



QUANTUM QOOL

COOLING ADVANCED ELECTRONICS FASTER

PITC DEC
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WWW.QUANTUMQOOL.COM

THE PROBLEM

HEAT IS THE ENEMY OF ELECTRONICS



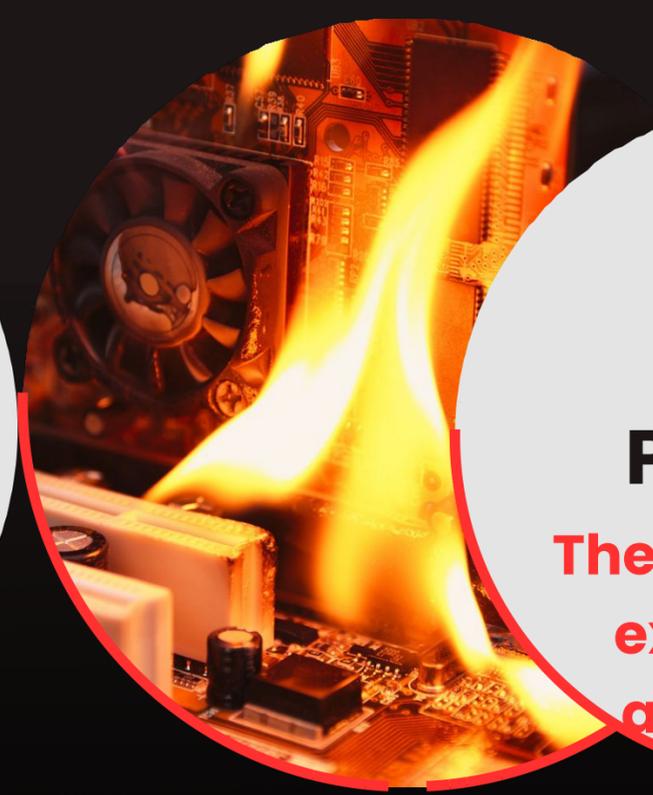
GOOD

Spacecraft are becoming more cutting-edge, robust and powerful than ever



EVEN BETTER

They're handling more compute and payloads than ever in smaller form factors



MAJOR PROBLEM

They're creating exponential amounts of heat

