Continuous measurements of low-level particulate matter (PM) concentration in stacks and ducts where there are no condensed water droplets. Can be used as a PM-CEMS or PM-CPMS. (Available in the US and China only)

**ARC IMAGER**
Low temperature, rugged process thermal imager. Used for ladles, refractory wear and safety.

**LSP-HD**
High speed linescanner providing detailed thermal images. LSP-HD 11 used at the caster exit, LSP-HD 19 used at the crop shear, rougher, and finisher, LSP-HD 21 used at the coil, continuous annealing and hot dip galvanize line, and LSP-HD 61 used at the top roll.

**NIR-B**
Short wavelength non-contact borescope thermal imager with high resolution images and through-the-wall design to provide a wide HD degree view. Used in natural gas fired reheating furnaces.

**4200+**
Accurate and stable opacity monitor for non-compliance applications. Used for stack gas emissions.

**4650-PM**
Continuous measurements of low-level particulate matter (PM) concentration in stacks and ducts where there are no condensed water droplets. Can be used as a PM-CEMS or PM-CPMS. (Available in the US and China only)

**LANCOM 4**
Portable gas analyzer featuring up to 9 sensors for emissions measurement and combustion optimization. Used for stack emission monitoring.

**9100**
Cross stack, in-situ carbon monoxide monitor for direct continuous measurement to provide efficient combustion control of any boiler system.

**1095**
Single spot non-contact pyrometers with high accuracy and fast response. M05 model used for the blast furnace tap measurement; M1, R1, U1, V1 used for the caster exit, crop shear, rougher and finisher; M2 and M3 used at the coiler; M2 and U2 used at the continuous annealing line; and M1 Target Orbiter used at the Stelmor coiler.

**IQ SERIES/SOLONET**
Single spot non-contact pyrometers with three measurement modes for extrusion, quench and strip. Used at extruder, quench and strip mills.

**ARC IMAGER**
Low temperature, rugged process thermal imager. Used in the cold rolling mill.

**LSP-HD**
High speed linescanner providing detailed thermal images. LSP-HD 60 used for thermoforming; LSP-HD 61 used for extruders and PET Preforms; and LSP-HD 71 used for thin plastics.

**PLASTICS**
Handheld non-contact spot pyrometers with high accuracy. C100 used in coke oven battery flues; C50 used for dirty gases; and C190L used for the refractory furnace using dirty fuels.

**CYCLOPS L**
Handheld non-contact spot pyrometers with high accuracy. C100L used in coke oven battery flues; C390L used for the reheat furnace using dirty fuels.
PRODUCT GUIDE

CDA INCINERATOR PYROMETER

Single spot non-contact pyrometers designed for measurement of the atmospheric temperature in waste incinerators.

HotSpotIR

High speed linescanner which detects small hot inclusions on coal conveyors. Also available in ATEX versions.

LANCOM 200

Portable gas analyzer featuring up to 9 sensors for emissions measurement and combustion optimization. Used for stack emission monitoring.

9100

Cross stack, in-situ carbon monoxide monitor for direct continuous measurement to provide efficient combustion control of any boiler system.

4200+ M

The best opacity monitor for compliance measurements to PS-1 and ASTM D6216. Used for stack gas emissions.

FTI-EB

A process thermal image used for coal fired boilers to check boiler tube and refractory deterioration and burner performance.

LANCOM 4

Portable gas analyser featuring up to 9 sensors for emissions measurement and combustion optimization. Used for stack emission monitoring.

LSP-HD

High speed linescanner providing detailed thermal images. LSP-HD 50 used on the lehr and for tempering operations.

WDG 1200-1210

In-situ oxygen probe for combustion optimization, featuring integrated control and display electronics. Mounted on the stack.

4650-PM

Continuous measurements of low-level particulate matter (PM) concentration in stacks and ducts where there are no condensed water droplets. Can be used as a PM-CEMS or PM-CEMS. (Available in the US and China only)

4650-PM

Continuous measurements of low-level particulate matter (PM) concentration in stacks and ducts where there are no condensed water droplets. Can be used as a PM-CEMS or PM-CEMS. (Available in the US and China only)

APPLICATION

DEDICATED

Single spot non-contact pyrometers designed for specific applications. Model FG for forehearth, FLT5A for routine lehr, SPM Deposition Monitoring - VDT.

