

Features

- 160 x 120 infrared resolution (19,200 pixels)
- 3.5" color TFT LCD touch screen with sun visor
- Built-in laser and white LED flashlight
- Video recording with voice annotations
- 4 image modes (infrared/visual camera/infrared overlay/picture in picture)
- Choice of 6 color palettes
- Expandable memory (Micro SD)
- Rechargeable li-ion battery
- Tripod mountable for continuous long-term monitoring
- Low battery indicator and auto shut off
- Includes 7.5mm lens and cap, micro SD memory card, video output and USB cable, headset, hood, tripod adapter, shoulder strap, two rechargeable batteries, AC adapter, software and hard carrying case

TECHNICAL DATA



Specifications

Imaging and Optical

Field of View (FOV): 29.8 x 22.6°
 Minimum Focus Distance: 0.2m (0.66')
 Spatial Resolution: (IFOV) 3.33 mrad
 Thermal Sensitivity (NETD): <0.08°C (80mK)
 Image Capture Frequency: 50Hz
 Focus: Manual

Measurement

Temperature Range: Low Range: -4 to 302°F (-20 to 150°C)
 High Range: 32 to 752°F (0 to 400°C)
 Accuracy: ±3.6°F (2°C) or ±2% of reading
 Resolution: 0.1 or 1°F/°C

Detector

Detector Type: Uncooled microbolometer,
 Focal plane array (FPA)
 Spectral Range: 8 to 14µm
 IR Resolution: 160 x 120 (19,200 pixels)

Image Presentation

Display: 3.5" color TFT touch screen
 Image Modes: IR image, visual image,
 picture in picture
 Picture in Picture: IR area on visual image or
 visual image area on IR
 Color Palettes: 6 (Gray/Gray Inverse/Iron/
 Iron Inverse/Rainbow/Feather)



REPLACEMENT LENSES

Continued...

TECHNICAL DATA

Measurement Analysis

| | |
|-----------------------------------|--|
| Spot Meter: | 3 |
| Emissivity: | Adjustable (0 to 1.00) |
| Line: | 2 lines (horizontal and vertical) |
| Area: | 3 boxes with max/min/avg |
| Automatic Hot/ Cold Detection: | Auto hot or cold spotmeter markers |
| Isotherm: | Detect high/low temperature/interval |
| Measurement Corrections: | Emissivity, ambient temperature, distance, relative humidity, offset temperature |

General Specifications

| | |
|----------------------------------|--|
| Zoom: | 20x continuous, digital zoom |
| Digital Camera: | Yes (640 x 480 resolution) |
| Image Format: | JPEG on memory card >1000 pictures |
| Video Out: | Composite (PAL and NTSC) |
| Video Format: | MPEG-4, 640x480 @ 30 FPS on memory card >60 minutes |
| Video Camera and Annotations: | Yes |
| Laser Indicator: | Yes |
| LED Flashlight: | Yes |
| External Memory: | 4GB micro SD card |
| Auto Shut-off / Sleep Mode: | Yes (user adjustable) |
| Tripod Mountable: | Yes |
| Low Battery Indicator: | Yes |
| Power Supply: | 7.4V rechargeable lithium battery |
| Battery Life: | Approx. 4.5 hours |
| Charging System: | In Camera or with AC Adapter |
| PC Connectivity: | USB Cable |
| Software: | Yes (Included) |
| Software OS Compatibility: | Windows XP / 7 / 8 / 10 |
| Supported Languages: | English, Chinese, French, German, Spanish |
| Laser Class: | II |
| Product Certifications: | CE, IP65, 6.6' (2m) drop test |
| Operating Temperature: | -4 to 122°F (-20 to 50°C) |
| Storage Temperature: | -40 to 158°F (-40 to 70°C) |
| Operating/Storage Humidity: | 10 to 90% |
| Dimensions: | 9.6 x 4.1 x 6.3" (243 x 103 x 160mm) |
| Weight: | 2.1lbs (920g) |



| Model | Description |
|-------------------|-------------------------------|
| R2100 | Thermal Imaging Camera |
| RL-11 | Optional Lens, 20.6°/11mm |
| RL-22 | Optional Lens, 10.4°/22mm |
| RL-33 | Optional Lens, 6.9°/33mm |
| R2100-7.4V | Replacement Battery |
| R2100-NIST | Thermal Imaging Camera & NIST |

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TECHNICAL DATA

Industrial and Commercial Maintenance Use

- Temperature Measurement Range: -28 to 400°C (-4 to 752°F)
- Thermal Sensitivity: <math><0.08^{\circ}\text{C}</math> @ 30°C (86°F) / 80mK



| | |
|---|--|
| 1 | 3.5" touch screen with innovative sun visor |
| 2 | Interchangeable lenses |
| 3 | 20x continuous zoom |
| 4 | Fusion display of IR and visible images |
| 5 | Area min/max with auto hot/cold spot markers |
| 6 | Picture-in-picture |
| 7 | Annotate images with voice and text |
| 8 | Video and snapshot storage on MicroSD Card |

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TECHNICAL DATA

High Resolution IR Images

19,200 pixels (160 x 120) Infrared resolution

Visible Light Digital Camera

640x480 resolution with flash provides sharp images regardless of lighting conditions

Picture in Picture

Displays thermal image super-imposed over a digital image

LED Flashlight

Allows the visual camera and fusion to be used in poorly lit environments

Wide Temperature Range

From -20 to 400°C targeting electrical and industrial applications

±2% Accuracy

Reliable temperature measurement

Thumbnail View

Easy to view and analyze images quickly



Automatic Lens Recognition

Automatically identifies the temperature calibration data associated with each of the interchangeable lenses

Audio Recorded with the Video Image

A speaker to listen to audio recorded with the video image

Capacitive Touch Screen

More easy, productive and effective to operate

Lithium Polymer Rechargeable Battery

Lasts >4hrs continuous use; replaceable

Copy to USB

Easily uploads images from camera to USB memory card

Area (Min/Max) Mode

Shows the Minimum or the Maximum Temperature reading in the selected area

Applications:

- Plant/General Maintenance
- HVAC/R & Plumbing
- Transportation/Automotive
- Cooling and Reheating
- Serving areas
- Food Service Equipment
- Cold Storage
- Home & Building Inspection
- Electrical & Mechanical Inspection
- Predictive Maintenance
- Health & Safety
- Equine & Veterinary
- Road Construction
- Workplace Ergonomics

Replacement Lenses

- **RL-11 Replacement Lens (20.6°/11mm):**
D:S; @ 100' (30.5 m): 36.3 x 27.2' Resolution = 2.7" (69.1mm)
- **RL-22 Replacement Lens (10.4°/22mm):**
D:S; @ 100' (30.5 m): 18.2 x 13.7' Resolution = 1.37" (34.8mm)
- **RL-33 Replacement Lens (6.9°/33mm):**
D:S; @ 100' (30.5 m): 12.2 x 9.1' Resolution = 0.91" (23.1mm)

Included

- Standard Lens (29.8°/7.5mm): Distance to Spot Size;
D:S; @ 100' (30.5 m): 53.3 x 39.9' Resolution = 4" (101.6mm)

Recognizable lenses increase camera resolution at longer distances.
No camera calibration required.



11MM LENS
RL-11



22M LENS
RL-22



33MM LENS
RL-33