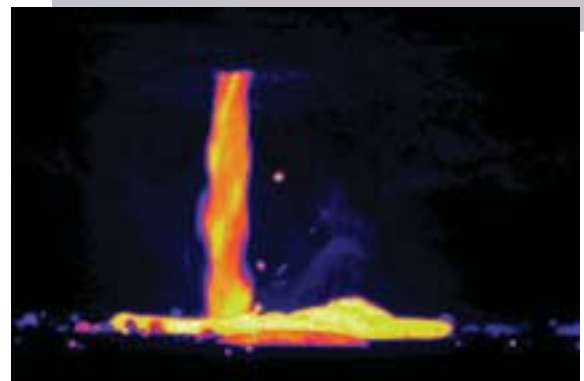
\*Example System 4 M1 thermometer



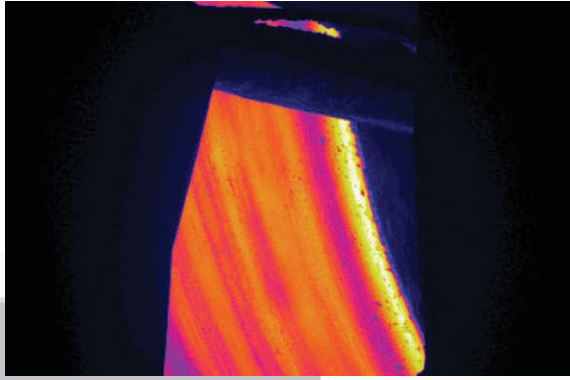
Example Application: Liquid Metals



FTI-E 1000 Camera Standard Housing



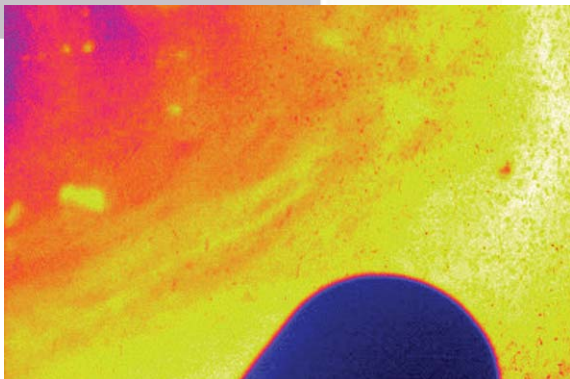
Example Application: Ladle Pouring



Example Application: Continuous Casting

## Applications

- Iron and Steel e.g. concaster
- Black Liquor Boilers
- Heat Recovery Boilers
- Cement Kilns
- Pipe welding (with close focus lenses)
- Glass
- Liquid Metals
- Coating Processes
- plus many more...



Example Application: Cement Kiln

## Intelligent Imaging

The FTI-E 1000 Thermal Imaging Camera is an integral part the LAND intelligent imaging solution, and is complemented by an extensive range of dedicated system peripherals.

### ● LAND Image Processing Software

On-line system providing flexible, application specific thermal analysis including

