solo™TI

The new upgraded 2018 solo™TI Fire Helmet with built in thermal imaging camera.

The ultimate fire helmet with breathing apparatus mask built-in as standard, integrated thermal imaging and outstanding communications ability.

Providing head protection, respiratory protection and a great communications interface in one system is a huge benefit. When you couple that with being able to see through the densest of smoke then it's a must have in firefighting safety. The solo™TI features a fully integrated thermal imaging camera, which displays the image inside the face mask using augmented reality viewing optics. The ergonomic design gives clean lines to the outside of the helmet which can be donned within a few seconds giving firefighters a quicker reaction time and the ability to use both hands in any hazardous situation.

- Manufacturing our own core enables us to ensure that we have the best optics possible. The clarity of the image displayed inside the face mask is paramount for the user, especially in the environments where the solo™TI is deployed
- Fire retardant resin and Kevlar® fibre composite shell
- Crystal clear Comms with your existing radio
- Can be used in conjunction with Dräger PSS (LDV)
- Fully-approved, with MED, SOLAS and CE marking
- Complete head, face and neck protection

technical specification

Mechanical Data

Helmet Dims (H X W X D)	350mm x 285mm x 390mm
Helmet Weights	2.9Kg
Shell Material	Fire retardant resin and Kevlar®fibre composite shell
Shell Lining	Plastazote Foam Strap Material
Face Seal	Neoprene Face Mask Material Lexan Polycarbonate

Thermal Camera Optical Data

Sensor Type	Uncooled Microbolometer with Digital Processing.
Resolution	320 x 240 array
Lens	9mm
Aperture	f/1.25
Sensing Material	Vanadium Oxide (Vox)
Spectral Response	7.5um – 13.5um
Thermal Stabilization	-40ºF to 175ºF (-40ºC to 80ºC)
Update Rate	30HZ
Thermal Sensitivity	<50mK
Dynamic Range	1022ºF (550ºC) Nominal
Pixel Size	17µm
Video Polarity	White-Hot, Black-Hot Selectable
Relative Heat Indicator	Sliding Bar Scale, temperature to colour relationship and temperature readout
Focal Length	1.1m to infinity (3ft to infinity)
	Field of View 27º Vertical x 35º Horizontal

Compliance Data

Emissions	EN 61000-6-3:2007
Immunity	EN 61000-6-2:2005
PPE	89 / 686 EEC
EC Approval	EN 443 (2008), EN136 (1998) including AC (2003), EN137 (2006)
Solas	Solas Approved
MED	2014/90/EU (MED)

Thermal Camera Electrical Data

Power Consumption	1.4W
Start Up Time	5 Seconds Typical
Battery Type	7.4V Li-ion Rechargeable Battery
Battery Life	Up to 10 Hours @ ambient Temperatures (22°C, 72°F)
Battery Charge Time	Less than 2 hours to 95%
Battery Charging Temp	5°C to 40°C (41°F to 104°F)
Charger Input Voltage	100-240vac 50-60 Hz Max 0.35A
Charger Operating Temp	0°C to 40 °C (32°F to 104°F)
Battery Rechargeable Cycles	Over 1000 charge cycles
Battery Weight	175g

Thermal Camera Display

Type	Near To Eye Viewing Optic
Dot Array	428 x 240 x 3 (WQVGA)
Pixel Configuration	R-G-B
Display Method	BT.656 Digital Format
Backlight LED Brightness	925 cd/m²
Field of View	14.5º
Zoom	None as standard

Environmental Data

Thermal Conditions	The camera has been designed to operate continuously between -20ºC (-4º) and 85ºC (185ºF) or 150º300ºF) for 15 minutes 260ºC (500ºF) for 7 minutes
Sealing	IP67, will withstand short-term immersion in water
Storage	It is recommended that for maximum effective operational life, the storage temperature is kept between -20ºC (-4ºF) and +40ºC (104ºF)
Warranty	36-month warranty as standard (conditions apply)

This specification is for the soloTI Fire Helmet.
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