LARGE SATELLITES | CUBESATS | ROVERS | LANDERS



CURRENT SOLUTIONS

COATINGS



DEGRADE

S

FILMS



UNRELIABLE

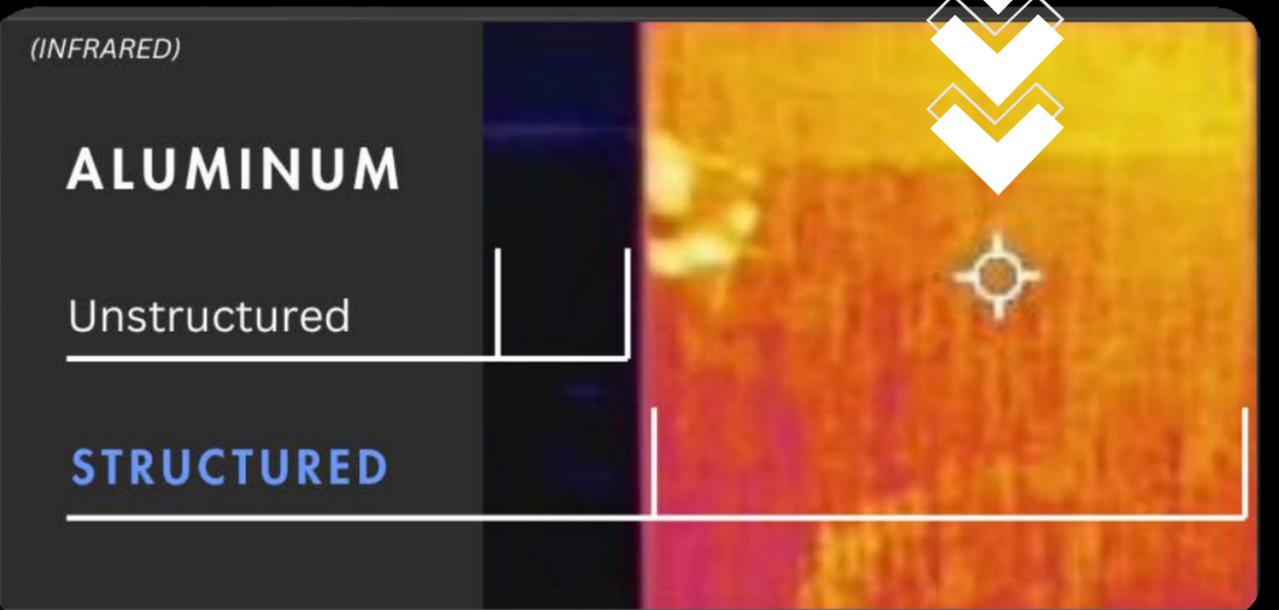
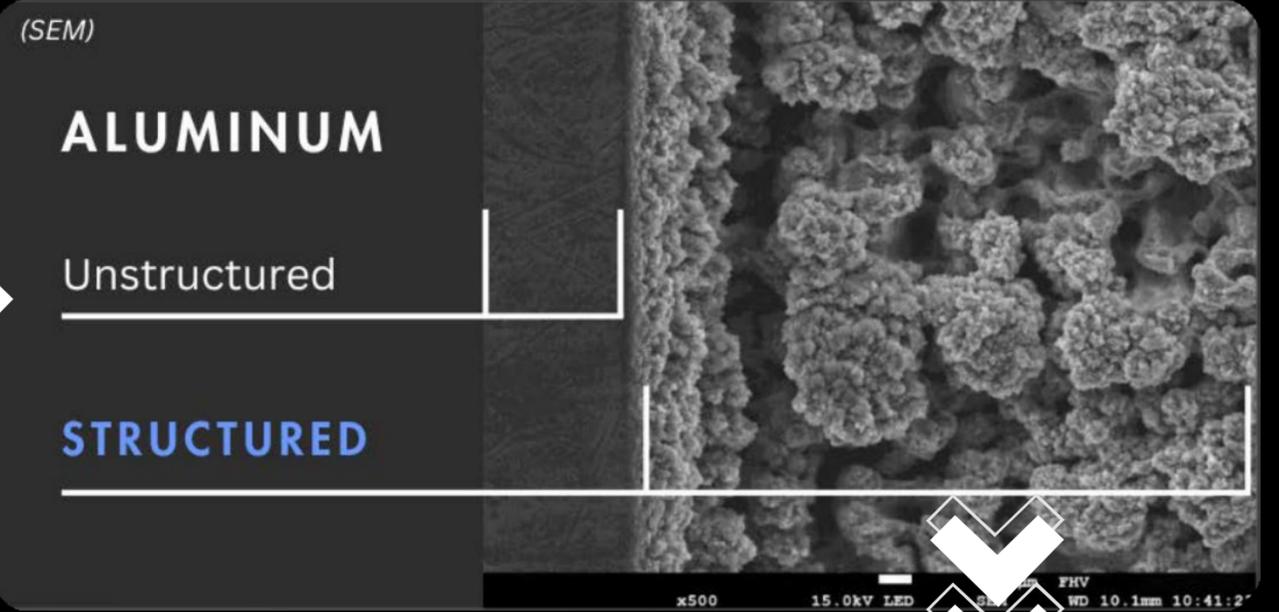
NANOTUBES



EXPENSIVE



OUR SOLUTION



- **Proprietary ultrafast laser surface structuring (ULSS) process that creates feature-enhancing nanostructures that accelerate cooling by removing bottlenecks of heat for semiconductor, battery, solar and space components & materials.**

