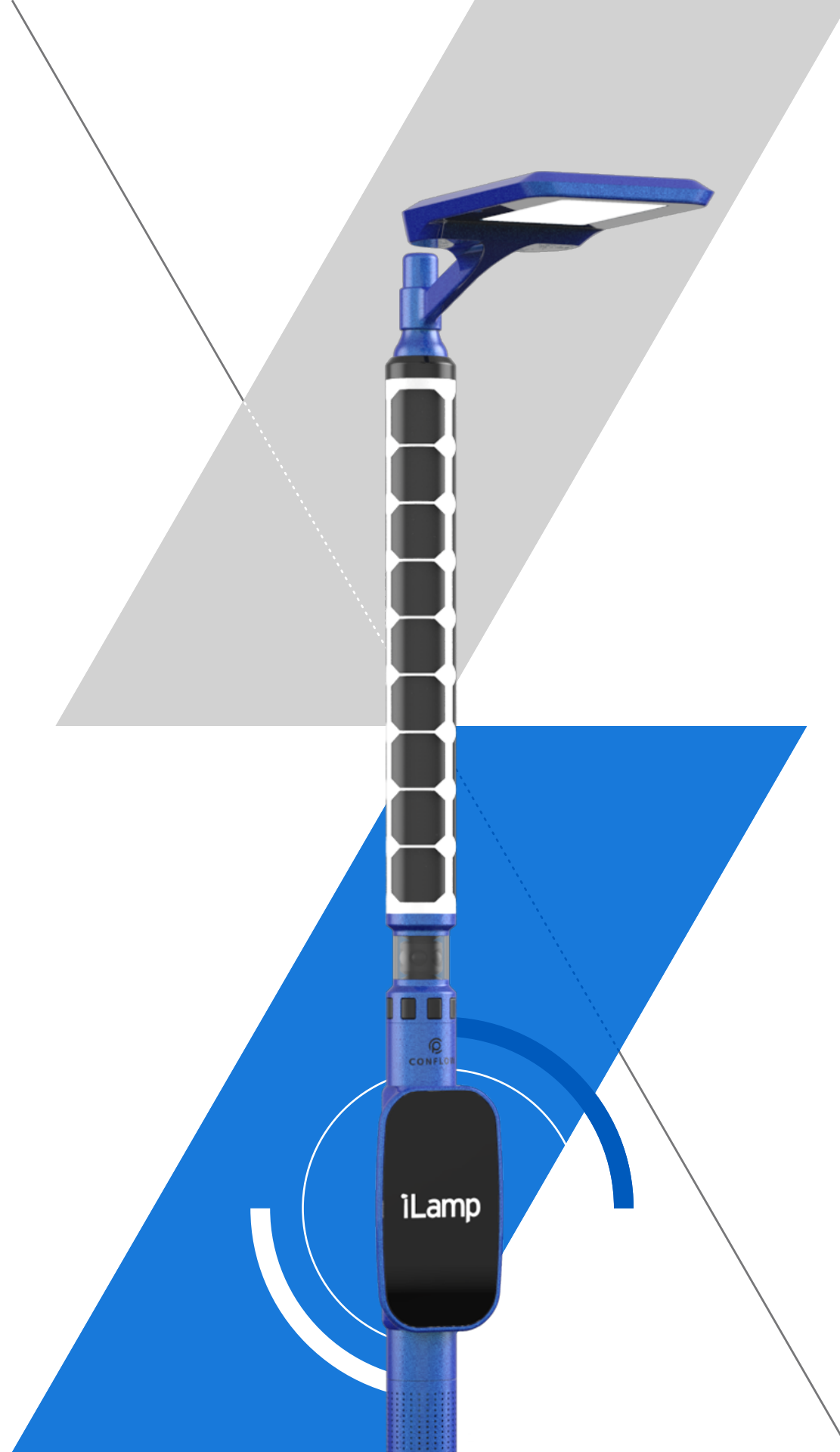




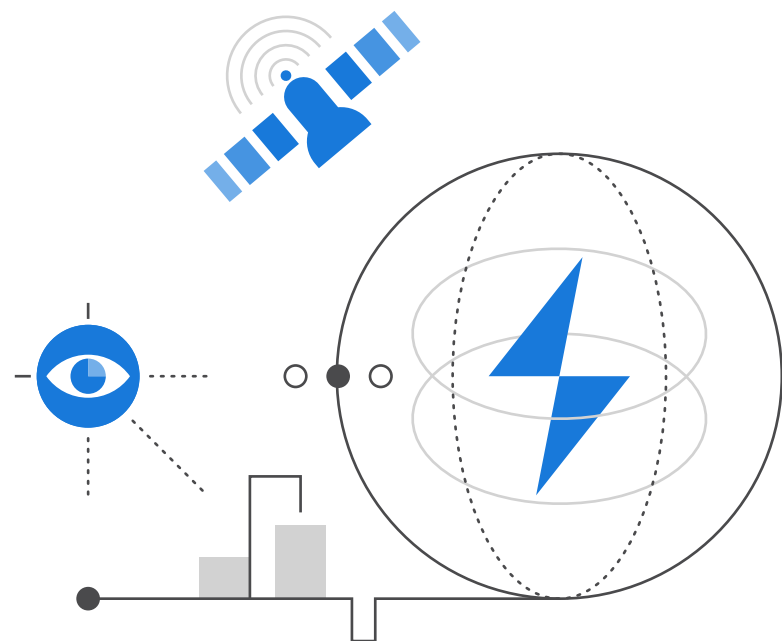
# Executive Summary

[conflowpower.com](https://conflowpower.com)

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# Power, Communication and Security



A vital trio that we did not set out to achieve yet here we are. iLamp has changed everything for us, seeking the best in the world for our technology combination took us from the multiple cities in the UK to the many more in the USA, Latvia to Taiwan, Thailand to Russia.

