RAYTEK PROCESS IMAGING SERIES

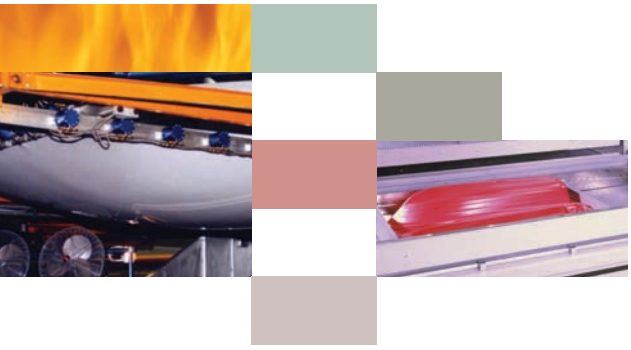
TF150

Process Imaging System for Thermoforming Processes

Thermal image from actual thermoforming application

MP150 Linescanner

Now available with 1024 datapoints per scan!



Raytek®
A Fluke Company

information@ITM.com

Raytek-Direct.ca

1.800.561.8187

Thermoforming Process Imaging System

The TF150 System allows thermoformers to visualize the temperature distribution of virtually any plastic part in a thermoforming process.

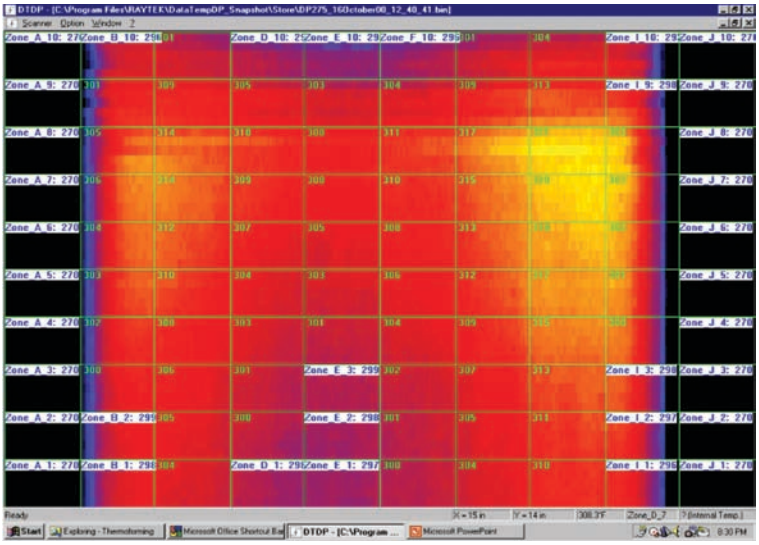
Benefits

- Significantly reduce set-up time
- Quickly find defects and failed heating elements
- Automate quality monitoring
- Reduce scrap
- Improve profitability and product quality

Features

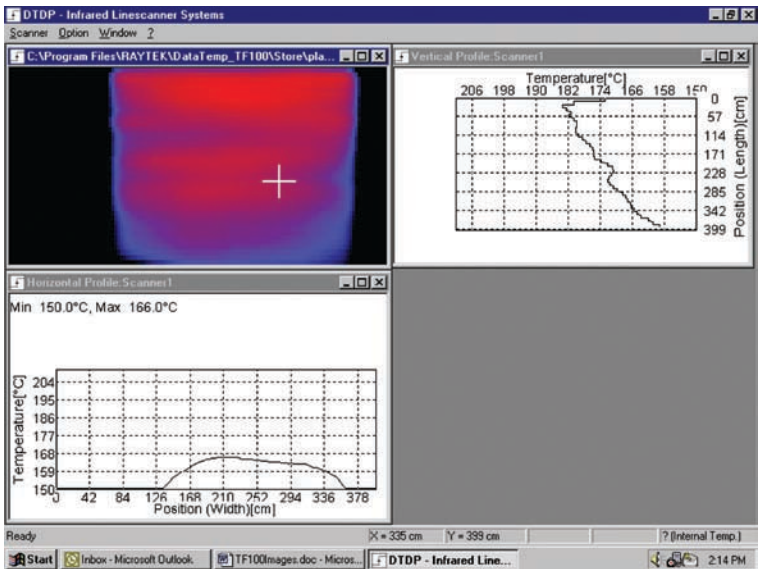
- Detailed thermal images and temperature profiles
- Thermal image distortion correction for rotary machines
- Define product-specific configurations and data files
- Heater zones overlayed on thermal image
- On board Ethernet TCP/IP communication
- Communicate zone temperatures automatically to PCL's, Excel, DASYLab or LabVIEW
- Built-in line laser sighting
- Fail-safe alarm logging
- Optional analog or digital outputs
- Languages supported: English, German, French, Finnish and Italian

