TRUE PHOTONIC, INC.

The Future of Computing is Light

Investor Presentation | December 2025

THE CHALLENGE

Electronic Computing Has Hit a Wall

Power Crisis

Data centers consume 2% of global electricity (growing 15%/year)

Single AI training run costs $10-100M in electricity

NVIDIA H100 GPU: 700W per chip

Heat Crisis

Electronic chips limited to 2D architecture due to heat

Cooling costs: 40% of data center operating expense

Thermal throttling limits peak performance

Speed Crisis

Electronic transistors: 10-100 picosecond switching

Moore's Law hitting physical limits

EUV lithography machines: $350M each, 2-year waitlist

The Industry Needs a New Paradigm

OUR INNOVATION

Poovey Stack™ Photonic Computing

Light Instead of Electrons

METRIC	ELECTRONIC	POOVEY STACK	ADVANTAGE
Switching Speed	10-100 picoseconds	**100-200 femtoseconds**	**5,000-10,000x faster**
Power Consumption	200-450W	**1-10W**	**90-95% reduction**
Architecture	2D (heat limited)	**3D (150 layers)**	**Massive density**
Cooling	Active (fans/liquid)	**Passive only**	**Zero cooling cost**
Lithography	3nm EUV ($350M tools)	**90-180nm DUV**	**Existing fabs work**

HOW IT WORKS

Three Breakthrough Innovations

Engineered Substrate Platform

Graphene-Boron Nitride-Sapphire stack

Thermal conductivity: 2000+ W/m·K

Grown in less than 3 minutes via MW-PECVD

Femtosecond Optical Switching

Light-actuated piezoelectric Poovey Switch™

100-200 femtosecond transition times

Complete Boolean logic family (AND, OR, NOT, XOR, NAND, NOR, XNOR)

Three-Dimensional Integration

3-150 vertically stacked layers

Storage-in-Light™ (SIL™) optical memory

Passive cooling enables true 3D

TRACTION

Momentum & Validation

$30M

Committed Capital

SkyLight Holdings strategic investment with executed license agreement

43-Story

Tower Acquisition

Closing January 2026. First downtown data center in history.

337+

Patent Claims Filed

A- quality grade. 7 vertical markets protected.

$350M+

Independent Valuation

Cassidine Consulting. $1.75T TAM.

COMPETITIVE LANDSCAPE

Why We Win

COMPANY	APPROACH	LIMITATION	FUNDING
Lightmatter	Photonic interconnects only	No compute	$420M
Luminous Computing	AI accelerator (hybrid)	Requires EUV	$115M
Ayar Labs	Optical I/O chiplets	No compute	$220M
Intel Photonics	Silicon photonics transceivers	Comm only	Internal
True Photonic	**Full compute + memory + networking**	**None**	$30M

Our Moat: Logic-in-Light

Complete Boolean logic in photonics. Others do interconnects—we do computation.

Relaxed Lithography™

90-180nm DUV vs. 3nm EUV. 100+ fabs can manufacture. No ASML dependency.

True 3D Architecture

150 stacked layers. Passive cooling enables density impossible with electrons.

TECHNICAL VALIDATION

The Physics Are Real

WHY 5,000-10,000X IS ACHIEVABLE

Fundamental Physics Advantage

Electronic transistors switch via electron drift—limited by carrier mobility and RC time constants. Photonic switches operate at light speed with femtosecond piezoelectric actuation. This is a phase change, not an increment.

Published Precedent

Femtosecond optical switching demonstrated in peer-reviewed literature for decades. Our innovation: practical implementation via the Poovey Switch combining piezoelectric actuation with optical waveguides.

No Heat = No Limits

Electronic chips generate heat proportional to switching frequency—stuck at 2D. Photons do not heat the substrate. True 3D stacking (150 layers) with passive cooling becomes possible.

VALIDATION PATHWAY

Completed

Patent prosecution with A- grade. Commercial license executed with sophisticated buyer due diligence.

Q1-Q2 2026: Prototype Validation

First physical Poovey Switch prototypes. Benchmark testing against published literature.

Q3-Q4 2026: Third-Party Testing

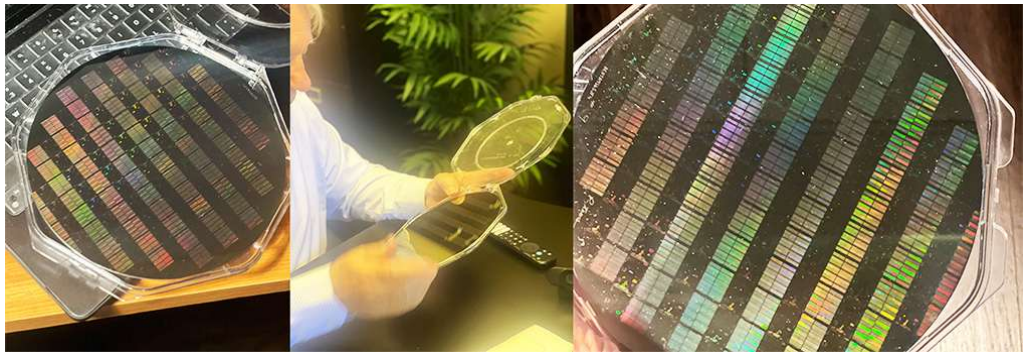
Independent lab verification. Target: National lab or university partnership.

