



NIR-656 & NIR-2K

Thermal imaging solutions

Near-infrared thermal imaging offers precise online temperature measurement and high resolution images to identify hot and cool spots for process optimisation and early detection of deviations.

A clear view of the process is provided to the operator, while at the same time the process temperatures are precisely captured, documented, and also used for online process control.

LAND cameras provide resolutions of up to 3 million fully radiometric calibrated camera pixels, temperature ranges from 600 - 1800 °C / 1112 - 3272 °F, and a choice of different optics for a wide range of industrial processing applications. Wide- and narrow-angle lenses are available to suit the required field of view.

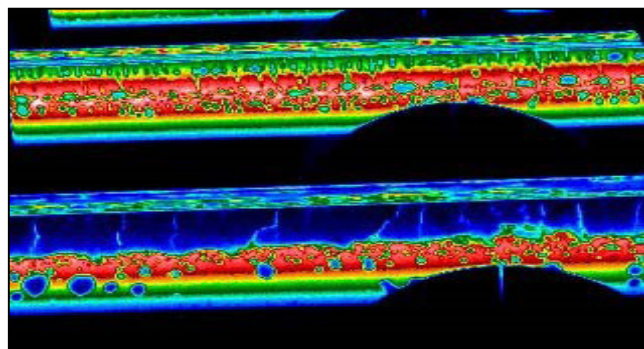
MODELS AVAILABLE

NIR-656: 656 x 492 pixels gives 322,752 temperature points at 30 Hz

NIR-2K: 1968 x 1476 pixels gives 2,904,768 temperature points at 15 Hz

The supporting ImagePro image and data processing and control software facilitates long term data trending, early detection of temperature variations while allowing full process control and optimisation to be achieved. The advanced open data interface allows easy configuration of multiple communications with plant and process control systems.

NIR-656 & NIR-2K are high resolution near-infrared thermal imaging cameras suitable for a range of applications like induction heating, heat treatment, forging & more.



FEATURES & BENEFITS

- **High resolution and accuracy** to give detailed temperature information, up to 3 million image pixels are transmitted via a high speed digital connection.
- **Accessories suitable for harsh industrial environments** to ensure ultimate reliability and availability.
- **12 camera models covering different pixel resolutions with wide or narrow fields of view** enabling optimum process control for a wide range of applications.
- **Advanced ImagePro software** enables full remote control of the camera to monitor and control the process at a safe distance.
- **Simple installation and operation**, when coupled with the ImagePro software, costs and complexity are minimised.

See degrees differently.

SPECIFICATIONS

	NIR-656	NIR-2K
IMAGER PERFORMANCE		
Measurement Range:	600 to 1000 °C / 1112 to 1832 °F 800 to 1400 °C / 1472 to 2552 °F 1000 to 1800 °C / 1832 to 3272 °F	
Pixel Resolution:	656 x 492	1968 x 1476
Spectral Response:	1 μm	
Frame Rate:	30 Hz	15 Hz
Detector:	FPA - Semiconductor	
Optic (HFOV x VFOV):	48° x 36° 16° x 12°	
Optic (IFOV):	1.28 mrad (48°) / 0.43 mrad (16°)	1968 x 1476: 0.43 mrad (48°) / 0.14 mrad (16°)
Focus Range:	0.3 m to infinity	
Protection Window:	Glass (low thermal expansion)	
Accuracy:	< 0.5 %K (600-1000 °C, 800-1400 °C) / < 1 %K (1000-1800 °C) < 0.5 %K (1112-1832 °F, 1472-2552 °F) / < 1 %K (1832-3272 °F)	
Repeatability:	1K	
MECHANICAL & ENVIRONMENTAL		
Dimensions:	81 x 114 x 215 mm (3.2 x 4.5 x 8.5 inch)	
Weight:	approx. 1.5 kg (3.3 lbs)	
Operating Temperature:	0 to 50 °C (32 to 122 °F) non-condensing (0 to 90 % humidity)	
Storage Temperature:	-20 to 80 °C (-4 to 176 °F)	
Environmental Rating:	IP65 / NEMA 4	
Vibration and EMC:	Vibration 3g in all axes 10-30 Hz EMC to EN61326-1 industrial	
Mounting:	2x ¼" UNC mounting holes spaced 25 mm apart allow it to be mounted to a large range of accessories	
ELECTRICAL		
Connections:	Power supply, Ethernet communications (switch), Fibre optic data connection (option)	
Status-LED:	Power (ON, green) / Camera Temperature/Ambient (OK, green)	
Interfacing:	Gbit-Ethernet	
Power Rating:	24 V DC / < 4 W	
IMAGE PROCESSING		
Software:	ImagePro - Advanced Image Processing and Controlling Software	
Workstation:	PC-Workstation (option)	
Interfacing:	Open Data Interface, Modbus TCP, Moxa I/O unit	
STANDARD ACCESSORIES		
Accessories (optional):	Power supply, cables, water cooled/purged enclosure, software, workstation	

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