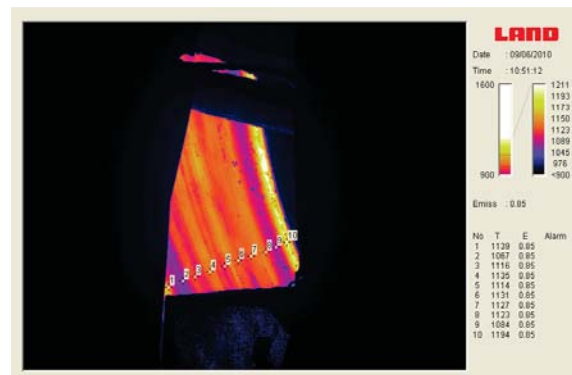
*Capture live images and video*

*3D display*

*Timed image acquisition*

*Temperature span controls*

*Profile display*



LIPS NIR - Point Measurement

*Temperature measurement: point, rectangle, polygon, isotherm, histogram, area*

*Alarms - Setting up, saving and loading settings*

*Change image properties, colour palette*

*Saving, storing, copying and printing views*

*Saving and loading config. files*

# LAND

## Specifications - Configurations

Temperature Range		Model Reference FTI-E 1000			
Lens Focal Length	8 mm*	25 mm	50 mm	75 mm	
600 to 1000°C / 1112 to 1832°F	10 - 08	10-25	10-50	10-75	
800 to 1400°C / 1472 to 2552°F	14 - 08	14-25	14-50	14-75	
1000 to 1800°C / 1832 to 3272°F	18 - 08	18-25	18-50	18-75	
1400 to 3000°C / 2552 to 5432°F	-	30-25	30-50	30-75	

## Optical Performance

Lens Type	8 mm	25 mm	50 mm	75 mm
Field of View (h x v)	44° x 33°	14.4° x 10.8°	7.2° x 5.4°	4.8° x 3.6°
Focus Range	600 mm (2') to infinity (manual focus)			
IFOV	1.2 mrad	0.40 mrad	0.20 mrad	0.13 mrad
Window material	Glass	Glass	Glass	Glass

## Close-up Lens options

Close-up Lens Ref.	G1	G2	G3	G4	G5
Focal Range mm/inch	100 to 123 / 4 to 4.85	120 to 160 / 4.7 to 6.3	150 to 215 / 5.9 to 8.5	200 to 340 / 7.8 to 13.4	250 to 495 / 9.8 to 19.5

## Imager Performance

FTI-E 1000 Scene Radiation Range	(see above) based on blackbody temperature
System Temperature Measuring Accuracy	0.5% (K) up to 1600°C/2912°F and 1% (K) above
Spectral Range	0.78 to 1.1 µm
Detector	Silicon focal plane array
Detector array format	656 x 494
Frame Frequency	30 Hz (Gigabit Ethernet)
<b>Physical &amp; Environmental</b>	
Dimensions (w x h x d)	81 x 114 x 215 mm / 3.2 x 4.5 x 8.5 inches
Weight kg / lbs	1.76 kg / 3.88 lbs
Operating Temperature Range	0 to 50°C / 32 to 122°F (non-condensing)
Storage Temperature Range	-20° to 80°C / -4 to 176°F
Operating Humidity	0 to 90 % Non-Condensing
Sealing	IP65 / NEMA 4 (with Phoenix Ethernet connector)
Vibration	3g between 10 and 30 Hz
<b>EMC Emissions and Immunity</b>	
FTI-E 1000 Interfaces	Separate sockets / lead for power and data connection
Power range	12 to 30 V dc, 3 Watts
Data Out	Digital data over Gigabit Ethernet (RJ-45)
Mountings	Two ¼" UNC mounting holes spaced 25mm apart allow it be mounted to a large range of accessories
Software	Complete Land Image Processing Software (LIPS)package for PC
Standard Accessories	Power Supply, Cables, Software, Close-up Lenses

\*8mm lens requires hot target to fill minimum of 30% of scene to achieve stated accuracy

# LAND

Land Instruments International Ltd • Dronfield S18 1DJ • England  
Email: land.infrared@ametek.co.uk • [www.landinst.com](http://www.landinst.com) • Tel: +44 (0) 1246 417691 • Fax: +44 (0) 1246 410585

AMETEK Land, Inc. • 150 Freeport Rd • Pittsburgh, PA 15238 • U.S.A.  
Email: irsales@ametek.com • [www.ametek-land.com](http://www.ametek-land.com) • Tel: +1 (412) 826 4444 • Fax: +1 (412) 826 4460

For a full list of international offices, please visit [www.landinst.com](http://www.landinst.com)

### Non-Contact Temperature Measurement Solutions

**George R. Peters Associates** ENGINEERING SALES REPRESENTATIVES

650 E. Big Beaver • Suite C • Troy, MI 48063  
(248) 524-2211 • Fax (248) 524-1758  
[www.grpeters.com](http://www.grpeters.com)



0034



001



An **AMETEK** Company

Applies in the UK

Applies in the USA