Our process increases emissivity



HEAT TRANSFER ENHANCEMENT VIA ULSS

**Non-Structur
ed**

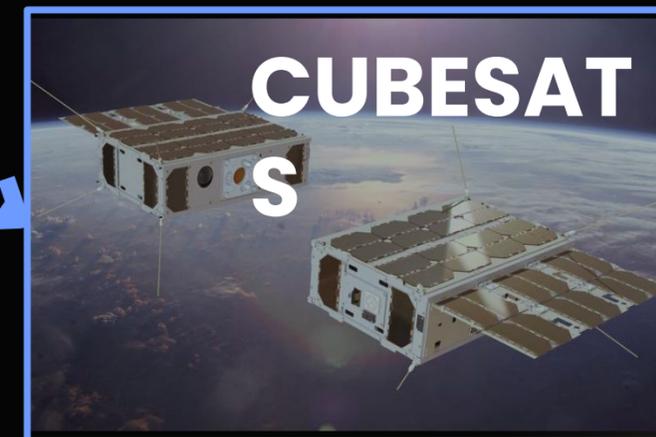
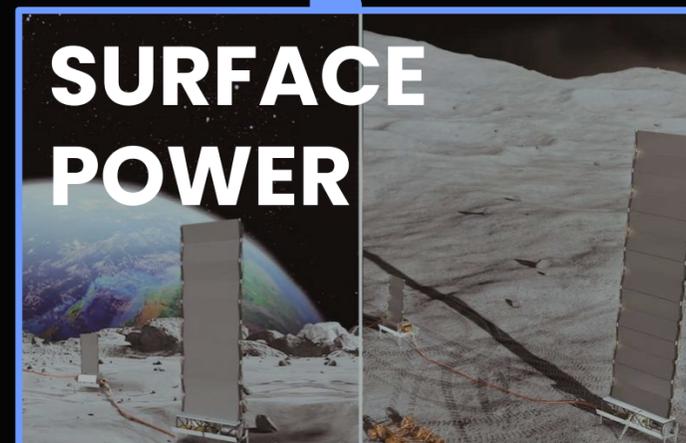
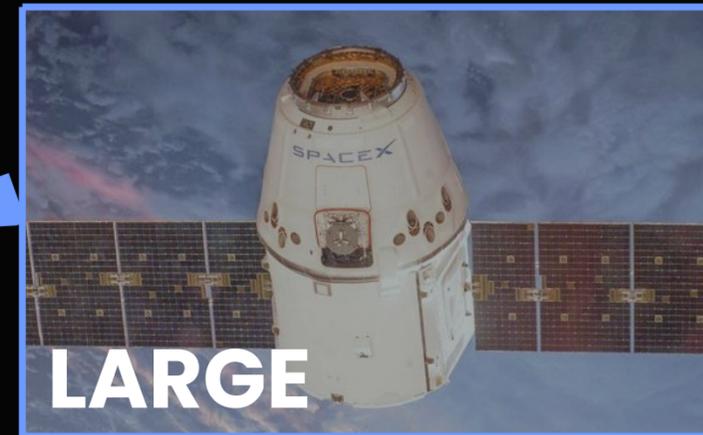
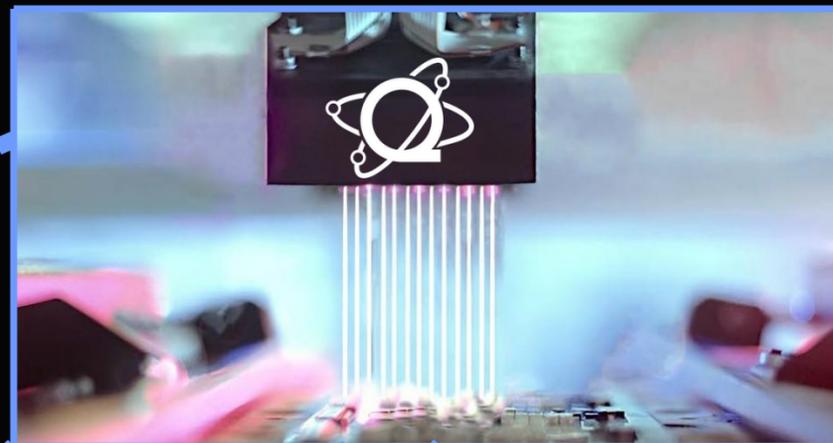