The TF150 Process Imaging System displays and monitors the complete temperature distribution of every sheet.



Actual thermogram showing heater zones

The software displays each thermal image snapshot with overlaid customizable zones and zone results. 100 zones are shown (several have alarm conditions). A high-alarm appears red and a low-alarm is blue. These results can be output to your PLC or SCADA system. The software can ignore the temperature of areas lying outside of the part's thermal image (background).



Actual thermogram showing temperature profiles

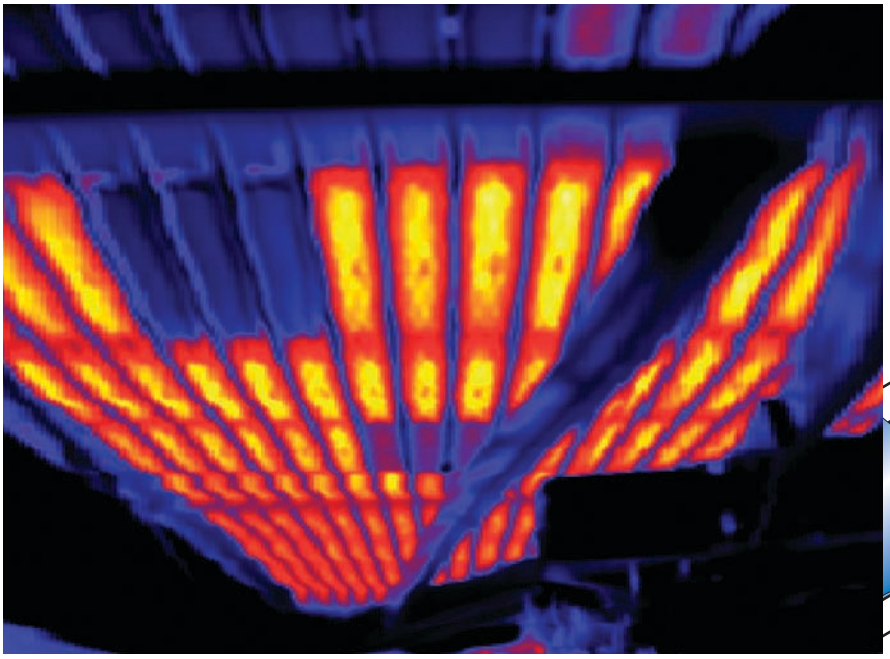
All thermal image data files can be recalled for analysis and display. As the cursor is moved around the thermal image, the spot temperature and location (x- and y- coordinates) appear on the task bar.

