

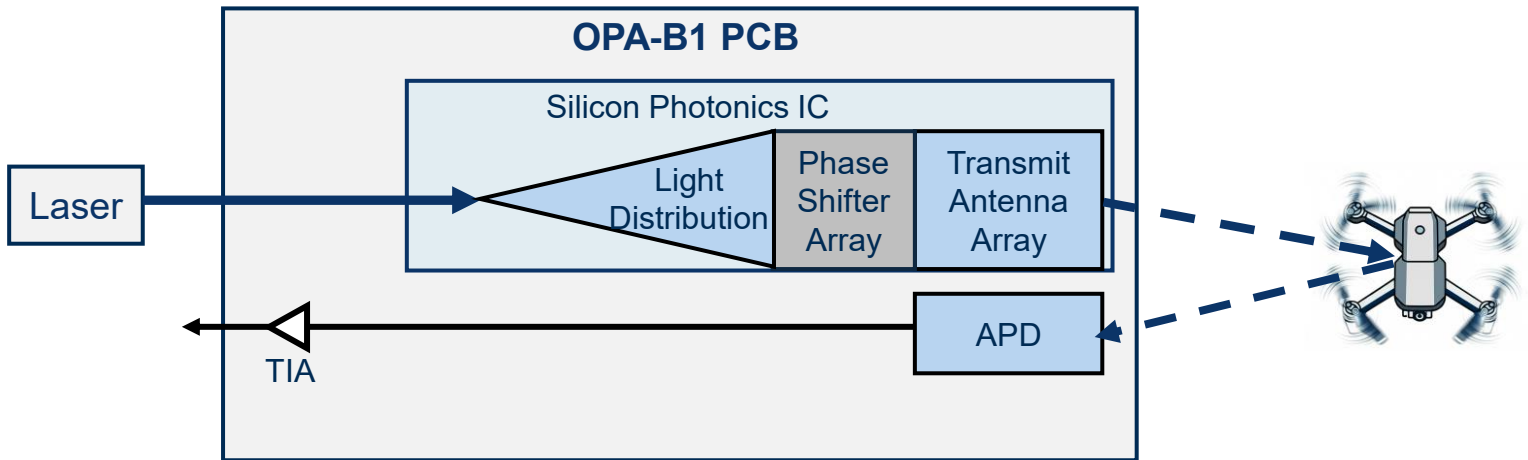
# FSOC-B1

## Free-Space Optical Comms Transmit-and-Receive Beamsteering Module



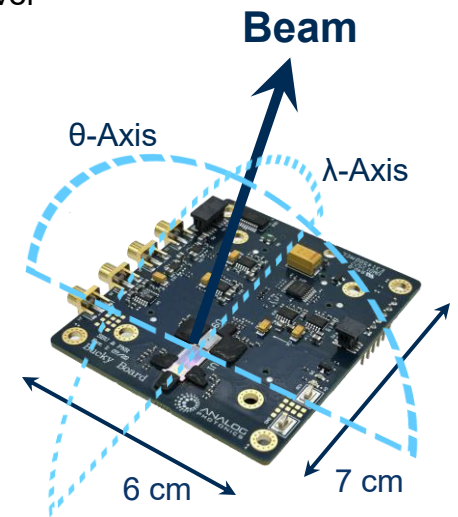
### Applications & Benefits

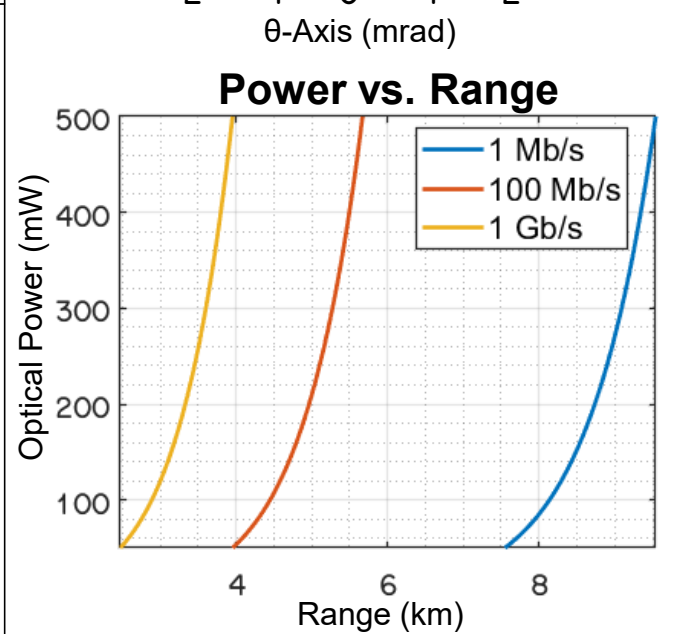
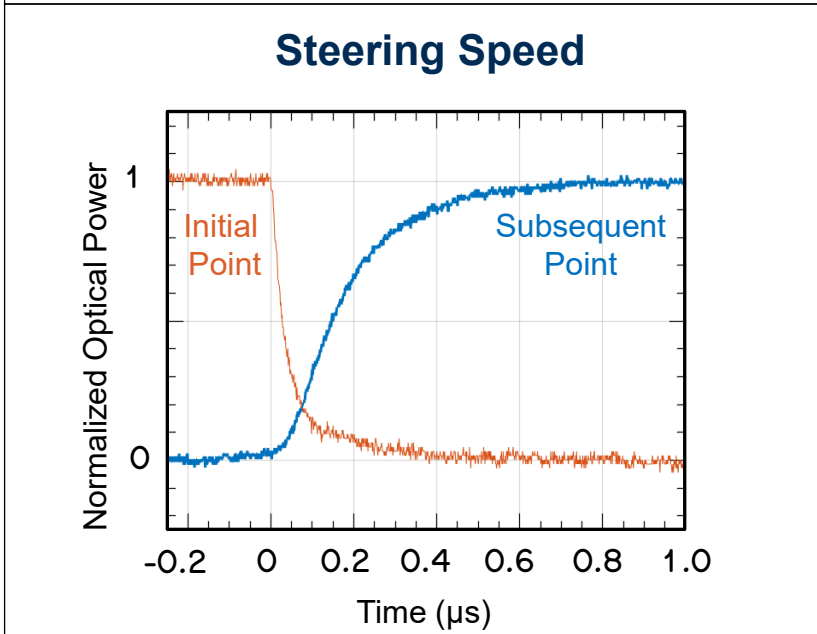
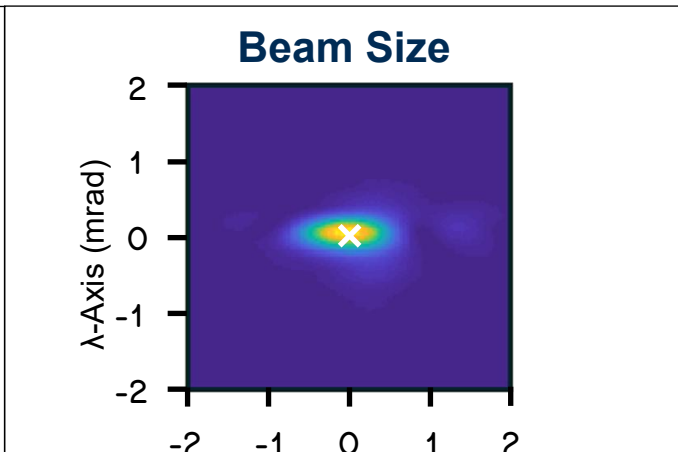
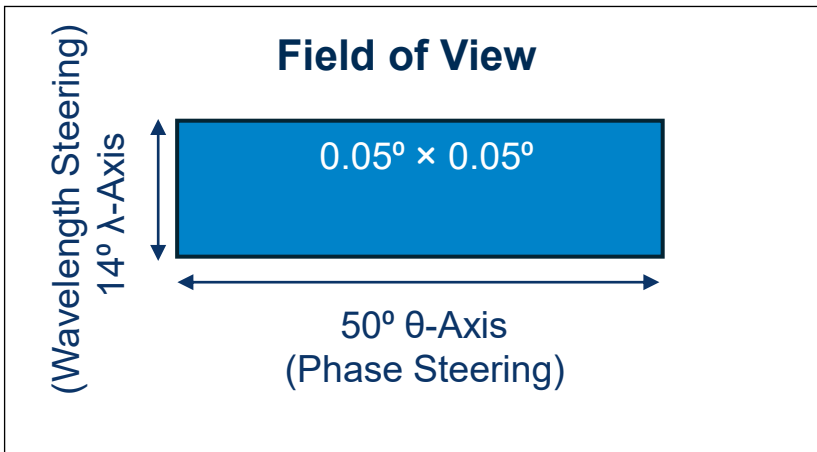
- Compact optical-phased-array module
- Independent transmit and receive arrays
- Direct-detect receiver for FSOC
- Fiber-coupled inputs and outputs
- Customer-provided laser for C- and/or L-band
- Application areas include LIDAR and FSOC



\* See component OPA-B1 for sister part with coherent receiver

Feature	Specification
Wavelength	C + L-Band
Maximum Input Optical Power	400 mW
Optical Power in Beam	$\leq 7.5$ dB IL from fiber input
Beam Size	1 mrad $\times$ 1 mrad
Field of View (H $\times$ V)	50° $\times$ 14°
Angular Resolution (H $\times$ V)	Arbitrarily programmable
Point-to-Point Steering Time	< 10 $\mu$ s random access
Electrical Power	< 5 W
Form Factor	7 cm $\times$ 6 cm $\times$ 1 cm PCB
Mass	64 g





### Compact Design

The FSOC-B1 module is only 42 cm<sup>3</sup> and 68g due to SiPh and CMOS integration.



### No Lenses

All FSOC-B1 optical components are integrated into the Silicon Photonics.



### Scalable

SiPh & CMOS are made in 300 mm nodes; cost is low with volume.



### Fast Steering

Acquisition, pointing, and tracking is accomplished through sub-microsecond steering.



### Availability

Immediate.



### Pointing Precision

Pointing precision is better than 0.1 mrad.



### Minimal Absorption

1.55  $\mu$ m exhibits excellent atmospheric transmission.



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