REED THE RIGHT SOURCE THE RIGHT SOLUTIONS

THERMAL IMAGER

TECHNICAL DATA

ACCREDITED CALIBRATION AVAILABLE

RoHS

FEATURES

- 3.5" colour TFT LCD capacitive touch screen with sun visor
- High thermal sensitivity (NETD) of <80mK
- Built-in laser and white LED flashlight
- Built-in visible light digital camera
- Includes 7.5mm (29.8 x 22.6° FOV) lens
- 20x continuous zoom
- Infrared and visual images, picture-in-picture as well as IR fusion
- Three spot, three area with min/max and average, two-line and isothermal measurement analysis
- Automatic hot/cold spot indicator
- Choice of six colour palettes including custom
- Automatic image capture
- Save images with voice annotations
- Video recording with voice annotations
- Micro SD memory card extension possible
- Includes thermal imager, 7.5mm lens, lens cap, micro SD memory card, video output cable, headset, USB cable, hood, tripod stand, shoulder strap, battery, charger, AC adapter, user manual, software CD and hard carrying case

SPECIFICATIONS

IR Resolution: 160 x 120 pixels
Field of View: 29.8 x 22.6°
Detector Type: Uncooled microbolometer
Thermal Sensitivity (NETD): <0.08°C (80mK)
Image Capture Frequency: 50Hz
Focus: Manual
Temperature Range: -20 to 400°C (-4 to 752°F)
Accuracy: ±2°C (±3.6°F) or ±2% of reading
Storage Medium: 4GB micro SD card
Interface: USB-mini, audio, composite video (PAL and NTSC), Micro SD slot
Drop Test: 2m
Encapsulation: IP65
Power Supply: 7.4V lithium polymer battery
Battery Life: 4 hours
Dimensions/Weight: 243 x 103 x 160mm/920g

ORDERING INFORMATION

R2100 ..... **Thermal Imager**
RL-11 ..... **20.6° 11mm Replacement Lens**
RL-22 ..... **10.4° 22mm Replacement Lens**
RL-33 ..... **6.9° 33mm Replacement Lens**
R2100-7.4V ..... **Spare Battery**
CERTIR3 ..... **Accredited Calibration Certificate**

1 REED YEAR WARRANTY

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Industrial and Commercial Maintenance Use

- Temperature Measurement Range: -28 to 400°C (-4 to 752°F)
- Thermal Sensitivity: <0.08°C @ 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

1 REED YEAR WARRANTY

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Imaging and Optical Data	
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 @ +30°C (+86°F) / 80mK
Image Frequency	50Hz
Focus	Manual
Zoom	1-20x continuous, digital zoom
Rotate	0-360°, continuous change by 1°
Detector Data	
Detector Type	Focal plan array (FPA), uncooled microblometer
Spectral Range	8-14µm
IR Resolution	160x120 pixels
IR Resolution	N/A
Image Presentation	
Display	2.5" TFT, capacitive 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	GRAY / GRAYINV IRON / IRONINV / RAINBOW / FEATHER
Measurement	
Object Temperature Range	Low Range: -20 to 150°C (-4 to 302°F) High Range: 0 to 400°C (32 to 752°F)
Accuracy	±2°C (±3.6°F) or ±2% of reading
Measurement Analysis	
Spotmeter	3
Emissivity Adjustable	0.01~1.0 Adjustable
Emissivity Table	Emissivity table of predefined materials
Line	2 lines (horizontal and vertical)
Area	3 boxes with max. / min. / average
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
Set-Up	
Laser / Floodlight	< class2 / white LED floodlight
Set-Up Commands	Local adaptation of units, language, date and time formats, information of camera
Language Selection	English, Chinese, French, German, Spanish

Storage of Videos	
Storage Media	4 GB Micro SD
Video Storage Format	Standard MPEG-4, 640 x 480 @ 30fps, on memory card >60 minutes
Video Storage Mode	IR / visual images, simultaneous storage of IR and visual images
Storage of Images	
Image Storage Format	Standard JPEG, including measurement data, on memory card >1000 pictures
Images Storage Mode	IR / visual images; simultaneous storage of IR and visual images
Digital Camera	
Built-In Visible Light Digital Camera	640x480 pixels
Data Communication Interfaces	
USB Interfaces	USB-mini, data tranform between camera and PC
Cloud Computing Service	N/A
Wi-Fi Connectivity	N/A
Video Out	Composite (PAL and NTSC)
Power System	
Battery	Lithium polymer battery, 4 hours operating time
Input Voltage	DC 9V to 12V
Charging System	In Camera (AC Adapter)
Power Management	Automatic shutdown and sleep mode (User selectable)
Environmental Data	
Operating Temperature Range	-20 to 50°C (-4 to 122°F)
Storage Temperature Range	-40 to 70°C (-40 to 158°F)
Relative Humidity (Operating and Storage)	10% RH~90% RH
Encapsulation	IP65
Drop Test	2m
Bump	25g (IEC60068-2-29)
Vibration	2g (IEC60068-2-6)

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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

Image Rotation
The ability to automatically rotate the active image

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 >4 hrs 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):**
  Distance to Spot Size; At 100' (12.2 m): 36.3 x 27.2' with a resolution of 2.7" (69.1mm)
- **RL-22 Replacement Lens (10.4°/22mm):**
  Distance to Spot Size; At 100' (12.2 m): 18.2 x 13.7' with a resolution of 1.37" (34.8mm)
- **RL-33 Replacement Lens (6.9°/33mm):**
  Distance to Spot Size; At 100' (12.2 m): 12.2 x 9.1' with a resolution of 0.91" (23.1mm)

11mm Lens RL-11

22m Lens RL-22

33mm Lens RL-33

Included

- Standard Lens (29.8°/7.5mm): Distance to Spot Size;
  At 100' (12.2 m): 53.3 x 39.9' with a resolution of 4" (101.6mm)

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

Contact:
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3910 Park Avenue, Unit 7
Edison, NJ 08820
732-632-6400
support@instrumentation2000.com
http://www.instrumentation2000.com