information@ITM.com

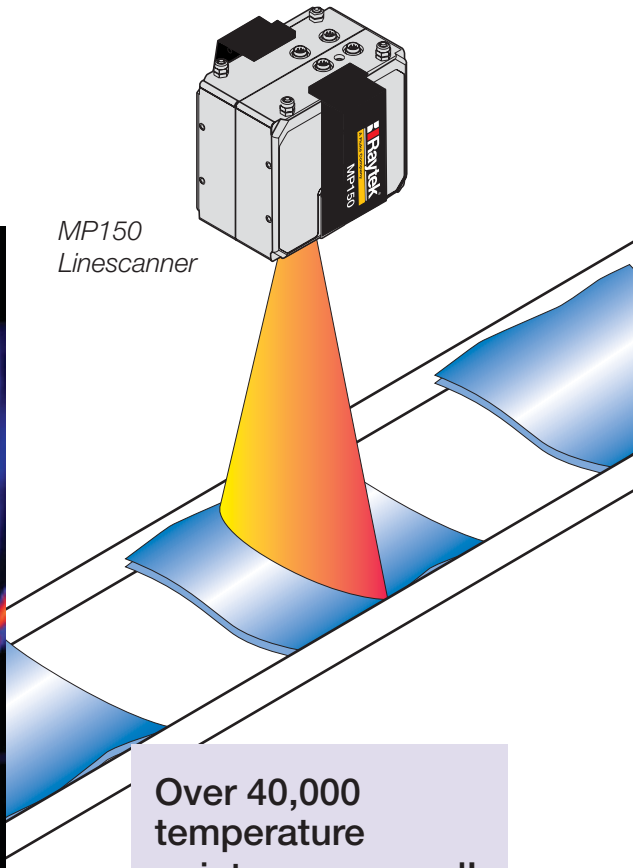
Raytek-Direct.ca

1.800.561.8187

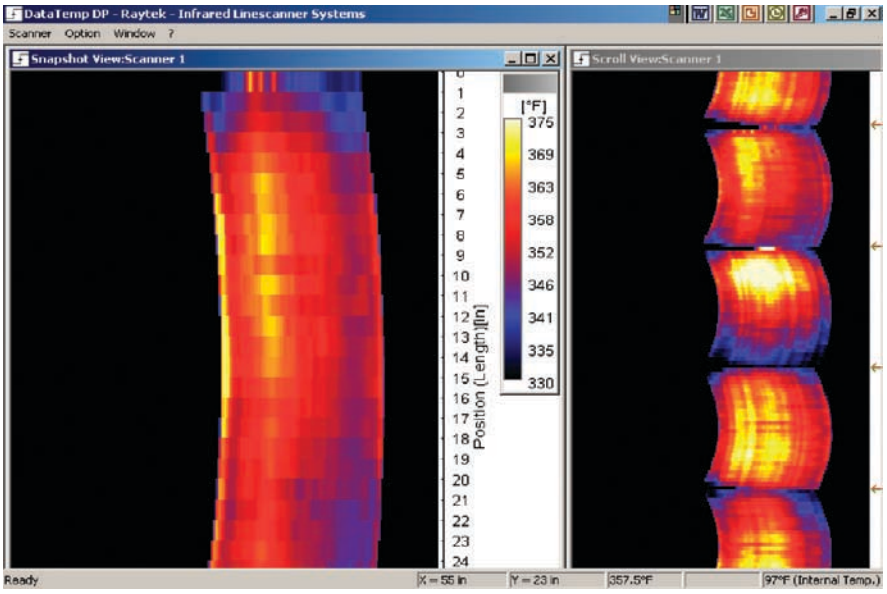
The most widely used solution for real-time process temperature imaging and analysis.



Down-time maintenance diagnostic scanning of heating elements easily identifies any problems with heater banks.



MP150 Linescanner



Individual part snapshots can be shown in a scroll view to visually identify process or material changes and problems. Note: scroll view above shows an overheated area on one part due to out of spec sheet thickness.

Over 40,000 temperature points per second!

The MP150 measures a line of up to 1024 temperature points using a rotating mirror that scans a 90° field of view up to 150 times per second. The scanning of a sheet can be initiated by the measured temperature, or by an external "trigger" signal. As the heated sheet traverses the field-of-view, a two-dimensional thermal image or "thermogram" is formed line by line. Thermal images are displayed each time a scanned sheet indexes.

Through the use of OPC (OLE for Process Control), the ES150 system acts as an OPC server and communicates with many common process control systems. This feature allows the ES150 to move beyond being just a measurement tool and becomes an integral part of the total process control system.