**Ultrafast Laser
Surface-Struct
ured**

Higher Heat Transfer Flow = Better Thermal



TARGET SPACECRAFT & COMPONENTS



THERMAL RADIATORS | HEAT SINKS | HEAT PIPES | HEAT SPREADERS | COLD PLATES

THE FOUNDERS



VICTOR A. RIVAS

CHAIRMAN, CO-FOUNDER & CTO

- Patented our laser-based process focused on thermal management
- Worked for both NASA & U.S. Department of Energy
- Expertise on material



KENT CAMPBELL

CO-FOUNDER & CEO

- Biz Dev background in global trade & international business
- Manufacturing & supply chains expertise
- Former global trade specialist at U.S. Department of Commerce



EARLY TRACTION

PAID
PILOTS



EVER-GROWING NEED FOR THERMAL MANAGEMENT SOLUTIONS IN BOTH SPACE & TERRESTRIAL APPLICATIONS, EVEN AT PROTOTYPE STAGE TO DEAL WITH HEAT ISSUES.



NON-DISCLOSURE
AGREEMENTS



ENTERPRISE
ACCELERATORS &
TECHNICAL DEMOS



Q2 LASER STATION

The Q2 Laser Station deploys our proprietary ultrafast laser surface structuring process at scale.

The Q2 works on metals, non-metals, ceramics, and composites.

