



LAMDA GUARD

metaAIR™

laser glare protection



Metamaterial
Technologies
Inc.

Mastering Light



Photo: FAA

Protection against laser strikes

Laser strikes on commercial aircraft have risen over the years and laser pointers are increasing in power and decreasing in price. Lasers can distract and even harm pilots during critical phases of flight and can cause temporary visual impairment. In 2015 there were over 10,000 laser incidents reported to the FAA, the UK Civil Aviation Authority and Transport Canada. According to laserpointersafety.com as of July 1 2017, pilots have reported over 55,000 laser illuminations to five countries (U.S., Canada, U.K., Australia, Italy) since 2004.

Laser lights can be dangerous and/or disruptive to the human eye. In some cases, lasers can cause flash blindness, after-image, and eye injury during critical phases of flight—especially when pilots are landing planes. The majority of lasers are green, which is what they eye is most sensitive to.

Metamaterial Technologies Inc.'s (MTI) is at the forefront of providing a solution through the development of metaAIR—a completely unique metamaterial optical filter that is highly transparent and can cover large and small areas to provide laser glare protection.

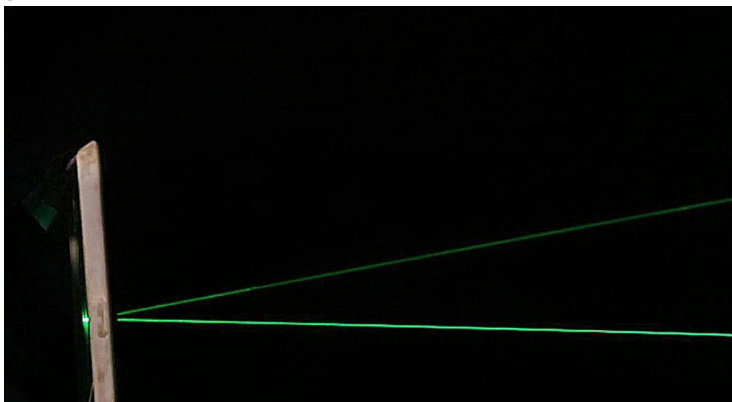


Photo: metaAIR blocking and deflecting a laser on a aircraft windscreen



Without metaAIR



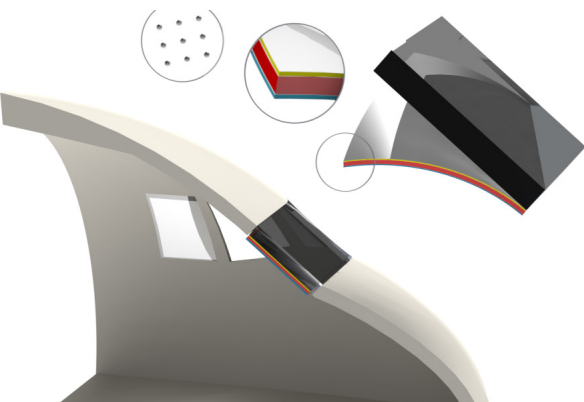
With metaAIR



What is metaAIR?

metaAIR is a dielectric (non-metallic) metamaterial optical filter that is scientifically engineered to protect vision from laser lights.

metaAIR has been created from polymer materials using nano-patterned designs with features as small as 5 nanometers that are engineered to interact with incoming light to block and deflect specific colors or wavelengths.



The Benefits

Clarity

metaAIR is neutral in color, highly transparent, and can be used both night and day. It has a high visual light transmittance that will allow users to see instruments and their surrounding

Tunable

metaAIR has the ability to be customized to block multiple wavelengths.

Thin Design

metaAIR is a lightweight and flexible optical filter. It can be applied to flat or cylindrical surfaces.

Manufacturing Integration

metaAIR can be applied to existing clear surfaces or new surfaces. It can be applied to windows, windscreens, goggles, visors and glasses.

Retrofit or Line-fit

metaAIR can be integrated into current equipment or products. It could be installed during of the product lifecycle or form-fitted to retractable visors, or a fleet of aircraft.

Ultraviolet (UV) Protection

metaAIR provides 99% protection from harmful UV rays from the sun.



MILITARY

AVIATION



TRANSPORTATION



EYEWEAR

