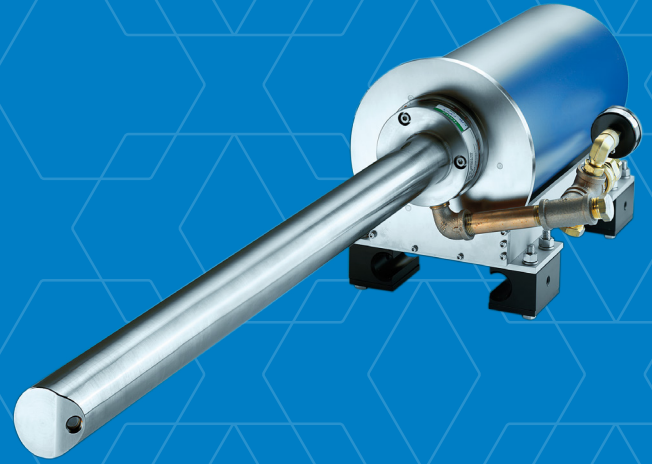




## HIGH TEMPERATURE CAMERA

# M555™ HR

## High Temperature Spyrometer® Camera



**The M555 HR High-Temperature Spyrometer\* Camera is a sophisticated dual wavelength, Infrared (IR) non-contact pyrometer and imaging system designed for industrial use.**

The M555 HR Camera enhances operational efficiency and flexibility in industrial settings. High-definition lens optics deliver superior image quality, essential for accurate process monitoring and control. Patented dual wavelength pyrometric technology ensures the highest accuracy in real-time temperature measurements for early problem detection to minimize downtime and related costs.

Able to manage up to 32 customizable temperature zones, the M555 HR Camera offers unparalleled process control, while maintaining optimal video capture speed. A user-friendly interface simplifies effective data management and analysis. Supporting multiple cameras and displays, the M555 HR Camera provides a scalable and flexible monitoring solution. It is compatible with Windows 10, ensuring robust security and future-proof operations, while its efficient air-cooling system offers sustainability by reducing power consumption in high-temperature environments.

### **Precision-Engineered for High-Temperature Applications**

Designed for high-temperature environments, the M555 HR Camera delivers precision and durability with accurate temperature measurements even at extreme temperatures, providing high accuracy readings from 427 °C to 1816 °C.

### **Targeted Hot Spot Analysis for Optimal Kiln Operations**

Real-time temperature monitoring capabilities allow for continuous data collection with high accuracy, facilitating immediate adjustments to kiln operations for optimal process control. With a narrower field of view, the camera focuses on specific hot spots within the kiln, capturing detailed temperature measurements crucial for maintaining product quality.

## FEATURES

- ✓ Leverages trusted, precise Quadtek™ Spyrometer® technology
- ✓ Patented dual wavelength pyrometric technology
- ✓ High-definition with 1080p resolution for better image quality
- ✓ Modular design for ease of serviceability
- ✓ True color VGA image
- ✓ High-accuracy, real-time temperature measurements
- ✓ Up to 32 customizable temperature measurement zones
- ✓ Enhanced user interface to simplify operations
- ✓ Real-time on-screen instrumentation graphing
- ✓ Support of up to two cameras/displays
- ✓ User configurable settings for application needs
- ✓ Image capture/storage capabilities
- ✓ Supports legacy D/I output, modbus or Internet temperatures
- ✓ Compatible with Windows 10 network/security requirements
- ✓ Fiber optic signal conversion availability
- ✓ Efficient air-cooling and water-cooling system available for >1800 °C
- ✓ Requires less air cooling, reducing electrical power consumption in certain applications
- ✓ Improved iris control options for clearer image under changing lighting conditions

\*USA Patent 6,667,761

### **Improved User Experience**

The M555 HR Camera features an improved user experience, including an enhanced user interface to simplify operations. Users can take advantage of real-time on-screen instrumentation graphing for varying operator application needs. The interface includes capabilities for improved onscreen trending, support for multiple cursors and exact measurements on trend.

## KEY APPLICATIONS

- Rotary Kilns**  
 Monitor cement and lime kiln product and temperatures. Identify potential kiln upsets early. Interface temperatures to your DCS.
- Cement Clinker Coolers**  
 Monitor the cooler for red rivers and upset conditions. Optimize cooling patterns by measuring clinker temperature on the grate. Aids in reducing equipment breakdown and refractory degradation. Obtain continuous visual of clinker depth and relation to grate speed changes.
- Fossil Utility Boilers**  
 Observe flame shape and temperature of each burner. Assign a temperature cursor to each flame to aid in controlling NOx levels.
- Steel Reheat Furnaces**  
 Identify areas of non-uniform heating and adjust product speed or combustion accordingly. Position temperature cursors to accommodate size and shape of the load.
- Glass**  
 View for flame impingement and product flow. Accurately measure refractory temperatures.
- Copper Casting Wheels**  
 Optimize metal flow to the casting mold while monitoring from the control room. Measure temperature of metal in casting spoons.