IQ SERIES/ SOLONET

Single spot thermometers with high accuracy and are cost efficient. K’s used at the tin bath.

SYSTEM 4

Single spot non-contact pyrometers with high accuracy and quick response. M3 used in the melt tank, M1 Fiberoptic used at the refiner, canal and gob; M3 and M3 used at the tin bath.

CYCLOPS L

Handheld non-contact spot pyrometers with high accuracy - C100G used on the lehr and for tempering operations.

LSP-HD

Handheld non-contact spot pyrometers with high accuracy - C100G used on the lehr and for tempering operations.

NIR-B GLASS

Short wavelength radiometric infrared linescanner imaging camera, designed to produce high definition (512 x 404 pixel) thermal images, along with providing accurate temperature measurements from any selected points in the image. Used in the melt tank.

4200+

Accurate and stable opacity monitor for non-compliance applications. Used for stack gas emissions.

4500 MKIII

The best opacity monitor for compliance measurements to PS-1 and ASTM D6216. Used for stack gas emissions.

LANCOM 4

Portable gas analyser featuring up to 9 sensors for emissions measurement and combustion optimization. Used for stack emission monitoring.

CYCLOPS L

Handheld non-contact spot pyrometers with high accuracy. C100G used for the melt tank port arch and bridge wall.

LSP-HD

High speed linescanner providing detailed thermal images. LSP-HD 50 used on the lehr and for tempering operations.

G L A S S

NIR-B GLASS

Short wavelength radiometric infrared linescanner imaging camera, designed to produce high definition (512 x 404 pixel) thermal images, along with providing accurate temperature measurements from any selected points in the image. Used in the melt tank.

4200+

Accurate and stable opacity monitor for non-compliance applications. Used for stack gas emissions.

4500 MKIII

The best opacity monitor for compliance measurements to PS-1 and ASTM D6216. Used for stack gas emissions.

LANCOM 4

Portable gas analyser featuring up to 9 sensors for emissions measurement and combustion optimization. Used for stack emission monitoring.

CYCLOPS L

Handheld non-contact spot pyrometers with high accuracy. C100G used on the lehr and for tempering operations.

LSP-HD

High speed linescanner providing detailed thermal images. LSP-HD 50 used on the lehr and for tempering operations.

NIR-B GLASS

Short wavelength radiometric infrared linescanner imaging camera, designed to produce high definition (512 x 404 pixel) thermal images, along with providing accurate temperature measurements from any selected points in the image. Used in the melt tank.

4200+

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Portable gas analyser featuring up to 9 sensors for emissions measurement and combustion optimization. Used for stack emission monitoring.

CYCLOPS L

Handheld non-contact spot pyrometers with high accuracy. C100G used on the lehr and for tempering operations.

LSP-HD

High speed linescanner providing detailed thermal images. LSP-HD 50 used on the lehr and for tempering operations.

G L A S S
**FORGING/HEAT TREATMENT**

**IQ SERIES/HEAT TREATMENT**

Single spot thermometers with high accuracy and are cost efficient. R21 used at the forging press.

**SPOT**

Single spot non-contact pyrometers with multiple operating modes and outputs. Range of single and multiple wavelength models for use at reheat furnace, forging press, induction heating and flame hardening.

**SYSTEM 4**

Single spot non-contact pyrometers with high accuracy and quick response. The R1 Fiberoptic used for monitoring ingot growth. Available in ATEX versions.

**CYCLOPS L**

Handheld non-contact spot pyrometers with high accuracy. C100L is used at the forging press and reheat furnace.

**NIR-B**

Short wavelength non-contact borescope thermal imager with high resolution images and through-the-wall design to provide a wide 90 degree view. Used for tube wall measurement in refineries. ATEX and IECEx approved.

**RTBA**

Single spot non-contact pyrometers designed for use in roadstone and tarmac production for moving materials, webs or inaccessible objects.