Every business should start with a story and end with addressing a clear market need.

We were presented with a technology that had all the hallmarks of a breakthrough, this breakthrough will not break through easily, it will force us to earn it, face major disappointment and constantly pivot, with each success there were set backs and new challenges, frankly, we loved every moment. It was a challenge, but it was a great one.

Finding our way into the street lamp sector was a blessing. We had no idea or ideas. This allowed us a blank slate to create something from outside the norms of the industry.

Discovering the importance of the global network of street lamps and the state they are in was the opportunity we didn't know we were looking for. Something enormous. Something brave to match the challenges of harnessing a new wave of power generation. This sector will allow us a home to showcase new technology and power advancements directly in the cities where we locate them. By developing a super smart lamp, not just a technology, not just a combination, but a design, a structure a platform and a network that will bring clean and independent power, communications and security everywhere.

Conflow Power will fund the majority of its business via the sale of iLamp throughout Southeast Asia and The USA. Targeting 650,000 units over the next 4 years, this represents less than .5% of the addressable market.

# Power



We are investing in, developing, partnering and licensing multiple powerbased technologies to ensure we are the creators of a complete solution, total autonomous power. In a lamp, a pole, a device that fits everything. It's in the air. Far more powerful things to discover if you are minded to. And we are more than minded, we are determined.

Speaking, writing and detailing any key information about our power technologies can bring no power to our business at this stage, so they must remain silent until they can be undoubted. The business we have forged will be successful even in the absence of a power breakthrough.

Our street iLamp will work regardless. Our power investigations and challenges will find their way into our iLamps while they work perfectly without the need for an additional power supply. This is very important part of our strategy.

We are promising nothing more than the most efficient network of street lamps the world has ever seen,

running on eco clean power, delivering everything imaginable and unimaginable including:

## Power as a Service

Conflow Power Group owns a 20% stake in PaaS.

The Payment Gateway to Alternative Energy.

PaaS provides customers with smart monitoring, exact charges, and precise billing. A world first for Redistributed Generation.

Currently consumers receive electricity generated through a complex network of cables and infrastructure.

Power is generated by a few large companies, from distant locations, for millions - a model which hasn't changed in over 100 years.

It's no coincidence that these industrial power facilities produce profound amounts of pollution and greenhouse gas emissions. Consumers not only pay for the electricity used, but for the entire infrastructure that delivers power and for their future expansion.

PaaS models are enabled by distributed power generation and storage distributed by smart micro-grids.

These innovative technologies enable us to fast-track the implementation of our payment gateway, while offering lower pollution and significantly more efficient energy storage compared to other solutions on the market. This is achieved by the following:



Distributed Generation



Microgrids



Power Storage



Energy Harvesting

By using smaller energy production sources, these can be moved closer to the end consumer. This migration of smaller power generation capabilities is described as “Distributed Power Generation (DPG).

The development of low-pollution power generation from renewables, in combination with new storage technologies, enables them to be placed close to population centers.

This allows for lower pollution, is practical for rural and remote locations, enables augmentation of traditional power sources to improve reliability, and reduces energy loss by increasing efficiency.

Power as a Service is a new concept and model for the way that electrical service is delivered.

Our goal is to accelerate the transition to renewable energy, by increasing the commercialisation of low-carbon technologies. Without drastic change, our net zero carbon targets simply cannot be met.

We provide “Power-as-a-Service” without the need for upfront capital investment. It’s the most comprehensive energy provision, management, maintenance and payment solution possible. This helps consumers increase their energy efficiency, while only paying precisely for what they use.



Real-time power monitoring and management



Pay for power without any upfront capital cost



High efficiency & low-carbon technology

# Communication



Cellular, Wi-Fi, 4G, 5G, even some new versions of communication can be utilised in different markets which have different needs, infrastructure and value. As a cornerstone of the iLamp its ability to communicate and allow others to communicate is vital for many obvious reasons but also for some unobvious ones. As a stationary payment gateway iLamp brings another dimension to the value of data, power, speed and safety of communications throughout a city. For the purposes of this document we will focus on one of these to show a differentiator, a clear discipline to not disrupt but to alter the course and ensure mini towers provide a distributed communication hub.

