# SPECIFICATIONS Ti160 Thermo Kwik

IRtek®
The Language of Temperature Through Colour

**DETECTOR CHARACTERISTIC**

| | |
|---|---|
| Detector type | : Uncooled FPA microbolometer |
| Array size | : 160x120pixels |

**IMAGE CHARACTERISTICS**

| | |
|---|---|
| Field of view | : 25° x 19° |
| Min. focus distance | : 0.1m |
| Spatial resolution (IFOV) | : 2.73mrad |
| Thermal sensitivity | : ≤0.08°C@30°C |
| Image frame rate | : 50/60Hz |
| Focus | : manual |
| Zoom | : x2 |
| Spectral range | : 8 ~ 14µm |
| Built-in CCD camera | : 1.3 million pixels, CMOS camera module |

**IMAGE DISPLAY**

| | |
|---|---|
| Screen display | : 3.5” TFT LCD |

**MEASUREMENT**

| | |
|---|---|
| Temperature range | : 30 ~ 50°C |
| Accuracy | : ±2°C or ±2% of reading whichever is greater |
| Effective distance | : 3 ~ 7m |
| Measurement correction | : automatic / manual |
| Measurement mode | : up to 4 movable spots, up to 3 movable areas (max., min., & average temp.), up to 2 movable lines, line profil, isotherms, temperature difference, alarm (voice, color) |
| Colour palette | : 11 palettes changeable |
| Image adjustment | : auto / manual gain / brightness |
| Setup function | : date/time, temperature unit, language |
| Emissivity | : 0.01 ~ 1.00 |
| Measurement features | : automatic correction based of data input of distance, humidity, & ambient temperature |

**IMAGE STORAGE**

| | |
|---|---|
| Storage | : SD card, max. 16GB |
| Storage mode | : manual / auto single file saving, IR and visual image link saving |
| File format | : thermal : JPEG with original thermal measurement data included<br>visual : JPEG |
| Voice annotation | : a built-in microphone up to 60 seconds of digital voice clip with each cared thermal imaging |

**LASER POINTER**

| | |
|---|---|
| Laser locator | : class 2, 1mW/635nm (red), IEC 60 285 |

**POWER SOURCE**

| | |
|---|---|
| Battery type | : Li-ion, rechargeable |
| Battery operating time | : 3 hours continuous operation |
| battery charging mode | : intelligent charger or power adaptor 12V (optional) to random charge |
| Power saving | : auto dormancy and auto shut down |
| External power | : 10 ~ 15V DC |

**ENVIRONMENT**

| | |
|---|---|
| Operating temperature | : -15 ~ 50°C |
| Humidity | : ≤90% non-condensing |
| Encapsulation | : IP54 |
| Drop resistant | : 2m |

**PHYSICAL CHARACTERISTIC**

| | |
|---|---|
| Weight | : 1kg |
| Dimension | : 105 x 245 x 230mm |

**INTERFACE**

| | |
|---|---|
| Interface | : Micro SD card slot, external DC input, video output, USB |

**ACCESSORIES**

| | |
|---|---|
| Standard | : Video cable, 2 Li-ion batteries, battery charger, lens cap, quick manual, manual & software (CD), SD card, card reader, USB cable, wrist strap, transport case, warranty card, certificate of product conformance |

© 2020 IRtek International
All rights reserved
032020B05
Specifications subject to change without prior notice.

CE N15521

CAUTION
LASER RADIATION
DO NOT STARE INTO BEAM
DIODE LASER
CLASS II LASER PRODUCT


# Ti160
## Thermo Kwik

**Suitable for :**
Coronavirus COVID-19 ,Ebola, SARS,
Avian Flu, Swine Flu, & other feverish conditions

**IRtek International -** P.O. BOX 435, Joondalup, W.A. 6919, Australia • Email: irtekaustralia@gmail.com / sales@irtek-temp.com • Website: www.irtek-temp.com

# TIPS TO CHOOSE
## A PROPER MEDICAL FEVER IMAGING CAMERA

IRtek®
The Language of Temperature Through Colour

# Ti160
## Thermo Kwik

### Features
Do not be overwhelmed with budget industrial thermal camera with features such as fusion technology or software analysis, etc.
**Note : IRtek Ti160 comes with a clinical non contact forehead thermometer that measure to 2°C accuracy. You will be able to confirm if the suspected target is feverish or not from the thermal imager's alarm.**

### Scanning Rate
Scanning rate determines the speed of your image sampling time. The scanning rate is measured in Hz (Hertz). 50Hz is almost continuous whilst 9Hz is slow and almost still. For scanning massive flow of people or large crowd in the airport, sea port, gathering or flow of people thru an entrance gate in a shopping mall or industrial workers coming to work in a shift. It is mandatory to have a 50Hz scanning rate camera.
**Note : IRtek Ti160 is a 50Hz camera.**

### Output PAL/NTSC Video Signal to TV/LCD
Most of the low cost camera does not have video output to TV/LCD. An operator needs to have a reasonable size of view of the LCD screen all the time.
**Note : IRtek Ti160 has a PAL/NTSC video output to connect to TV/LCD.**