**MINERALS**

**4200+**

Accurate and stable opacity monitor for non-compliance applications. Used for stack gas emissions.

**4500 MkIII**

The best opacity monitor for compliance measurements to PS-1 and ASTM D6216.

**ARC IMAGER**

Low temperature, rugged process thermal imager. Used for critical vessel refractory monitoring.

**LANCOM 4**

Portable gas analyser featuring up to 9 sensors for emissions measurement and combustion optimisation. Used for stack emission monitoring.

**MILLWATCH/SILWATCH**

Carbon monoxide monitors for early warning of possible fires in mills and storage sites.

**POLYSILICON**

**SYSTEM 4**

Single spot non-contact pyrometers with high accuracy and quick response. The R1 Fiberoptic used for monitoring ingot growth. Available in ATEX versions.

**NIR IMAGER**

High temperature process imager providing high resolution images. Used for monitoring input growth.

**PETROCHEMICALS / HYDROGEN REFORMING**

**FTI-E**

A process thermal imager used for tube measurement in heaters with dirty fuels.

**ARC IMAGER**

Low temperature, rugged process thermal imager. Used for critical vessel refractory and constant flare stack flame monitoring. Available in ATEX versions.

**CYCLOPS L**

Handheld non-contact spot pyrometers with high accuracy. C100L is used in heaters and reformers for tube measurement.

**LANCOM 4**

Portable gas analyser featuring up to 9 sensors for emissions measurement and combustion optimisation. Used for stack emission monitoring.

**HotSpotIR**

High speed linescanner which detects small, hot objects. High speed alarms. Used for supercalender roll cover monitoring.

**LSP-HD**

High-speed linescanner providing detailed thermal images. LSP-HD 60 used at the dryer exit and for supercalender roll cover monitoring.

**PAPER/NON WOVENS**

**ARC IMAGER**

Low temperature, rugged process thermal imager for critical vessel refractory monitoring.

**LSP-HD**

High-speed linescanner providing detailed thermal images. LSP-HD 60 used at the dryer exit and for supercalender roll cover monitoring.

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*THE LATEST TECHNOLOGIES UTILIZED IN THE SPOT FAMILY MAKE NON-CONTACT TEMPERATURE MEASUREMENT ACCURATE, FLEXIBLE AND EASY TO USE.*
PRODUCT GUIDE

PAPER/NON WOVENS

9100
Cross stack, in-situ carbon monoxide monitor for direct continuous measurement to provide efficient combustion control.

4500 MkIII
The best opacity monitor for compliance measurements to PS-1 and ASTM D6216. Used for stack gas monitoring.

4650-PM
Continuous measurements of low-level particulate matter (PM) concentration in stacks and ducts where there are no condensed water droplets. Can be used as a PM-CEMS or PM-CPMS. (Available in the US and China only)

LANCOM 4
Portable gas analyzer featuring up to 9 sensors for emissions measurement and combustion optimization. Used for gas stack emissions.

WDG 1200-1210
Insitu oxygen probe for combustion measurement, featuring integrated control and display electronics. Mounted on the stack or downstream of particulate control equipment.

CEMENT

HotSpotIR
High speed linescanner which detects small hot clinker inclusions on conveyors.

4500 MkIII
The best opacity monitor for compliance measurements to PS-1 and ASTM D6216.

SPOT
Single spot non-contact pyrometers with multiple operating modes and outputs. R100 used at burning zone.

LSP-HD
High speed linescanner providing detailed thermal images. LSP-HD 60 used for rotary kiln shell.

NIR-B
Short wavelength non-contact borescope thermal imager with high resolution images and through-the-wall design to provide a wide 90 degree view. Used in the kiln burning zone.

4650-PM
Continuous measurements of low-level particulate matter (PM) concentration in stacks and ducts where there are no condensed water droplets. Can be used as a PM-CEMS or PM-CPMS. (Available in the US and China only)

MILLWATCH/SILOWATCH
Carbon monoxide monitors for early warning of possible fires in mills and storage silos.

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