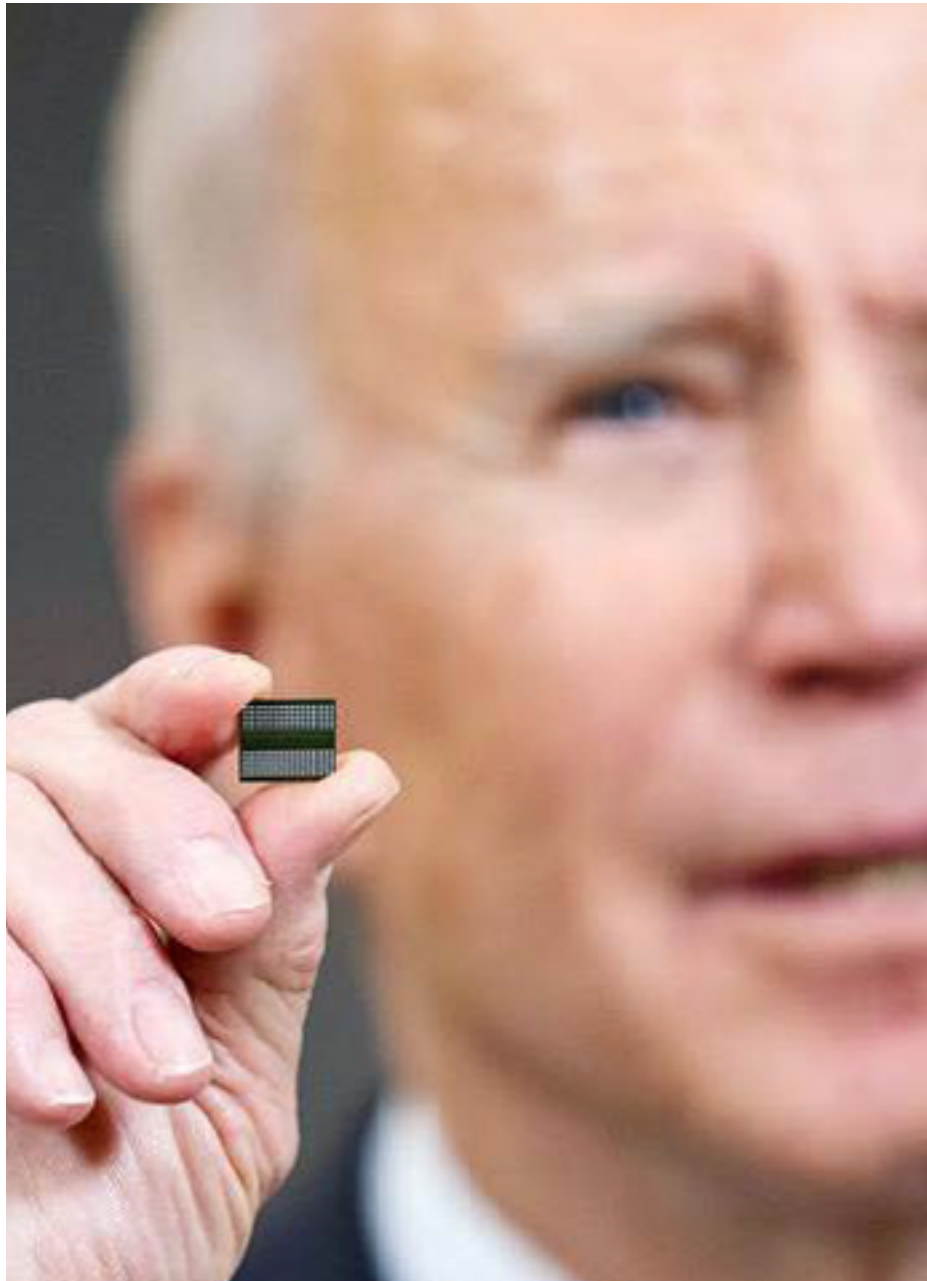
To bring this to reality we have entered into a joint venture with a Taiwanese company with 20+ years in the design and manufacturing of semiconductors. We hold an option to buy into this company with the resulting funds to be used to expand into larger production of what is now a very sought after commodity. The global supply of regular semiconductors is threatened.

Even as the world's leading chipmakers scramble to solve critical supply bottlenecks, a new wave of semi conductor startups has been quietly lining up massive sums of venture capital in their quest to design the next generation of chips.

Startups in China and the US have been subject to a venture capital land grab from investors who believe nascent chip designs will propel a future ruled by artificial intelligence and machine learning.

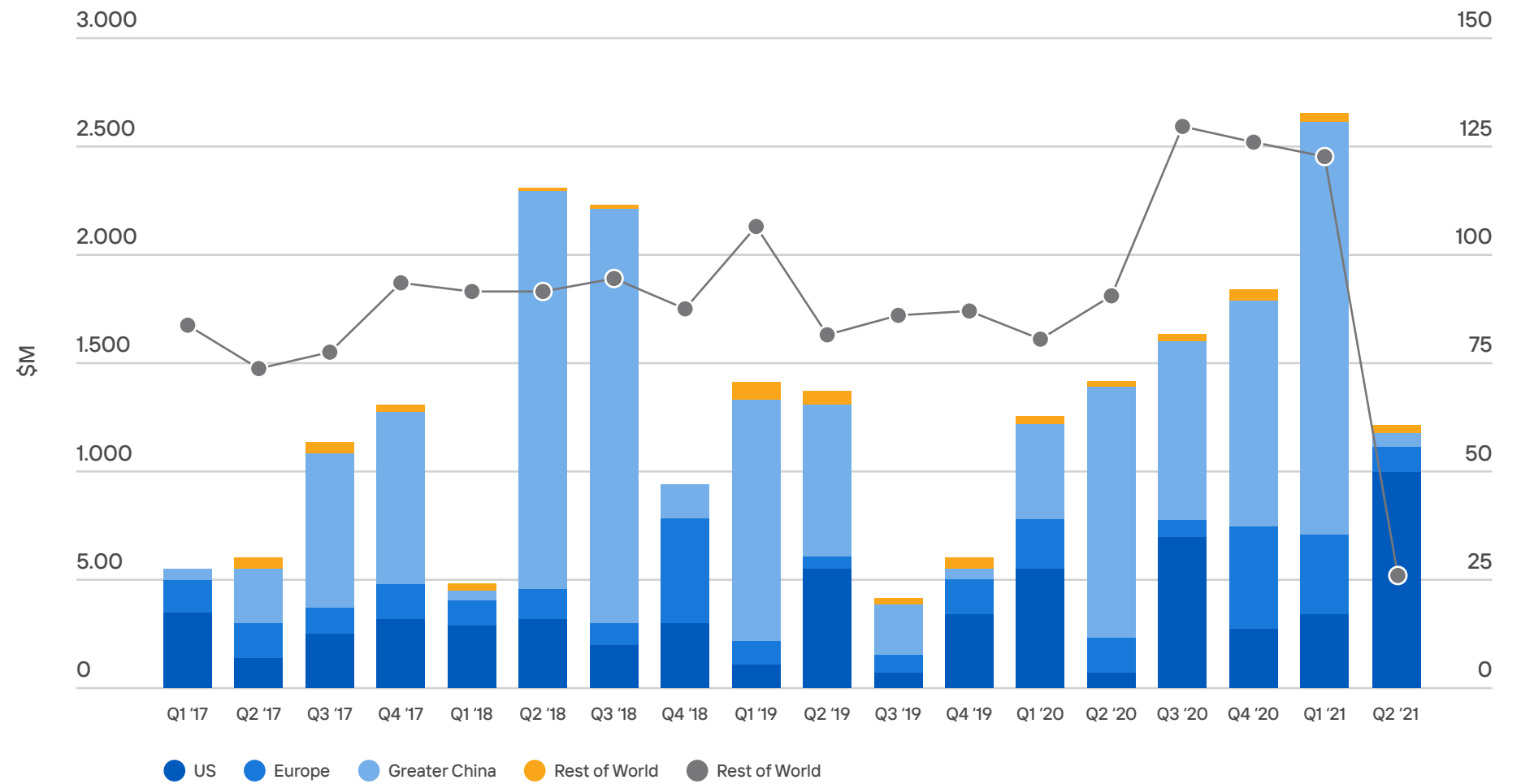
Global VC investment in semiconductor companies set a quarterly record for deal value at \$2.64 billion in the first three months of 2021, with 70% of the funding going toward Chinese companies, according to PitchBook data.

