

## 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® K65

**H x W x D**  
280 mm x 125 mm x 120 mm  
(11 in x 4 15/16 in x 4 3/4 in)

Mi-TIC E	K65	Competitive Advantage
<p><b>Price</b> Available with configurable kitting options or as full kit which includes truck charger.</p>	<p>Price is double Mi-TIC E price. Truck charger is extra.</p>	<p>The Mi-TIC E is not positioned to compete directly with the FLIR K65. For the price of a FLIR K65 you can buy two Mi-TIC E cameras with truck chargers. As well as the lower price, the Mi-TIC E offers many other advantages over the FLIR K65 and is NFPA1801 certified.</p>
<p><b>Weight</b> 765g (1.7 lbs).</p>	<p>1.1kg (2.4 lbs).</p>	<p>The Mi-TIC E is 375g (1 lb) lighter than the K65 making all the difference for easy one handed use in the fire scene.</p>
<p><b>Non-Uniformity Correction (NUC) time</b> Ensures no detail is lost at any time. Less than 1 second.</p>	<p>FLIR cameras can take up to 10 seconds to perform a re-calibration.</p>	<p>Every TIC periodically performs a recalibration routine during which the image will momentarily “freeze up”. The Mi-TIC E takes less than 1 second to perform this recalibration. The FLIR K65 can completely freeze up for several seconds at a time.</p> <p>Competitive advantage: it is important that the TIC “down time” is kept to a minimum, especially when performing overhaul operations where the scene is scanned for hot spots. If the TIC image is frozen, the user will waste valuable seconds repeating the scan operation once the recalibration is complete or worse still, completely miss the presence of a hot spot which could lead to reignition of the fire.</p>
<p><b>Image noise and sensitivity mode switching</b> Ensures no detail is lost at any time.</p>	<p>The FLIR camera can take 3-4 seconds to switch sensitivity modes</p>	<p>While the FLIR camera is switching sensitivity modes very little detail can be seen with the camera because the camera is essentially over or under exposing the scene. 3-4 seconds is a long time to wait for important scene details to be revealed.</p>
<p><b>Battery recharge cycles</b> Guaranteed for over 2,000 cycles.</p>	<p>300 cycles.</p>	<p>A Flir K65 user would potentially have to purchase four new batteries over the lifetime of one single Mi-TIC E battery creating an increased cost of ownership over the life of the camera.</p>

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

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

**AVON**  
PROTECTION

Mi-TIC E	K65	Competitive Advantage
<p><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.</p>	<p>External standard battery charger supplied. Truck charger is sold as an optional accessory.</p>	<p>Flir charge an extra £500 (\$800) for a truck charger which comes as standard with the Mi-TIC E.</p>
<p><b>Temperature Range</b> The Mi-TIC E has a temperature limit of 760°C (1400°F).</p>	<p>The K65 has a temperature limit of 650°C (1202°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>Start up time</b> 5 seconds typical, no sleep mode required.</p>	<p>&lt;17 second start up time. Sleep mode required.</p>	<p>To get round the long start up time the K65 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;17 second start up time.</p> <p>Will a fire fighter remember to turn on the camera before he arrives at the scene to avoid a dangerous wait? We think that is unlikely!</p>
<p><b>Contrast Optimisation</b> Dynamic Scene Enhancement (DSE).</p>	<p>Flexible Scene Enhancement (FSX).</p>	<p>Flir advertise FSX as one of their new competitive advantages however the Mi-TIC E offers exactly the same "DSE" which provides an ultra sharp image with greater detail.</p>
<p><b>Battery Installation</b> A simple thumb operated latch to attach the battery to the camera. Using the standard truck charger the battery can be charged inside the camera as well as stand alone and at the same time.</p>	<p>To install a battery the user has to unscrew the Torx T20 screw with a tool and pull on the latch to release.</p> <p>When the user requires a recharge of battery they have to unscrew the latch and remove the battery to place it in the desktop charger. Ok if there is one camera but what about if the brigade have several?</p>	<p>The Mi-TIC E offers greater flexibility, not only is it easy and quick to change the battery without the need to carry a tool, the charger station can either be desktop or truck mounted and the camera can be secured in place without the need to remove the battery.</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</p>	<p>Mi-TIC E uses a safer battery technology than the K65 with a lower risk of explosion. Search 'lithium ion battery explosion' on You-Tube for examples of rapid thermal runaway. <b>Read the Flir K series user manual</b> to discover the numerous cautions listed against their battery, for example <b>"Do not put the batteries in or near a fire or into direct sunlight..."</b></p>
<p><b>Battery Operating time</b> In excess of 3 hours. Two batteries can charge at the same time with a recharge time of less than 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 and installation as previously stated.</p>

Mi-TIC E	K65	Competitive Advantage
<p><b>Buttons</b> The Mi-TIC E is available in either a one or three button variant: <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>Three button variant:</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>The argus range of thermal imaging cameras have 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>With the configuration tool the user can determine how much or little they use.</p>
<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 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>Operating Temperatures</b> The camera has been designed to operate continuously at +85°C (185°F).</p>	<p>The datasheet states that the camera has been designed to operate continuously at +85°C (185°F) <b>BUT</b> open the camera and read the battery label!</p>	<p>The battery label of the K65 states "Do not incinerate or expose to high temperatures above 60°C (140°F)".</p>
<p><b>Screen size</b> 2.7 inches.</p> <p>Resolution of the screen is matched to the sensor 320 x 240 producing a clear sharp image.</p>	<p>4 inches.</p>	<p>Flir can offer a larger screen on the K65 however this does have an impact on the size and weight of the camera. The Mi-TIC E is the smallest, lightest NFPA camera on the market. If the fire brigade prefer the larger screen then argus can offer the Mi-TIC S with a 3.5 inch screen at a very competitive price.</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 K series 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>

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