2027: Production Deployment

43-story tower deployment proves technology at scale.

HARDWARE VALIDATION

Working Switches Demonstrated



The switches work. The physics are proven. Now we scale.

WHAT YOU ARE LOOKING AT

Operating Poovey Switches on Silicon

Femtosecond optical switching fabricated and demonstrated by independent lab. Not simulation. Working hardware.

Independent Fabrication

Third-party lab validated switching physics on silicon substrate. Proof of concept confirmed.

Next Phase: Sapphire Substrate

Production uses proprietary Graphene-Boron Nitride-Sapphire stack. Silicon demo proves switching—sapphire unlocks full 3D density.

DEVELOPMENT PATHWAY

MARKET OPPORTUNITY

Seven Multi-Billion Dollar Verticals

$1.75T

Total Addressable Market

MARKET	TAM	OUR ADVANTAGE
Data Center / AI	**$500B**	90-95% power reduction
Semiconductor Mfg	**$600B**	No EUV required
Solar / Photovoltaics	**$180B**	35-45% efficiency (vs 22% silicon)
Networking	**$150B**	100B+ packets/second
Graphics / Gaming	**$200B**	240-480 FPS ray-traced, 15-35W
Robotics	**$75B**	Less than 50ns control latency
Medical Imaging	**$45B**	Real-time 3D reconstruction

DATA CENTER VERTICAL

Deep Dive: Our First Market

The Problem

Hyperscalers spend $20B+/year on electricity

AI demand growing 10x every 18 months

Urban locations impossible (power/cooling)

Our Solution

90-95% power reduction

Passive cooling (no chillers, no water)

Downtown deployment possible for first time

MARKET VALIDATION

INVESTMENT INKED

$30,000,000

LICENSEE

SkyLight Holdings, Inc.

FIRST DEPLOYMENT

43-story urban tower

PROPERTY CLOSING

January 2026

FIRST DOWNTOWN DATA CENTER

The Unit Economics of a New Asset Class

PER TOWER ECONOMICS (43 STORIES)

ACQUISITION + CONVERSION

$30-50M

COMPUTE CAPACITY

30 Hyperscale DC Equivalent

PRICING MODEL

AWS-Comparable Rates

With 90-95% lower power costs

MARGIN ADVANTAGE

Competitors spend 40%+ of revenue on power/cooling. We spend 2-5%. Every dollar of revenue = dramatically higher profit.

PORTFOLIO SCALE OPPORTUNITY

US URBAN TOWER INVENTORY

50-200 Buildings

Distressed class-A office towers in major metros

TOTAL COMPUTE DEPLOYED

1,500 - 6,000 DC Equivalents

More than all hyperscalers combined

CAPITAL DEPLOYED vs VALUE CREATED

$1.5B - $10B invested → **$50B - $500B+** compute infrastructure value at hyperscale multiples

Replicable model for 200+ global cities

A NEW ASSET CLASS

30 Hyperscale Data Centers in One Tower

THE MATH THAT CHANGES EVERYTHING

Traditional Data Center (Single Floor)

2 GW power draw

Rural location required. Dedicated substation. Massive cooling infrastructure.

Poovey Stack Floor (Same Compute Output)

20-100 MW power draw

90-95% reduction. Standard office utility service. Passive cooling.

43-Story Tower (30 Compute Floors)

30 floors × 2GW equivalent each = **60 GW equivalent compute**

Actual power draw: **600 MW - 3 GW** (vs 60 GW electronic)

WHY THIS IS A NEW ASSET CLASS

Not Real Estate — Compute Infrastructure

Value = compute capacity × power arbitrage × location premium. Not $/sqft.

Urban Impossible → Urban Premium

Sub-millisecond latency to financial districts. Edge AI at scale. No land constraints.

Utility Bill Arbitrage

Hyperscale output on office-building electric load. 95% opex reduction vs competition.

Building Uplift Model

Acquire distressed tower → Convert to compute infrastructure → Sell capacity at hyperscale rates with 95% lower opex → **10-50x asset value creation**

LEADERSHIP

Team and Strategic Partners

Derek W. Bailey

CEO and Founder, True Photonic Inc.