TF150 System

RAYTTF150LT	TF150 System with MP150LT 20 to 300°C (68 to 572°F), 3 to 5 microns
RAYTTF150MT	TF150 System with MP150MT 100 to 800°C (212 to1472°F), 3.9 microns
RAYTTF150G5	TF150 System with MP50G50 100 to 950°C (212 to 1742°F), 5 microns
RAYTTF150P30	TF150 System with MP50P30 30 to 250°C (86 to 482°F) 3.43 microns
RAYTTF150P31	TF150 System with MP50P31 100 to 350°C (212 to 662°F) 3.43 microns

TF150 Specifications

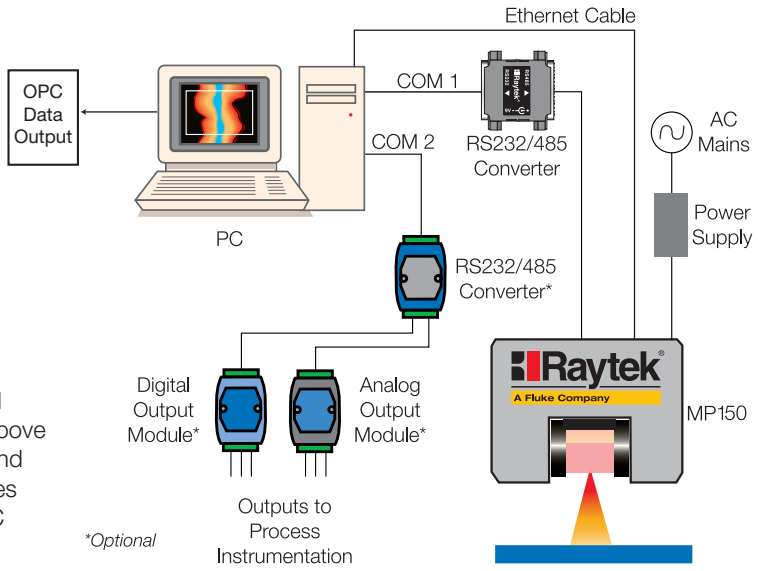
System Accuracy	±2°C (±4°F)
Optical Resolution	150:1 (90% energy)
Ambient Temperature	0 to 50°C (32 to 122°F)
Field of View (FOV)	45° or 90° (selectable)
Number of Temp. Points	256 points @ 150Hz 512 points @ 80Hz 1024 points @ 40Hz
Scan Rate	up to 150Hz
Physical Dimensions	200 x 180 x 190 mm 7.9 x 7.1 x 7.5 in
Weight	7 kg (15.5 lbs)

Options and Accessories

Part Number	Description
XXXTMP50ACCC	MP50 carrying case
XXXTMP50485CB10	10m RS485 cable extension
XXXTMP50PSCB10	10m Power cable extension
XXXTMP50ETH10	10m Ethernet cable extension
XXXMP50ACMP	Mounting plate for adjustable mounting base (or tripod)
XXXTMP50ACRMB	Adjustable mounting base
XXXSYS16DA	Digital Output Module (16 channel, open collector)
XXXSYS4AA	Analog Output Module (4 channel, mA or V)
XXXSYS485CV	RS232/RS485 Converter (needed for output modules)
XXXTMP50ACTB	Terminal Box (for electronically triggering snapshots)

Easy Installation

The MP150 Linescanner installs easily... just like a camera, and views the sheet between the oven and forming sections from above or below. Connecting the pre-wired cables (included) to a PC and entering installation dimensions in the TF150 Software completes the installation process. The MP150 connects to a standard PC operating Windows® NT4, Windows®XP, Windows® 2000. Optional analog and digital (open collector) output modules.



The Worldwide Leader in Noncontact Temperature Measurement

Raytek Corporation
Worldwide Headquarters
Santa Cruz, CA USA
Tel: 1 800 227 8074 (USA and Canada, only)
1 831 458 1110
solutions@raytek.com

European Headquarters

Berlin, Germany	France	United Kingdom
Tel: 49 30 4 78 00 80	Tel: 0800 888 244	Tel: +44 1908 630 800
raytek@raytek.de	*info@raytek.fr*	*ukinfo@raytek.com*

China Headquarters
Beijing, China
Tel: 8610 6438 4691
info@raytek.com.cn

To find a Raytek office near you, please visit www.raytek.com

Worldwide Service
Raytek offers services, including repair and calibration.
For more information, contact your local office or e-mail: support@raytek.com

Raytek is an ISO 9001 certified company

www.raytek.com