

# THERMAL IMAGING INFRARED CAMERA

## MODEL 1950 & 1954

Versatile tool for performing infrared thermography  
Indispensable means for ensuring safety in industrial application

### SPECIFICATIONS



#### MODEL 1954

Thermo Resolution  
120 x 160

#### MODEL 1950

Thermo Resolution  
80 x 80



### FEATURES

- Focus-free with 20°x 20° field of view (model 1950) and 28°x 28° field of view (model 1954)
- Automatic brightness control
- Exceptionally long battery life
- Quick startup in 3 to 10 seconds (model dependent)
- User configurable emissivity table
- User configurable cursor and trigger functions
- User selectable color palette
- Captures thermal and real image simultaneously
- Verbally record your comments directly to the image using included Bluetooth® headset
- Wirelessly connect to AEMC® Clamp-on Meters and Multimeters, and environmental meters (model dependent) and record their measurements simultaneously with your thermograms
- Comprehensive CAMReport® software included that offers all the necessary functions for reliable analysis of the measurement results and report generation

| MODEL                               | 1950   | 1954  |
|-------------------------------------|--|---|
| <b>IR DETECTOR</b>                  |  |   |
| Type                                | UFPA microbolometer  |   |
| Spectral Range                      | 8 ~14µm  |   |
| Resolution                          | 80 x 80  | 120 x 160   |
| <b>IMAGING PERFORMANCE</b>          |  |   |
| NETD                                | 80mK @ 86°F (30°C)   |   |
| Frequency                           | 9Hz  |   |
| Field of View                       | 20° x 20°  | 28° x 38°   |
| IFOV (spatial resolution)           | 4.4mrad  | 4.1mrad   |
| Minimal Focal Distance              | 1.3 ft (0.4m), fixed focus   | 0.98ft (0.3m), fixed focus  |
| <b>FOCUSING</b>                     |  |   |
| Adjustment                          | Fixed  |   |
| <b>VISUAL IMAGE</b>                 |  |   |
| Resolution                          | 240 x 320 pixels   | 480 x 640 pixels  |
| Minimal Focal Distance              | 2" (0.05cm), fixed focus   |   |
| <b>PRESENTATION OF IMAGES</b>       |  |   |
| Images Displayed                    | Infrared image, visual image with automatic parallax compensation.<br>Merging of both images is possible with included PC software |   |
| LCD Screen                          | 2.8" (7.1cm)   |   |
| Display Colors                      | Pseudo-colors, multiple palettes   |   |
| <b>FUNCTIONS</b>                    |  |   |
| Image Freezing                      | Animated or fixed image  |   |
| Data Storage                        | 2GB Micro SD card included (approx. 4,000 images). Replaceable with up to 32 GB SD card  |   |
| <b>MEASUREMENT</b>                  |  |   |
| Temperature Range                   | -4°F to 482°F (-20°C to 250°C)   |   |
| Accuracy                            | ±3.6°F (±2°C) or ±2% of reading  |   |
| <b>ANALYSIS FUNCTIONS</b>           |  |   |
| Measurement Tools                   | Manual cursor, automatic detection, min/max/avg on adjustable area, temperature profile, and isotherm                              |   |
| Adjustment                          | Automatic or manual adjustment palette min-max   |   |
| Parameter Settings                  | Emissivity, environmental temperature, distance, relative humidity   |   |
| Isotherm Display                    | Color display of a temperature range adjustable by the user  |   |
| Voice Recordings                    | via Bluetooth headset (included)   |   |
| <b>ENVIRONMENTAL SPECIFICATIONS</b> |  |   |
| Operating Temperature               | -4° to 122°F (-15° to 50°C); 95% RH  |   |
| Storage Temperature                 | -40° to 158°F (-40° to 70°C)   |   |
| Humidity                            | 10% to 95%   |   |
| Drop Resistance                     | 6' (2m) on all sides   |   |
| Impact Resistance                   | 25G  |   |
| Vibration Resistance                | 2G   |   |
| Ingress Protection                  | IP54   |   |
| <b>LASER POINTER</b>                |  |   |
| Type                                | -  | Class 2 645-655nm power: 1mW  |
| <b>GENERAL SPECIFICATIONS</b>       |  |   |
| Start Up                            | Less than 3 seconds  | Less than 10 seconds  |
| Safety                              | EN 61326-1: 2006, EN 61010-1 Ed.02   |   |
| Power Supply                        | 4 x AA NiMH rechargeable batteries with external charger included  |   |
| Laser                               | -  | Class 2   |
| Laser Output                        | -  | < 1mW   |
| Laser Wavelength                    | -  | 645-655nm   |
| Software                            | CAMReport® software included, for data analysis and report generation  |   |
| Tripod Mounting                     | 1/4" insert on camera (tripod not included)  |   |
| Battery Life                        | 13.30 hrs typical (11 hours minimum)   | 9 hrs typical (7 hours minimum)   |
| Dimensions/Weight                   | 8.86 x 4.92 x 3.27" (225 x 125 x 83mm) / 24.7oz (700g) with rechargeable batteries   |   |
| Bluetooth Product Communication     | 407, 607 clamps and MTX3293 dmm  | 407, 607 clamps, MTX3292 and MTX3293 and logger models 1110, 1200 and 1800 Series |

