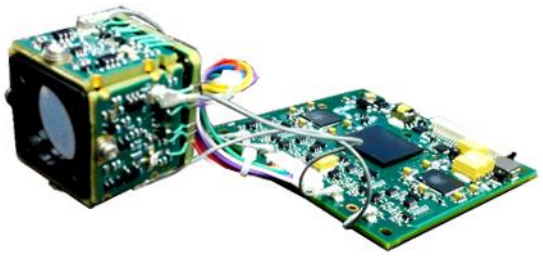
MULTIPLE LASER SPOT TRACKER MODULE

- **IDENTIFIES MULTIPLE SPOTS SIMULTANEOUSLY**
- **VERY HIGH SENSITIVITY**
  TRACKER MODE – TRACKS SPECIFIC PRF CODES
- **SEEKER MODE – IDENTIFIES/REPORTS ALL VALID PRF CODES WITHIN THE FOV**
- **ULTRA-WIDE DYNAMIC RANGE**
- **DETECTOR OPTIMIZED FOR 1.06 μm**
- **ADAPTIVE NOISE TRACKING THRESHOLDS**
- **POWER-ON BUILT-IN-TEST (BIT)**
- **INTERFERENCE FILTER AND OPTICS INCLUDED**
- **PREALIGNED MECHANICAL INTERFACE**



DESCRIPTION:

The ***Model 743DP*** is a new generation of miniaturized Multiple Laser Spot Tracker Modules designed for target identification and tracking applications. The ***Model 743DP*** utilizes a silicon quadrant detector optimized for 1.06 μm. Independent five channel noise detectors set the lowest thresholds to achieve long acquisition ranges for different background light and spot positions. The unit can be operated with a finely focused spot size for steering applications or with a defocused spot for target location identification within the FOV. The Model 743DP will decode and report up to 4 separate and independent laser pulse trains.

SPECIFICATIONS:

Quadrant Detector	1.5 mm diameter SiAPD Quad
Spectral Response	1064 nm with 10 nm narrowband optical filtering
Field-of-View	7º full angle with a spot size ~1/2 detector
Aperture Size	11 mm clear aperture
Boresight Accuracy	Standard Deviation < 1.0 mr/axis at 10x minimum detectable signal
Min Detectable Signal	< 1 femtojoule (23°C)
Dynamic Range	> 100,000:1
False Alarm Rate	Controlled by adaptive threshold on each channel, plus sum channel

Inputs	First/last/peak pulse logic, PRF code via RS-422/RS-485 full duplex serial interface
Outputs	Steering plus status information sent via serial interface
Power	+5 V ± 2% @ 500 mA - 5 V ± 2% @ 200 mA
Temperature	Operating: -40°C to +71°C Storage: -55°C to +85°C
Size	1.1” x 1.1” x 1.0” Sensor Assembly 2.5” x 2.5” x 0.4” Processor Assembly
Weight	Sensor = 22 g Processor = 24 g

ISO 9001 CERTIFIED

Specifications subject to change without notice.

U.S. Patent No.8,451,432

APPLICATIONS:

Missiles, UAS, Handheld & Mounted Tracking Systems, Weapons Systems, Alignment

“In the event this commodity will be transferred to a “foreign person” as defined in 22 CFR 120.16, either outside or within the United States, a validated US State Department license is required.”

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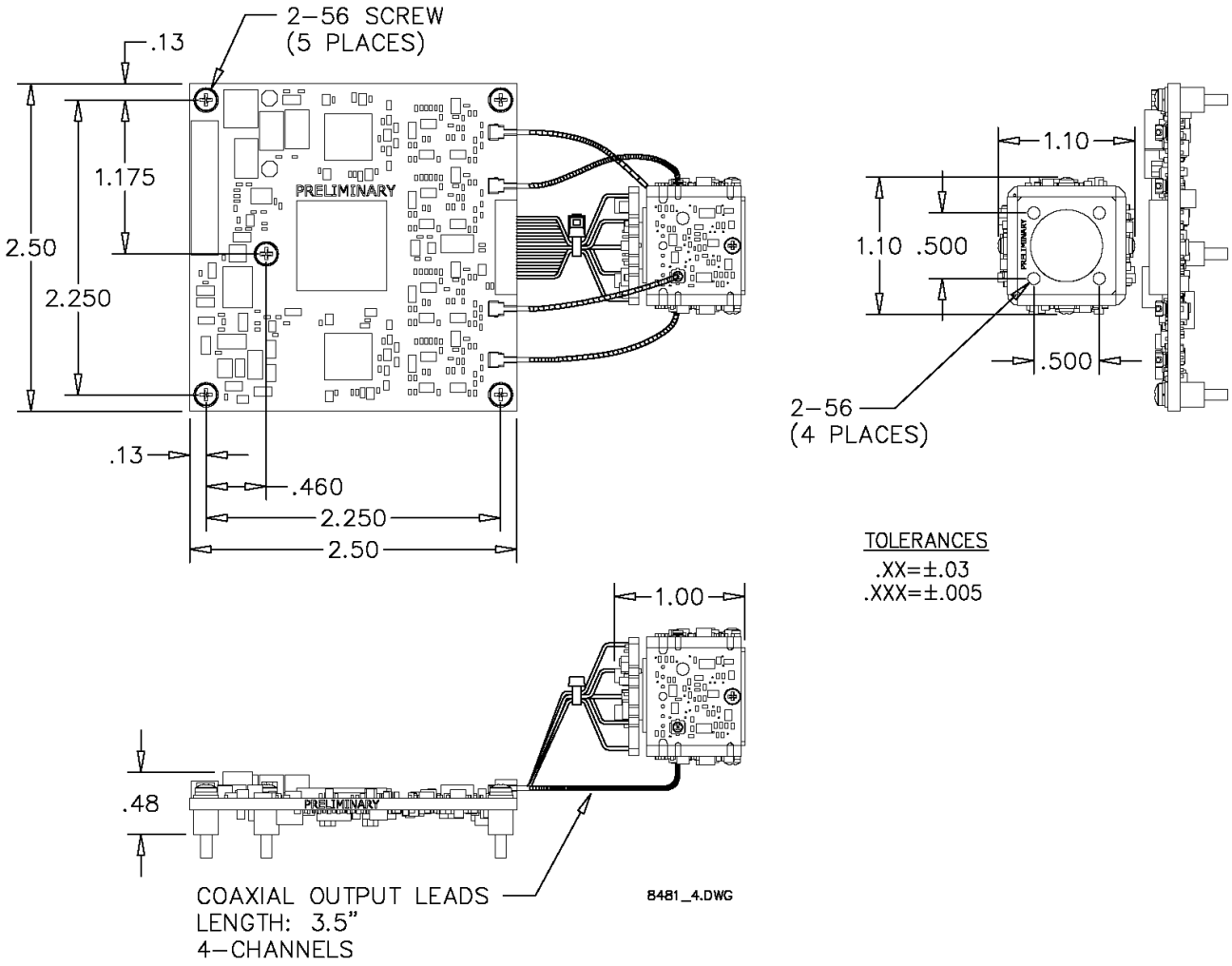

Sensor Assembly

Dimensions are in inches.

The *Model 743DP* comprises a hermetically-sealed detector with built-in front-end electronics on a rigid flex board, and a separate board assembly (2.5" x 2.5") containing analog and digital processing circuits. The individual channels are digitized with a high-speed A-D converter and output as a serial digital interface for steering or as an X –Y location within the field of view. An adaptive threshold control allows optimum signal-to-noise operation and power management is used to reduce power consumption.