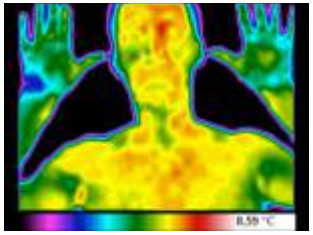
### Understanding Your Pixels
Pixels means image measuring resolution. Resolution is a picture clarity or picture sharpness.
**Note : IRtek Ti160 is 160x120 pixels and is reasonably good enough to scan human skin temperature. The higher the pixels, the more expensive a thermal camera is. This is a dominant factor that drives the price of a thermal camera.**

### Understanding Your Thermal Sensitivity
Thermal sensitivity or NETD (Noise Equivalent Temperature Difference) is a measure of the sensitivity of a detector of thermal radiation in the infrared. The smaller the number, the better the detection is (Generally it is between 80mK to 200mK).
**Note : IRtek Ti160 has thermal sensitivity of 0.08°C at 30°C.**

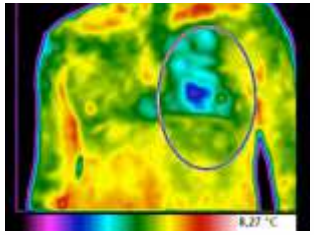
### How Accurate is Accurate?
Most of the thermal camera in the market today is not accurate or stable enough to determine the pathologycal condition condition of a sick person especially at a distance of a few meters away from the target. Too many variations that affect the outcome of the measurement.
**Note : IRtek Ti160 has an added tool to take your measurement out of a guess work.**

### LAST BUT NOT LEAST
**The knowledge about human body temperature and its variations. IRtek is an infrared company and has people who understand about the business. The successful application of Fever Imaging System depends not only the infrared technology behind it but also the implementation in the field and knowledge about human pathologycal condition condition and how it works.**

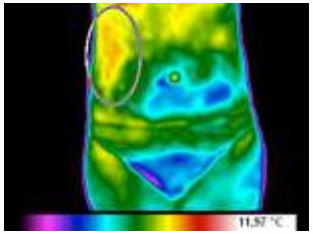
Hypothermia on H7



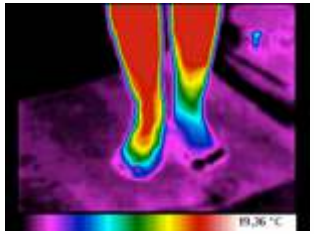
Coronary diseases



Steatosis (fatty degeneration)



Obliterating endarteritis



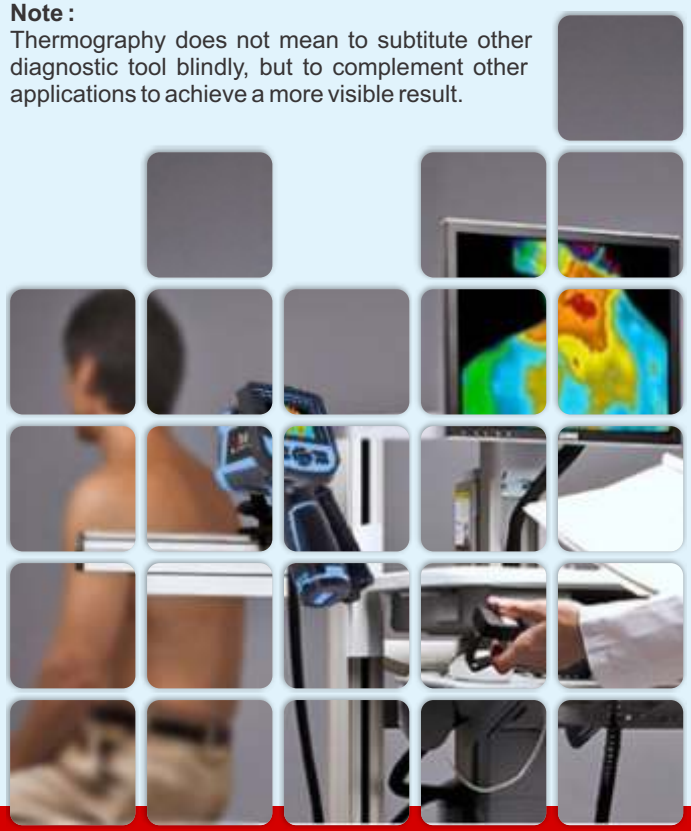
# THERMOGRAPHY
Thermography allows you to discover injuries and health problems at the early stage and therefore allowing us the possibility to develop preventative action. With thermography, we can make the connection and establish a close relation between different pathologies in different areas, organs, or meridians. It is also an ideal tool to determine the progress after treatment with no invasive and pan.

**Clinical applications :**
Andrology, digestive system, ENT, gynecology/obstetrics, hematology, immunology, locomotors systems, ,urinary system, circulatory system, dermatology, neurological disease, endocrine system, respiratory system, cardiovaskular disease, cancerous disease, acupuncture, etc.

**Difference from other diagnostic imaging systems :**

| X ray, ultrasound, CT (Anatomical) | Thermography (Functional) |
|---|---|
| Mechanical | Metabolism |
| Structure | Autonomic nervous system |
| | Temperature changes |

**Note :**
Thermography does not mean to subtitute other diagnostic tool blindly, but to complement other applications to achieve a more visible result.



**IRtek International -** P.O. BOX 435, Joondalup, W.A. 6919, Australia • Email: irtekaustralia@gmail.com / sales@irtek-temp.com • Website: www.irtek-temp.com