American companies have also raised impressive sums. In April, SambaNova Systems became the most valuable VC-backed chipmaker in the US after raising \$676 million at a \$5 billion-plus valuation. And Groq landed a \$300 million round co-led by Tiger Global and D1 Capital that will support the development of its streamlined AI chips.



President Joe Biden has proposed that the US invest \$50 billion in semiconductor manufacturing and research.

(Doug Mills/Getty Images)

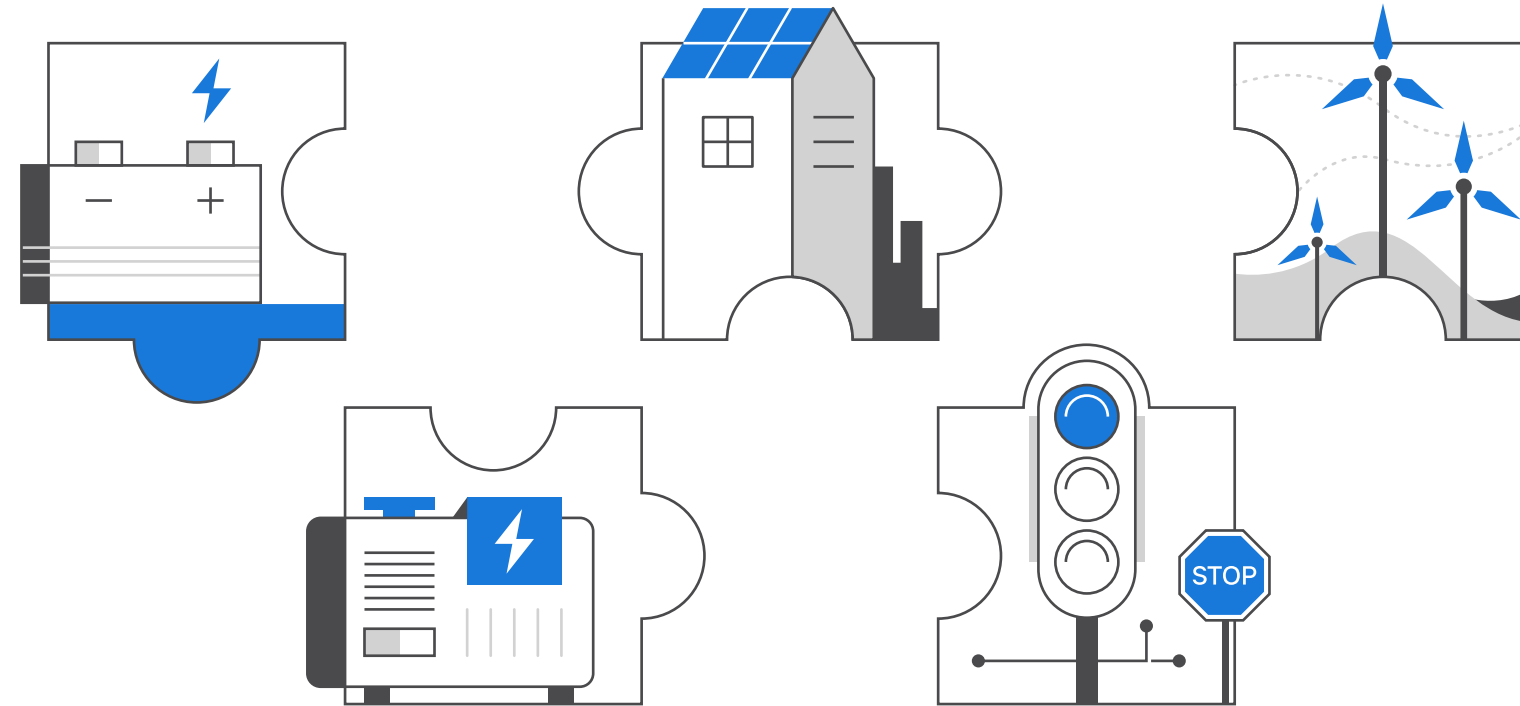


China, US lead boom in semiconductor VC deals

Source: Pitchbook

Our JV partner in Taiwan was founded in 2000. Under the introduction of Hitachi Cable's epitaxial technology and quality system, it has successively completed the growth of laser diode epitaxy epi wafer for wireless communication microwave components (HBT and HEMT) and optical storage applications with MOVPE technology. Hitachi Cable is an official OEM factory and has passed the verification and mass production of Japanese customers.

ConFlow Taiwan will now specialise in the business of light emitting diode epitaxy wafers. It has introduced Hitachi Cable's Liquid Phase Epitaxy technology for the mass production of AlGaAs Red colour epitaxy wafers and MOVPE epitaxy technology for AlInGaP visible and infrared epitaxial wafers. Under the independent business and development of ConFlow Taiwan. The LED epitaxy wafer has become the current main product and has gained good reputation from customers in the market.