## Specifications and Performance

Pyrometer Sensor		
Pyrometry Options	Dual wavelength Infrared (IR) ratio pyrometry using narrow bands centered at 0.8 and 1.6 microns:	/TR1_554: 663 - 1255 °C (1225 – 2291 °F) /TR2_554: 848 - 1816 °C (1558 – 3301 °F) /TR3_554: 750 - 1450 °C (1382 – 2642 °F)
	Single wavelength Infrared (IR) pyrometry using a narrow band centered at 1.6 microns:	/TR2_553: 427 - 1371 °C (800 – 2500 °F)
Temperature Accuracy	±1.0% Full Scale	
Spot Size	Approximately 1/24 of horizontal image width	
Spatial Scan Resolution	47 horizontal x 35 vertical width of the image	
Scan Rate	Scan speed varies with size and number of TMZs or via operator adjustment	

Lens	
Construction	Air or water-cooled 304 stainless steel outer shroud; sapphire window for max. environmental protection. Straight viewing(/L) versions available.
Diameter	/L: 38 mm (1.5 in.)
Cooling Requirements	Instrument quality air*, 25-40 SCFM (12–19 dm <sup>3</sup> /sec) @ 5-15 psig (34-103 kPa), required for straight lens
Thermocouple	/TJ: Type J thermocouple option; /TK: Type K thermocouple option
Front Objective Field of View	90° HFOV 75° HFOV 50° HFOV 35° HFOV

Length	Straight Lens	Water Cooled Lens
18 in.	✓	
24 in.	✓	✓
30 in.	✓	✓
36 in.	✓	✓
42 in.	✓	
48 in.	✓	✓

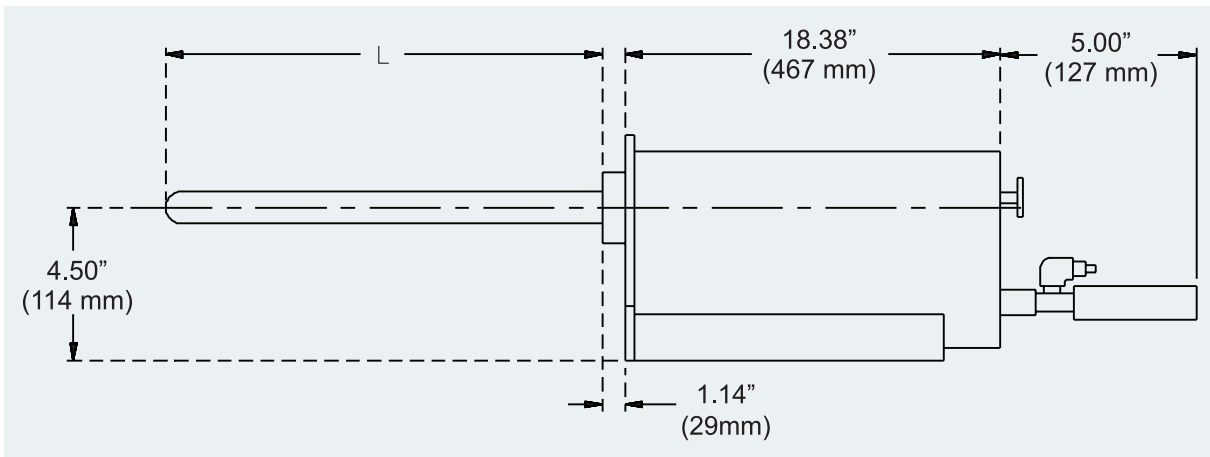
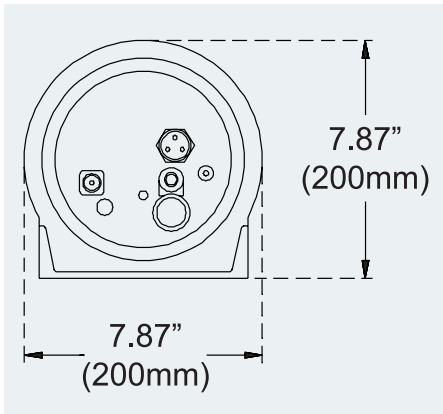
\*To ISO 8573-1, Class 1•7•2

Camera	
Power	115-230 V ac, 50/60 Hz
Detector	Solid state color image sensor
System Resolution	>300 lines in the center of the image
Video	.0V p-p, 75 ohm, CCTV signal /VTN: NTSC or /VTP: PAL video timing selected at time of order
Control	Iris adjustment on rear of unit; remote iris adjustment from the processor
Application Filter	Filters are provided to match your process and maximize performance. Contact your Sales Representative

Mechanical	
Video Output Jack	Female PL-259 "UHF" type
Power Input Jack	Removable waterproof miniplug (JOY type TP, female 3-conductor; mating power cord provided)
Enclosure Cooling Input	1/4 in. brass quick-disconnect nipple; mating coupler (Snaptite BVHC4-4F) provided
Lens Cooling Input	1/2 in. brass quick-disconnect nipple; mating coupler (Snaptite BVHC8-8F) provided
Weight	14 kg (30 lb) for standard air-cooled configuration

Enclosure	
Construction	/CEI: Corrosion-resistant, insulated, air-cooled, NEMA 4; /CEW: Corrosion-resistant, water-cooled, NEMA 4
Cooling Type	Vortex cabinet cooler, 25 SCFM @ 100 psi (13 dm <sup>3</sup> /sec @ 690 kPa); instrument-quality air required or water-cooled option available
Ambient Environment	Max. 140 °F (60 °C) with negligible radiant heat load. Water-cooled option available to handle high radiant heat environment

## Dimensions



Copyright © 2024 Mirion Technologies, Inc. or its affiliates. All rights reserved. Mirion, the Mirion logo, and other trade names of Mirion products listed herein are registered trademarks or trademarks of Mirion Technologies, Inc. or its affiliates in the United States and other countries. Third party trademarks mentioned are the property of their respective owners.