### ACCESSORIES

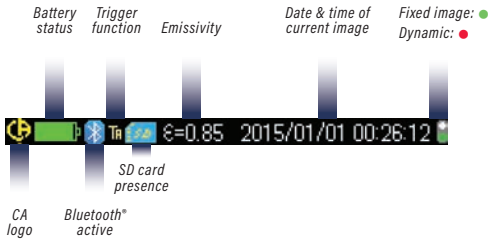
Carrying Case with Foam Insert  
Cat. #2121.60

Cable - USB (Type A to 5-pin Mini-B)  
Cat. #2126.49



# Display & Menu Contents

## STATUS BAR



## FUNCTION KEYS

Linked to selected menu choice or camera image



## MENU

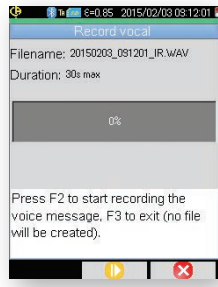
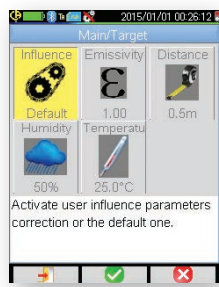
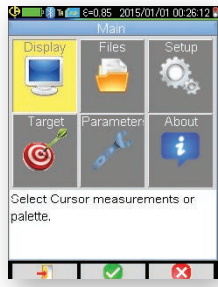
Selectable using navigation keys



## CONTEXTUAL HELP

This display area updates based on the menu item selected

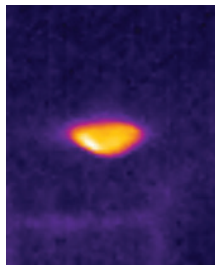
A comprehensive set of easy access menus are available on screen. You can use the function and navigation keys to easily configure the camera for your specific needs. Trigger functions can be programmed, color palettes can be selected, cursor tools can be configured as well as environmental conditions including ambient temperature and humidity, distance and emissivity.



# SELECTABLE CURSOR TOOLS

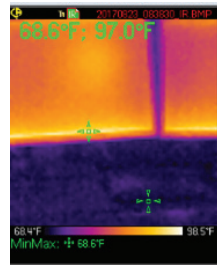
User programmable cursors provide a comprehensive set of options for evaluating thermal profiles

### NONE



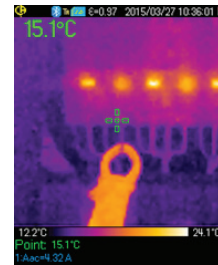
No cursor display, temperature evaluation is determined by color palette only.

### MIN/MAX



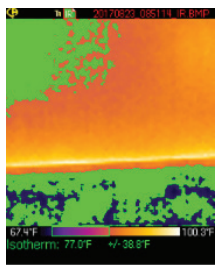
Automatically displays the cold and hot spot values at the Min and Max cursor positions.

### POINT



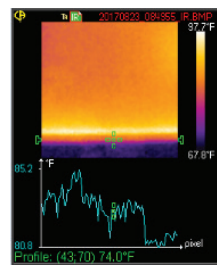
Displays the value at the cursor. Cursor is movable using the navigation keys.