*In 2018, we obtained Japanese laser grade and semi-insulating GaAs technology and team cooperation. The design was completed in 2019. The 4-inch substrate ingot growth equipment was installed in September 2019 and start to mass production and offer sample from Nov 2019. The 6-inch design has been completed in 2020, and the installation of 6-inch laser grade and semi-insulating GaAs substrate equipment is expected to begin in 2021.*

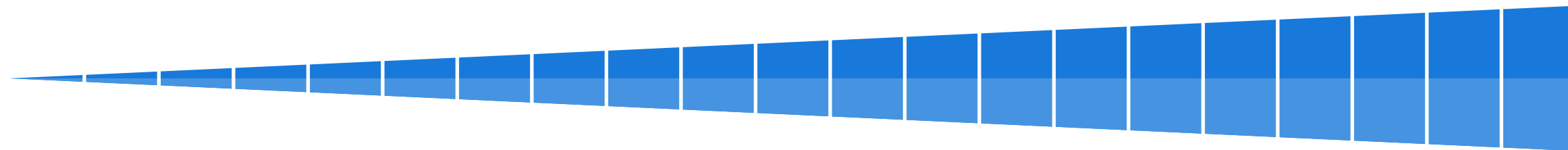
*Inside the facility  
which is now ConFlow's 5G  
research facility*





RF dominates

Optoelectronic dominates



2019

2025


2030

\$200M

Wafer Market

\$200M

CO-existence Wafer Market

3D sensing handset 

\$262M

Epiwafer Market

\$262M

Epiwafer Market


Display 


 Handset PA

 Handset PA

LiDAR Personal Vehicle (L4/L5) 

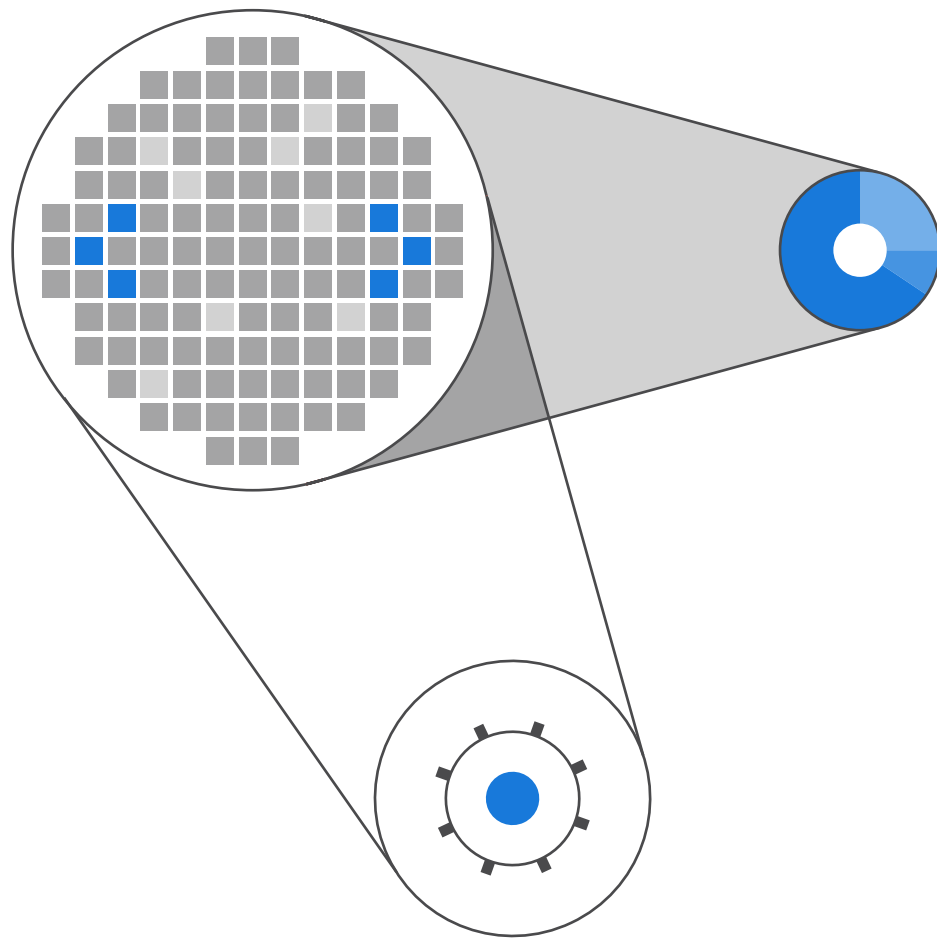
 3D sensing handset

Industrial manufacturing 

 Display

*GaAs wafer market roadmap: market growth drivers*

Source: GaAs Wafer and Epiwafer Market: RF, Photonics, LED, Display and PV Applications 2020, Yale Development, June 2020.



- ▶ GaAs wafer market has been quiet in the last couple of years as the mobile handset market becomes saturate and the related GaAs RF PA market gives very limited growth.

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- ▶ The situation has been changed as Apple introduce iPhone X with 3D sensing function using GaAs based VCSELs. The event has attracted vast attention to GaAs again.

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- ▶ Indeed, the photonics market, particularly driven by 3D sensing applications in the mobile phone market and the Lidar applications, will give new source of GaAs market growth in the next five years.

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- ▶ But the GaAs market growth will not be limited to the photonics applications, LED markets, driven by IR LED applications, automotive lighting, horticultural lighting and display applications will drive increasing volume of GaAs wafers as well.

