

## COMPETITOR COMPARISON



# Mi-TIC E™

**H x W x D**  
203 mm x 96 mm x 71 mm  
(8 in x 3 3/4 in x 2 13/16 in)

**versus**



# FLIR® K2

**H x W x D**  
250 mm x 105 mm x 90 mm  
(9 13/16 in x 4 1/8 in x 3 9/16 in)

Mi-TIC E	K2	Competitive Advantage
<b>Visible light camera</b> Not available.	Multi-spectral dynamic imaging - MSX.	The K2 aims to supplement the low resolution sensor with a visible light overlay which provides detail to an image in daylight but in the dark or in the fire scene offers limited benefit to the fire fighter.
<b>Image Frequency</b> 30Hz.	9Hz.	The argus range of thermal imaging cameras work at 30Hz. This relates to the times per second the LCD/OLED is refreshed. Therefore a 9Hz camera refreshes its LCD/OLED 9 times per second and a 30Hz camera refreshes its LCD/OLED 30 times per second. A 30Hz camera provides a far smoother image than a 9Hz camera.
<b>Sensor Resolution</b> 320 x 240 pixels.	160 x 120 pixels.	The Mi-TIC E offers a better image quality providing a clearer and more detailed image. The argus range of thermal imaging cameras are known for leading image quality, this is certainly very clear when comparing the Mi-TIC E to the Flir K2.
<b>Truck Mount charger</b> The Mi-TIC E has a multipurpose camera charger which can be used either as a truck or desktop charger. There is an option to charge up to six charger stations in a "daisychain" configuration. The battery can also be charged connected to the camera.	Desktop battery charger supplied. No truck charger available for FLIR K2. Can be charged directly via USB cable but this takes considerably longer.	FLIR K2 batteries must be removed from the TIC to be charged. Loose batteries are typically charged in the station, not in the truck. There is a risk that batteries are left behind and without batteries, the FLIR K2 is useless.
<b>Battery recharge cycles</b> Guaranteed for over 2,000 cycles.	300 cycles.	A Flir K2 user would potentially have to purchase seven new batteries over the lifetime of one single Mi-TIC E battery creating an increased cost of ownership over the life of the camera.

**Recommend the Mi-TIC E to your customers for trial and evaluation.**

The **argus®** range of thermal imaging cameras

**AVON**  
PROTECTION

Mi-TIC E	K2	Competitive Advantage
<p><b>Buttons /Features</b> The Mi-TIC E is available in either a one or three button variant.</p> <p><b>One button:</b></p> <ul style="list-style-type: none"> <li>• Black box recording</li> </ul> <p><b>Three buttons:</b></p> <ul style="list-style-type: none"> <li>• Image freeze</li> <li>• Image and video capture</li> <li>• Video playback</li> <li>• Zoom</li> <li>• Multiple colour modes</li> </ul>	<p><b>One button variant:</b></p> <ul style="list-style-type: none"> <li>• Multiple colour modes</li> <li>• Visible overlay light</li> </ul>	<p>The argus range has kept the one and three button variants to give the customer a greater choice depending on their application. Some fire brigades may wish to have a very simple camera which switches on/off whilst another brigade will see the benefit for extra colour modes or the capability to zoom and take images.</p>
<p><b>Start up time</b> 5 seconds typical, no sleep mode required.</p>	<p>30 seconds from cold. 10 seconds from sleep.</p>	<p>To get round the long start up time the K2 offer a sleep mode, but they haven't taken into account that using this will slowly drain the battery. They have an automatic shutdown, but this is not ideal because you will either be draining your battery or facing a &lt;30 second start up time.</p> <p>Will a fire fighter remember to turn on the camera before they arrive at the scene to avoid a dangerous wait? We think that is unlikely!</p>
<p><b>Temperature Range</b> The Mi-TIC E has a temperature limit of 760°C (1400°F).</p>	<p>The K2 has a temperature limit of 500°C (932°F).</p>	<p>The Mi-TIC E has been designed to provide fire fighters with excellent detail in day to day fire scenarios.</p> <p>The argus range of thermal imaging cameras have been able to offer a greater temperature range meaning it is possible to view more intense fires.</p>
<p><b>NFPA Certification</b> Certified to NFPA 1801.</p>	<p>Not certified. The datasheet states "Designed to meet NFPA 1801 specification" <b>BUT</b> this does not mean certified.</p>	<p>The Flir K2 is <b>NOT</b> NFPA certified. The list of NFPA certified cameras can be found on the SEI website <a href="http://www.seinet.org">www.seinet.org</a>.</p>
<p><b>Thermal Sensitivity - NETD</b> &lt;50mK.</p>	<p>&lt;100mK.</p>	<p>The Mi-TIC E has twice the sensitivity as the Flir K2 meaning the level of noise in the image is twice as better as the K2. With &lt;50mK the user will be able to see smaller temperature differences giving finer detail in the image.</p>
<p><b>Battery Technology</b> Lithium Iron Phosphate batteries are certified for use at temperatures over 85°C (185°F), commonly experienced by fire fighters. Unlike Li-ion there is no risk of rapid thermal runaway that could cause a dangerous explosion.</p>	<p>Lithium Ion (Li-ion) batteries are not certified for use above 60°C (140°F). When an ordinary Li-ion battery is exposed to high temperature, or a severe mechanical shock there is a high risk of rapid thermal runaway (explosion) not present in Lithium Iron Phosphate.</p>	<p>Mi-TIC E uses a safer battery technology than the K2 with a lower risk of explosion. Search 'lithium ion battery explosion' on You-Tube for examples of rapid thermal runaway. Read the Flir K series user manual to discover the numerous cautions listed against their battery, for example "Do not put the batteries in or near a fire or into direct sunlight..."</p>
<p><b>Battery Operating time</b> In excess of 3 hours.</p>	<p>4 hours.</p>	<p>This may seem like an advantage to Flir however it is important to consider the battery technology as previously stated.</p>

Mi-TIC E	K2	Competitive Advantage
<p><b>Warranty</b> Avon Protection offers a standard 3-5-10 warranty. 3 years cover for the camera. 5 years cover for the battery 10 years cover for the sensor and lens.</p>	<p>Flir offer a 2-5-10 limited warranty. 2 years cover for the battery. 5 years cover for the camera. 10 years cover for the sensor.</p>	<p>Flir offer a 10 year warranty on the uncooled sensor but the chances of the sensor going wrong within that timeframe is highly unlikely due to the high quality of the sensors now used.</p>
<p><b>Germanium Window</b> Replaceable in the field.</p>	<p>There is no protective germanium window so the lens is exposed. The concave section on the front means any front impact will be directed onto the lens.</p>	<p>When the K2 lens inevitably gets scratched or damaged the camera will require an expensive factory repair. Lenses are typically six times the cost of a germanium window (most likely not covered under warranty).</p>
<p><b>Housing material</b> Radel R-5100 and Santoprene.</p>		<p>Operating Temperature Range: The Mi-TIC E will withstand continuous use between -20°C (-4°F) and +85°C (185°F). K2 will only withstand -20C (-4°F) to +55°C (131°F). All Fire fighting TICs apart from the FLIR K2 will withstand continuous use between -20°C (-4°F) and +85°C (+185°F). After extended exposure to heat in a Fire Attack situation, TICs can reach temperatures in excess of +85°C (+185°F). Do you want to compromise your operation because your TIC stops functioning when you need it most?</p>

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