### ISOTHERM



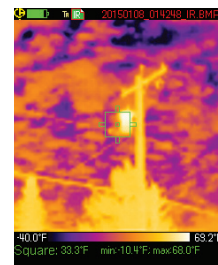
Displays points that fall in the same temperature range in the same color. User picks green, red or brown as the display color and defines the range and tolerance.

### PROFILE



Displays the temperature profile of a horizontal line defined by the cursor. Cursor can be moved along the line to get an individual temperature.

### SQUARE



Displays the Min/Max and mean values within the box. Box size and location is user adjustable.



# THERMAL IMAGING INFRARED CAMERA (CONTINUED)

## CAMREPORT® SOFTWARE FOR ANALYZING THERMOGRAMS

This comprehensive software offers all the necessary functions for effective analysis of the measurement results and report generation



|            |                |            |                      |
|------------|----------------|------------|----------------------|
| Operator : | Location :     | Equipment: | Date :               |
| John Doe   | Foxborough, MA | CA 1950    | 9/13/2017 9:14:12 AM |

|                       |                      |                     |
|-----------------------|----------------------|---------------------|
| <b>Infrared image</b> | <b>Digital image</b> | <b>Merged image</b> |
|-----------------------|----------------------|---------------------|

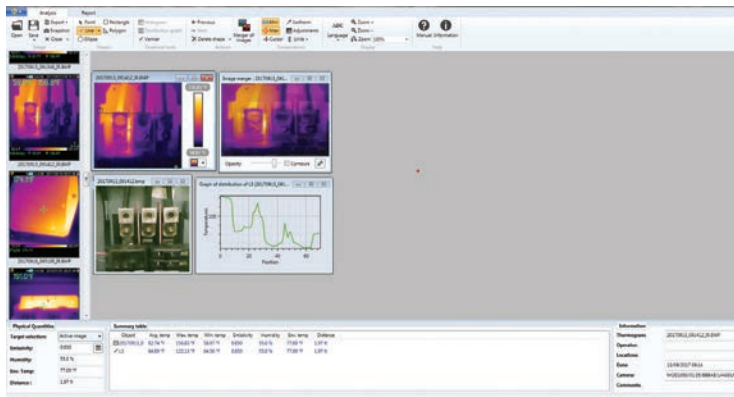
|                         |                        |
|-------------------------|------------------------|
| <b>Image properties</b> |                        |
| Image name              | 20170913_091412_IR.BMP |
| Emissivity:             | 0.88                   |
| Humidity                | 55.0 %                 |
| Environment temperature | 74.00 °F               |
| Distance                | 1.75 ft                |

|                                |                 |                  |               |
|--------------------------------|-----------------|------------------|---------------|
| <b>Temperature measurement</b> |                 |                  |               |
| <b>RO</b>                      | Min:69.70 °F    | Max:154.81 °F    | Avg:101.77 °F |
|                                | Emissivity:0.88 | Env. T°:74.00 °F |               |

Report creation is automatic, using one of three available templates. Reports can be exported in Word or PDF format. This makes it simple to print and/or archive them.



Typical analysis tab screen

## FEATURES

- Transfer measurements from your camera to the software by USB cable, or transportable SD card
- Drag-and-drop measurement images from the storage directory to the analysis window in the software
- Includes thermal and real images automatically
- Superimpose thermal images over real images for better visual analytical results
- Locate Min/Max and mean temperatures of the image or an area of the image
- User selectable color palette from seven different types
- Summary table automatically displays environmental parameters and statistical results of the measurement
- Include dictated audio comments into the report with the Bluetooth® headset
- Includes multiple analytical tools for assessing thermal images
- Manually enter measurement analysis findings, site characteristics and operator information to your report.
- Add graphics such as logos to your reports
- Correct the measurement results using built-in or user configured emissivity tables
- Include multiple measurements in any report
- Save reports as a Word or PDF document

| CATALOG NO. | DESCRIPTION   |
|-------------|---|
| 2121.40     | Thermal Imaging IR Camera Model 1950 (Resolution 80 x 80)   |
| 2121.41     | Thermal Imaging IR Camera Model 1954 (Resolution 120 x 160) |