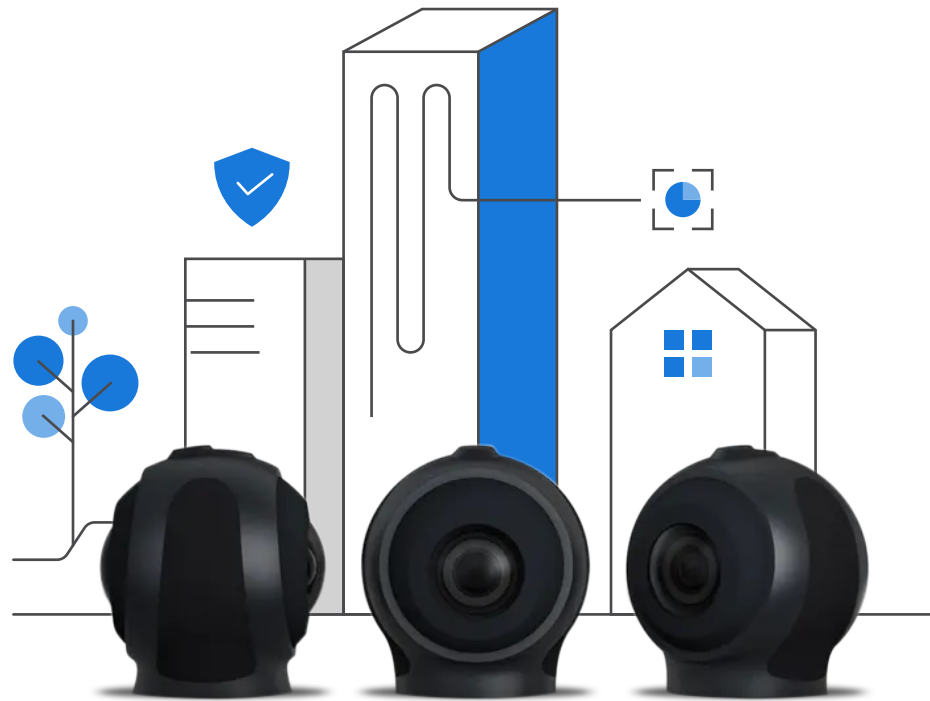
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- ▶ Indeed, we are entering a new Era for GaAs wafer and epiwafer markets, shifting from GaAs RF dominating era to optoelectronic applications dominating era. Seeing the opportunities enabled by the new era, the financial market is excited, the wafer suppliers and epiwafer suppliers are excited, the equipment suppliers are excited.

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- ▶ Opportunities also bring challenges. Technically, the specification requirement is different and evolving constantly, the supply chain for new applications is under construction. Challengers are hoping to grasp market share from the leading suppliers.

# Security



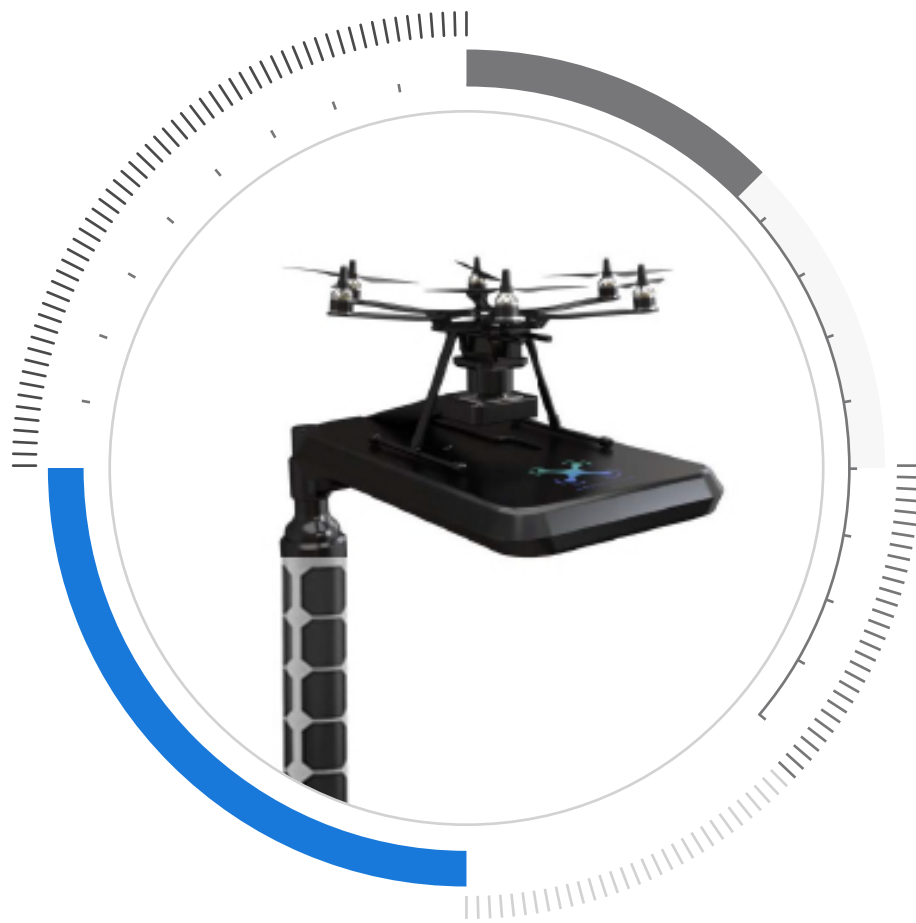
The final part of the trio is the monitoring of people, vehicles, weather, weapons and the movement of these things. The iLamp has multiple elements built in to assist in this. A 360-degree high resolution camera renders CCTV obsolete. The market is saturated, we are spoilt for choice and the cost gets lower and lower, our current option can capture 12K by 12K video at up to 30 frames per second in 12-bit RAW (DNG8) or 10-bit All-I 4:2:2.

Gunshot detection is not complicated but current systems are expensive and clunky. Our built-in speaker sends alerts when certain frequencies are heard and when multiple poles are deployed they can use triangulation to pin point the location and retrieve footage while sending a live view to relevant departments of law enforcement automatically.

Automatic lighting monitors visibility levels and reduces light and therefore power usage where and when necessary.

