



Discontinued Product Resolution

California

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Advanced Photonix, Inc. (API) was approached by a major defense contractor that was facing a "line down" situation. The product they had been purchasing was a high output P-type silicon detector from another source. The detector was part of a magnetic sensing assembly for aircraft that is used for the detection and tracking of submarines below the ocean's surface.

Michigan

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The problem the customer faced was that the incumbent vendor discontinued the production of this technology midway through an open contract due to financial and engineering issues. These types of detectors are very difficult to manufacture and have typically low manufacturing yields due to the high bias voltage applied to them. The benefit of a P-type silicon photodiode is its increased responsivity at 1064nm. While conventional silicon devices are rolling off, in terms of photo current, due to the longer wavelength of 1064nm, the P-type silicon will generate nearly 50% more photo current.

Wisconsin

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Development of this type of sensor was a new emerging technology for API as we had received numerous requests for similar devices. Our engineering and R&D team worked diligently to procure the appropriate equipment to process such a device as well as develop a robust wafer fabrication process to achieve the desired electrical requirements.

In just a few months, API was able to design, develop, and successfully complete the order and keep the customer's program on track. API is now the sole source supplier for the program.

API offers two standard configurations of these devices. One is a single element unit; the other is a quadrant design ideal for laser target acquisition applications.