The Q2 is constructed to be modular, meet manufacturing



REVENUE STREAMS



**ULTRAFAST LASER
STATION SALES**

**MACHINES FOR
INDUSTRIAL
MANUFACTURERS &
SUPPLIERS**



**CONTRACT
ULTRAFAST**

**MISSION-BASED
CONTRACTS FROM
NASA, DOD & PRIME
CONTRACTORS**



**LICENSING
MODEL**

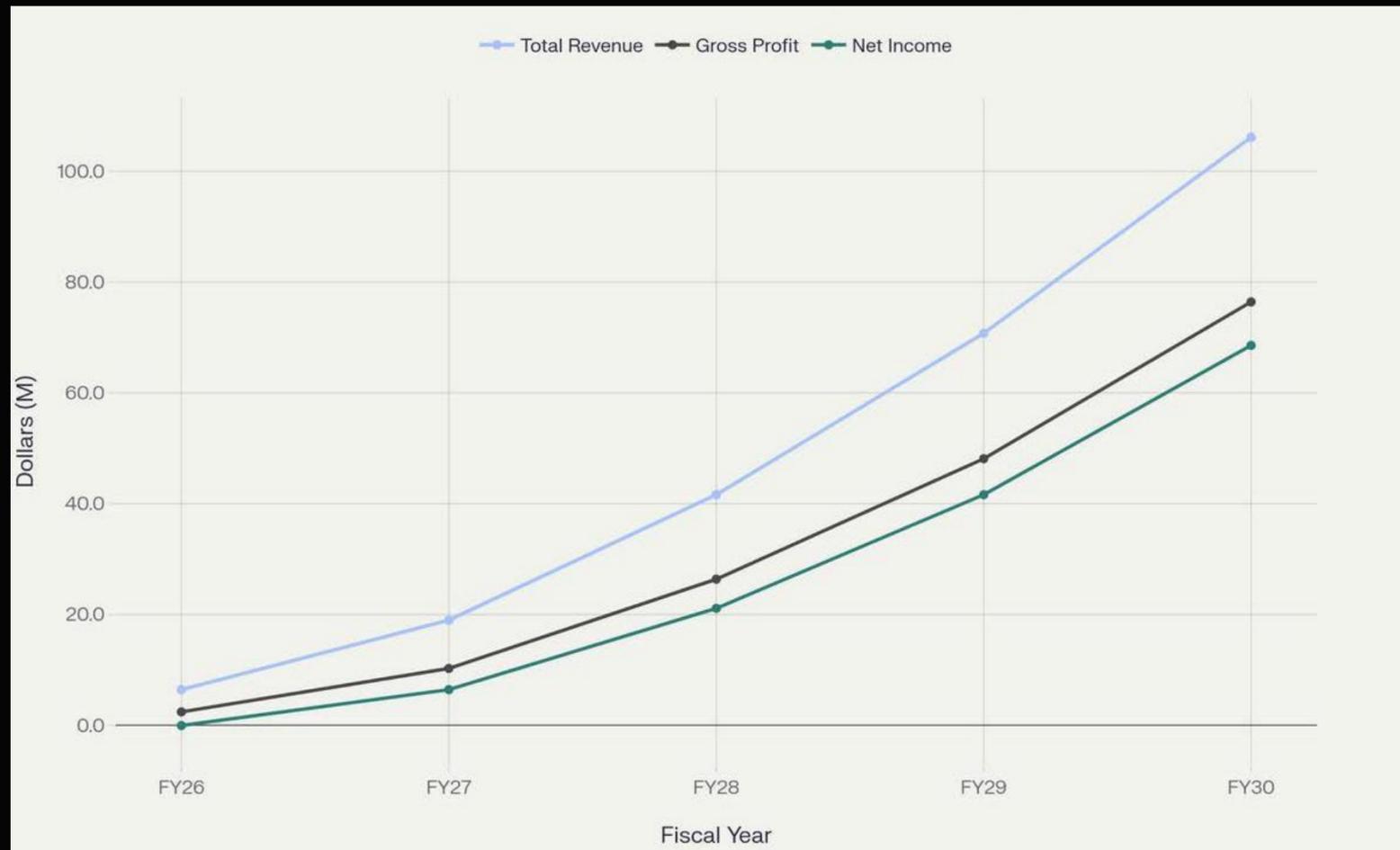
**FOR EXCLUSIVE
USAGE OF OUR LASER
STRUCTURING
PROCESS AT SCALE**



FINANCIAL HIGHLIGHTS

REVENUE TRAJECTORY

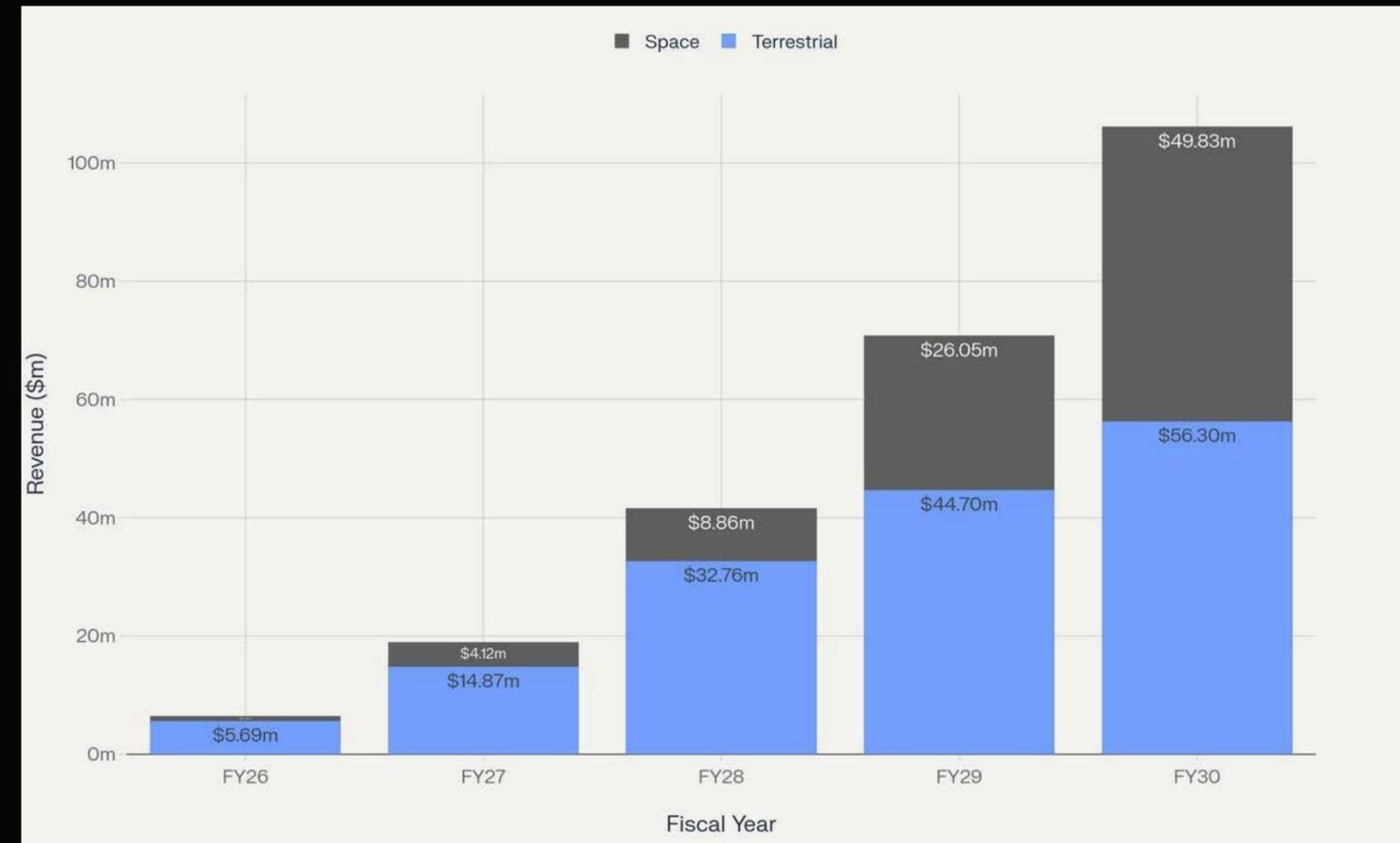
FY26 – FY30



FY26: \$6.4M (INITIAL COMMERCIAL ENTRY)
FY30: \$106.1M (50% CAGR)