Air quality monitors provide data and services as well as generate warning systems for key social groups.

These are just some of the services we are adding to the iLamp which all have revenue generating capabilities.



## Drone Ready

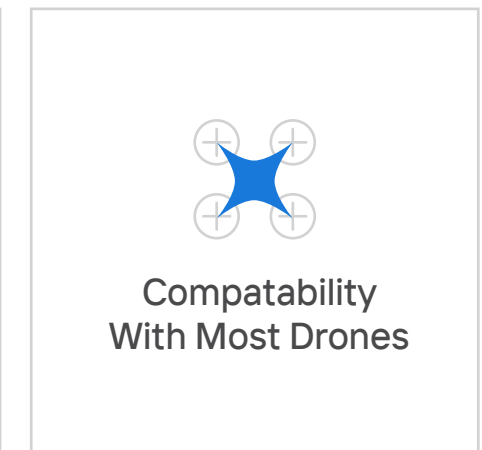
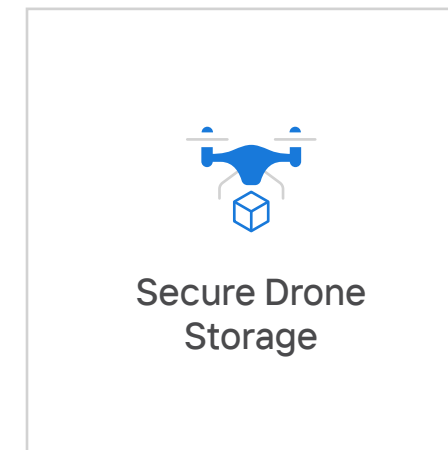
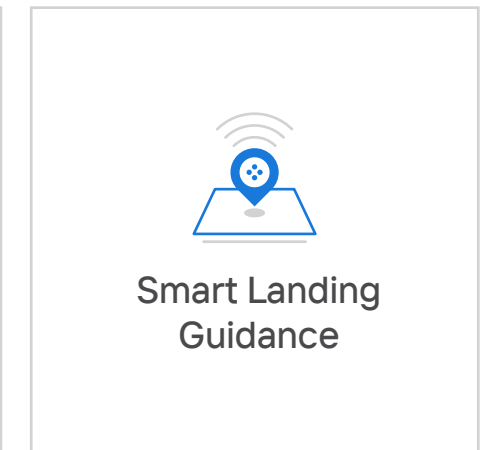
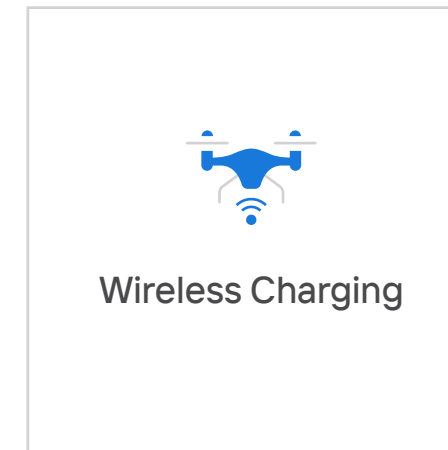
A world first for drone guidance.

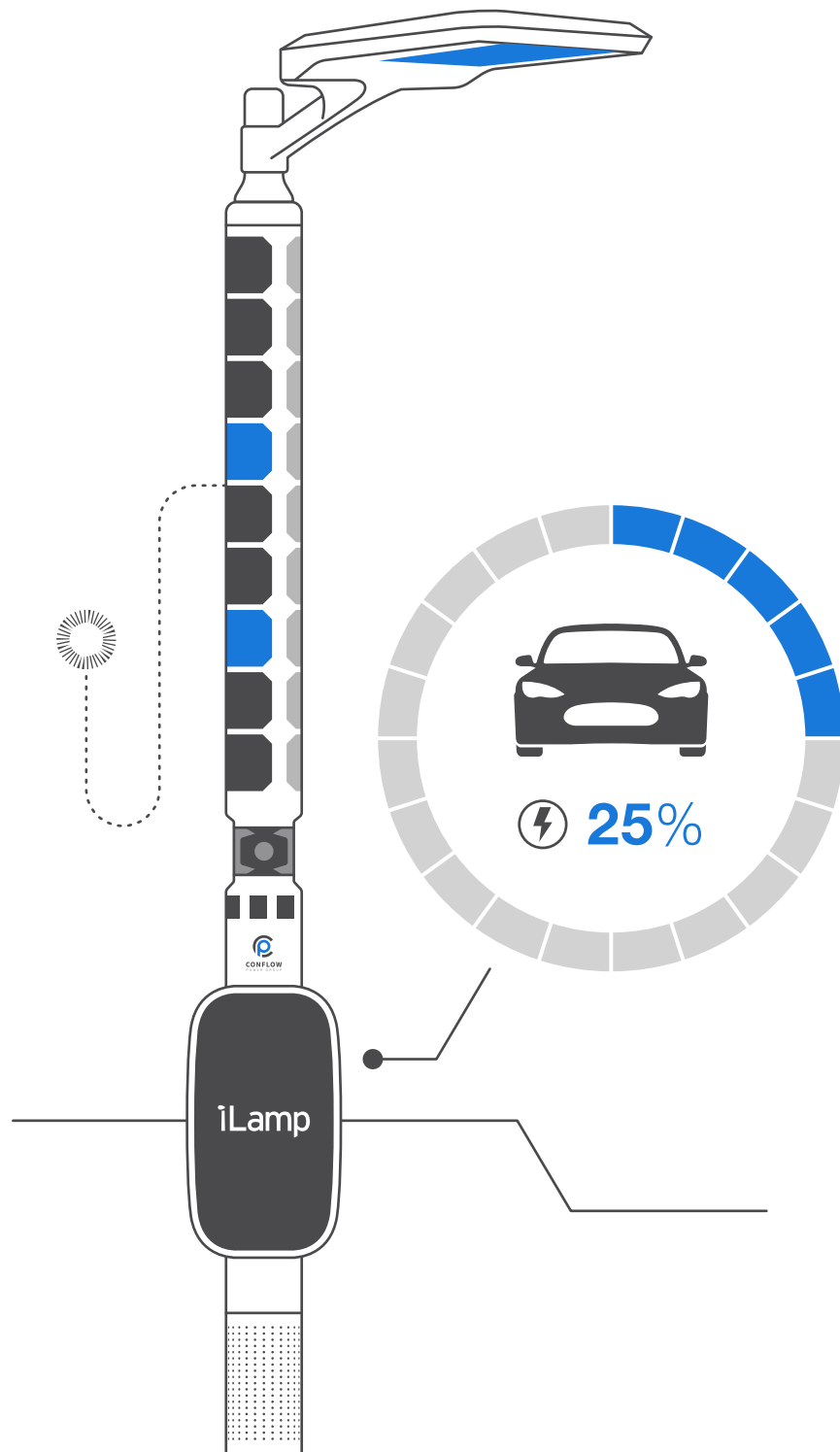
Drone Ready is a cutting-edge Drone Guidance System, with an innovative landing pad that provides secure drone storage and charging.