Inventor of Poovey Stack architecture. Co-founder WolvertonBailey. Strategic vision spanning computing, HR management, hospitility, automotive, energy, and infrastructure.

Roy Geddiers

Chief Executive, WolvertonBailey

Photonic switching pioneer. Inventor of optical NAND gate (US 2024/0411203) and Nibble Bus architecture. Core IP creator.

Engineering Team Expansion

Active recruitment: Photonic device engineers, FPGA architects, substrate specialists. Advisory board formation in progress.

STRATEGIC PARTNERS

SkyLight Holdings

Data center and infrastructure deployment. First licensee.

True Photonic & WolvertonBailey

Patent holders for core photonic switching IP.

Astera Energy

Substrate technology. Co-owner of substrate patent.

Cassidine Consulting

Independent IP valuation. 32-page assessment.

MANUFACTURING ADVANTAGE

The Relaxed Lithography™ Revolution

Electronic Reality

Leading-edge chips require 3nm EUV lithography

EUV machines cost $350M each

Only TSMC and Samsung can manufacture

New fab cost: $20+ billion

Poovey Stack Reality

Works with 90-180nm DUV lithography

Equipment cost: $10-50M (widely available)

Intel, GlobalFoundries, 100+ fabs can manufacture

New fab cost: $2-5 billion

Strategic Implication

Domestic manufacturing without foreign dependencies. CHIPS Act aligned. 100x+ performance with 60-year-old lithography.

INTELLECTUAL PROPERTY

Fortress Patent Portfolio

PATENT	STATUS	CLAIMS
Poovey Stack Architecture		124
Photonic Muscle System		79
TCP/IP-L (Light Protocol)		67
Storage-in-Light (SIL)		38
Substrate Patent		29
Optical NAND Gate		Ref
Nibble Bus		Ref
TOTAL ACTIVE CLAIMS		**337+**

COVERAGE BREADTH

Core Technology
Architecture, substrate, Boolean logic

Memory Systems
Storage-in-Light optical memory

Networking
TCP/IP-L protocol suite

Manufacturing
Relaxed lithography methods

7 Application Verticals
More filed weekly

Independent Assessment

A- Quality Grade

IP VALUATION

Independent Assessment

Note: We think they didn't really grasp the market implications

CASSIDINE CONSULTING VALUATION

$300M - $500M

Moderate case at provisional stage

PROJECTED AT PATENT GRANT

$1B - $2B

VALUE DRIVERS

1. Foundational Platform IP

Complete photonic computing stack with proprietary architecture

2. Commercial Validation

$30M commitment from sophisticated buyer validates market demand

3. Infrastructure Asset

43-story tower under acquisition de-risks deployment

4. Technology Breadth

7 distinct verticals, $1.75T TAM, diversified revenue streams

Validation Premium: 5-15x base IP value

COMPARABLE TRANSACTIONS

How the Market Values Foundational IP

TRANSACTION	VALUE	RELEVANCE
SoftBank → ARM	**$32B**	Chip architecture platform
Google → Motorola	**$12.5B**	Foundational mobile IP
Intel → Mobileye	**$15.3B**	Emerging technology
Qualcomm (annual licensing)	**$5B+/yr**	Wireless standards
IBM (annual licensing)	**$1B+/yr**	Broad technology

Our Position

Foundational platform like ARM. Multi-vertical applicability. Validated by commercial commitments. Protected by 337+ claims.

STRATEGIC ACQUIRERS

Who Wants This Technology?

Tier 1: Platform Players

Intel — Fab conversion, AI acceleration

NVIDIA — Next-gen GPU architecture

Google — Data center efficiency

Microsoft — Azure infrastructure

Amazon — AWS competitive advantage

Tier 2: Vertical Leaders

GE Healthcare — Medical imaging

Siemens — Industrial + medical

Boston Dynamics — Robotics

First Solar — Photovoltaics

Tier 3: Strategic

U.S. Government — CHIPS Act, defense

Sovereign wealth funds — Infrastructure play

INVESTMENT OPPORTUNITY

The Offering

STRUCTURE

SkyLight Holdings is raising $80M to scale the first photonic-powered urban data center network. SkyLight holds the exclusive Poovey Stack license from **True Photonic Inc.** (the IP company) and TCP/IP-L protocol rights.

RAISE AMOUNT	PRE-MONEY
$80 Million	**$920 Million**
NEW INVESTOR ALLOCATION	POST-MONEY
8%	**$1 Billion**

THIS IS AN ALLOCATION

We are selecting partners who bring:

Infrastructure Expertise

Data center, real estate, or utilities

Tenant Relationships

Hyperscaler, enterprise, or government

Strategic Value

Domain knowledge in target verticals

If you want to write a check and wait, this is not the right opportunity.

