

Photonics spin-out to defend against battlefield laser threats awarded funding

Using research undertaken by the Defence Science and Technology Laboratory (Dstl), Sentinel Photonics offers a unique range of laser detection and protection products. For the first time, protection from laser-based threats for dismounted soldiers is possible, potentially saving lives and improving survivability.

The technology detects and analyses invisible lasers used ahead of weapon systems to provide advance warning of attacks. Over time a bank of laser 'signatures' will be created that will identify and distinguish individual threat systems, enabling dismounted troops to take appropriate protective measures.

Infographic showing how the novel laser warner detects and identifies multiple threats.

This disruptive technology not only offers a step change in size, weight, power, and cost, but also enhanced detection capabilities against laser threats on the battlefield.

This capability has attracted the attention of the UK Government and has resulted in 2 successful applications for development contract funding from the Defence and Security Accelerator (DASA).

Hetti Barkworth-Nanton, Sentinel's Chief Executive Officer, said:

I would like to thank DASA for their support. These two grants, totalling £232,000, will help Sentinel accelerate its product development programme and will see demonstrator products in the hands of our end users by the end of the year. By the end of the summer, I'm also pleased to announce that we will be seeking to launch a Venture Funding round and would welcome preliminary discussions with interested parties.

A wide range of military and homeland security users will soon benefit from the assurance of having agile, next generation laser detection and protection in place. In addition to dismounted operators, a wide variety of land, sea and air platforms could be equipped with this capability.

Sentinel's first product will be a novel camera-based Laser Event Recorder (LER) to detect both pulsed and continuous wave (CW) lasers. In due course it also plans to develop a range of optical filters to provide protection

against laser threats to complement the LER detection capability.

Sean Tipper, Sentinel's Chief Technology Officer, said:

I have been working in the electro-optics field at Dstl for more than 5 years and am excited to continue this journey as part of Sentinel Photonics. The cutting-edge work undertaken at Dstl to not only reduce the Size, Weight and Power (SWaP) of these technologies but also create entirely new capabilities and overcome existing limitations, is what makes Sentinel's products unique and will help to prevent loss of life and improve mission effectiveness.

Sentinel Photonics was established in 2019 by [Ploughshare Innovations](#), the technology transfer office of Dstl. Ploughshare commercialises innovations from across UK Government by either licensing to industry or creating spin-out companies. Sentinel Photonics is its latest novel spin-out and interested parties are invited to contact us about future seed round investment opportunities. For more information about Sentinel's products visit <http://sentinelphotonics.co.uk>