REVENUE BY SEGMENT

FY26 – FY30



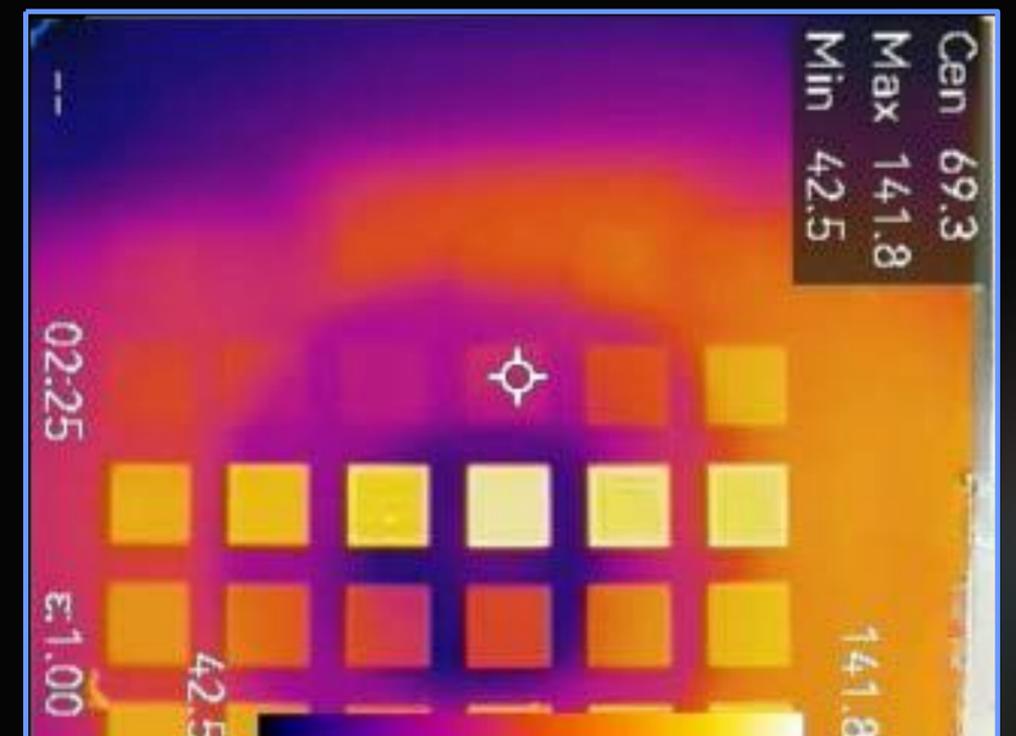
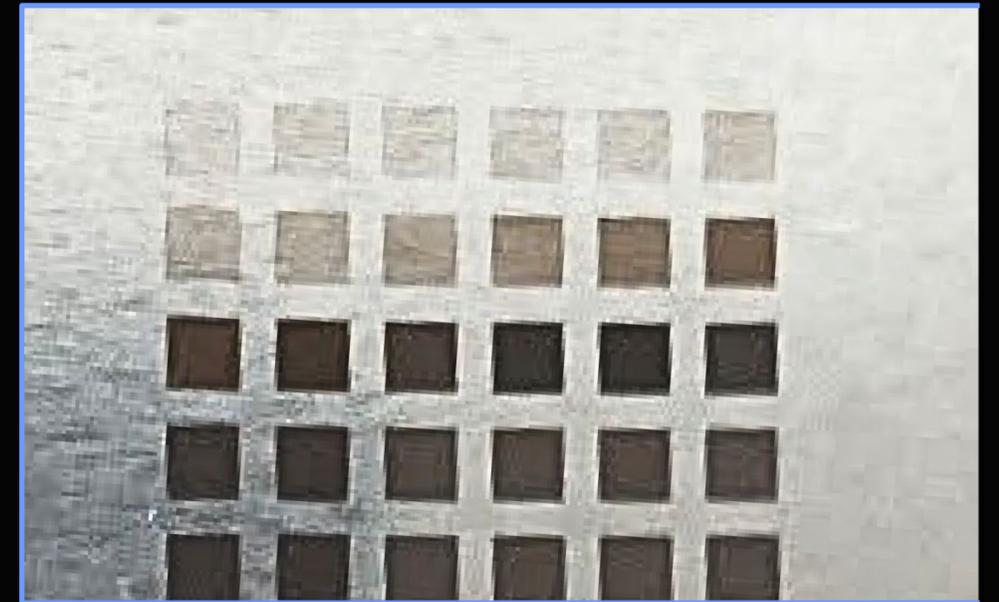
REVENUE MIX EVOLUTION: SPACE SEGMENT GROWS FROM 18% TO 47% OF TOTAL REVENUE

SO WHY TEST ON THE ISS?

- In-orbit testing is needed to validate for customers in the space sector the durability & emissivity performance of ULSS metal samples regularly used for key thermal spacecraft components.

Testing will enable Quantum Qool to prove how its tailored nanostructures create a “plasmonic cooling” effect, making it a spacecraft cooler overall at scale.

Letters of Support:



CURRENT FUNDING ROUND

\$1.4 MILLION

FUNDRAISE – OPEN THRU NOV.

(CURRENTLY AT \$1.2M COMMITTED)

USE OF FUNDS FOR PRE-SEED ROUND:

- Bring on 3 Laser & Thermal Engineers and 2 Laser Technicians
- Start build of ultrafast laser structuring robotics platform for macro applications
- Full application lab buildout to serve more customers



THANK YOU

FOR MORE INFORMATION:

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Chairman

vrivas@quantumqool.com



LOCATIONS

Omaha / Washington DC



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