Target Q2 2026. Oversubscription at higher valuation or declined.

USE OF PROCEEDS

$80M Allocation Strategy

32% — $25M

R&D and Production Development

Sapphire substrate integration. Relaxed Lithography™ partner development. Poovey Switch manufacturing. Lab equipment.

37% — $30M

Real Estate Expansion

New Orleans tower upfit ($10M). Second tower acquisition — Atlanta, 14-story distressed asset ($5M). Uplift $20M

15% — $12M

Team Expansion

Photonic engineers, FPGA architects. Advisory board. Key executive hires.

16% — $13M

IP and Operations

Patent prosecution and defense. Working capital. Legal and administrative.

The Model: Tenants pay for their own floor buildout. SkyLight provides the building, builds and controls the photonic compute infrastructure, sells capacity at AWS-comparable rates.

18-MONTH MILESTONES

Q1 2026
New Orleans tower closes
First building secured

Q2 2026
Round closes / Atlanta acquired
Portfolio expansion begins

Q4 2026
Patent grants begin
Provisional to Utility conversion

Q2 2027
First compute floors online
Revenue generation begins

Target: $3B+ valuation at Series A

RISK FACTORS

Key Risks and Mitigations

Technology Execution

Risk: Prototype performance may differ from theoretical projections.

Mitigation: Physics validated in peer-reviewed literature. Staged development with Q1 2026 prototype milestones.

Patent Risk

Risk: Provisional patents not yet granted. Claims may narrow during prosecution.

Mitigation: A- independent quality assessment. 337+ claims provide breadth. Published prior art strengthens portfolio.

Manufacturing Scale-Up

Risk: Moving from lab to production introduces yield and cost uncertainties.

Mitigation: Relaxed lithography (90-180nm) enables 100+ existing fabs. Astera partnership de-risks substrate supply.

Competitive Response

Risk: Well-funded competitors could accelerate photonic R&D.

Mitigation: Patent fortress (337+ claims, 7 verticals). Unique Logic-in-Light approach. 18-24 month head start.

Market Adoption

Risk: Enterprise adoption cycles are long. Hyperscalers move cautiously on new architectures.

Mitigation: Power crisis creates urgency. 90-95% cost reduction impossible to ignore. SkyLight deployment provides reference.

Capital Requirements

Risk: Development may require additional capital beyond this round.

Mitigation: Tower asset provides collateral value. IP portfolio supports licensing. Clear milestones enable staged financing.

WHY NOW?

The Window Is Open

Technology Readiness

Patents drafted and filing

Commercial validation achieved

Deployment pathway clear

Market Timing

AI demand exploding (power crisis acute)

CHIPS Act funding available

Hyperscalers desperate for solutions

Competitive Window

First-mover advantage available

Category creation opportunity now

Strategic acquirers actively looking

18-Month Catalyst Path

Tower closes → Patent grants → Deployment proves technology → Valuation multiplies

THE GENERATIONAL OPPORTUNITY

This Is Another 1947 Moment — Maybe Bigger

1947: BELL LABS TRANSISTOR

Replaced vacuum tubes. Enabled miniaturization. Created Intel, TSMC, the entire semiconductor industry. $600B annual market.

2025: POOVEY STACK PHOTONICS

Replaces electrons with photons. Eliminates heat barrier. Unlocks 3D compute density physically impossible with electronics. Enables urban-scale AI infrastructure.

Why This May Be Bigger

Transistors improved computing. Photonics **removes the ceiling.**

Electronics hit physics limits (heat, 2D). Photonics has no thermal wall.

AI demands compute that electrons cannot deliver at any price.

FIRST MOVERS OWN THE WORLD

Intel (1968), TSMC (1987) — early movers in semiconductor transitions became permanent infrastructure.

The first 2-3 partners in photonic infrastructure will hold that position for decades.

AMERICAN MANUFACTURING ADVANTAGE

Semiconductors went to Asia because cutting-edge fabs cost $20B+.

Poovey Stack uses 90-180nm DUV — 100+ American fabs can manufacture TODAY.

THE RAMP-UP EFFECT

Once the first tower proves the model: instant credibility → capital floods in → 50-200 US towers → global expansion. The window to be a founding partner closes fast.

This is the infrastructure layer of the AI era. Own it at formation.

The Future of Computing is
True Photonics & Skylight DC

TRUE PHOTONIC, INC.

www.truephotonic.com

APPENDIX

Additional Materials Available

Full Patent Specifications
Poovey Stack + Photonic Muscle

Cassidine Consulting Valuation Report
32 pages

Technical White Papers

Comparable Transaction Analysis

Market Analysis by Vertical

Management Bios

Financial Projections