Drone Ready combines hardware and software solutions to deliver smart drone landing guidance.

We have demonstrated that drones can land completely autonomously on a landing pad the size of an A3 piece of paper, in winds of up to 20mph. This is at least a 2x smaller landing area than our competition.

This is achieved by using an electromagnetic capturing system, then a physical tether to charge and store the drone. Most of our technology is integrated into our landing pad, which offers:





## iLamp

iLamp is a revenue generating smart street light for home owners, small businesses, developments, villages, towns and cities all over the world.

- + Off Grid Installation
- + Energy Saving Lighting
- + Control Hub

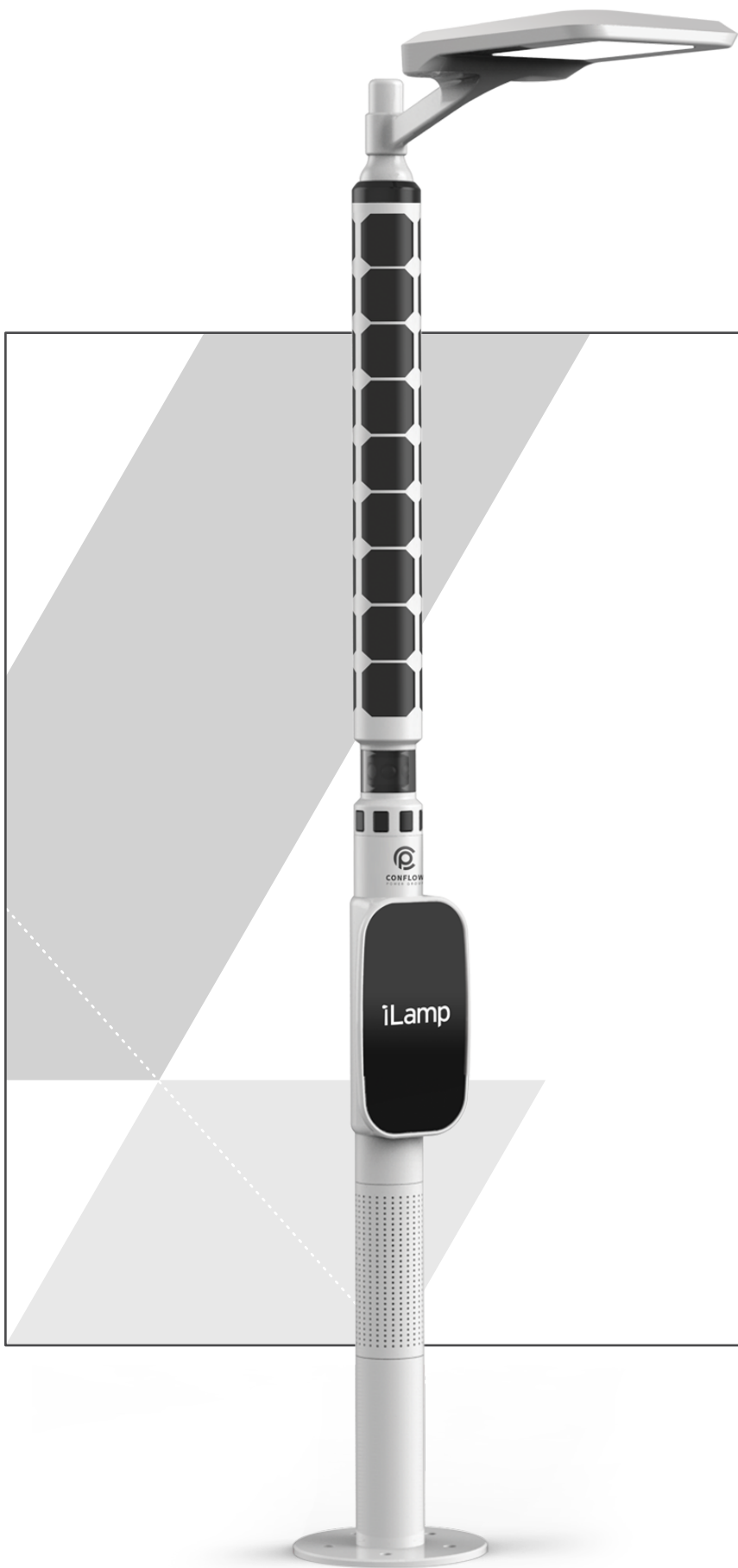
*iLamp launched three models on pre-order in April 2021 and has a planned future for scheduled upgrades, additions and enhancements.*



WHITE

RED

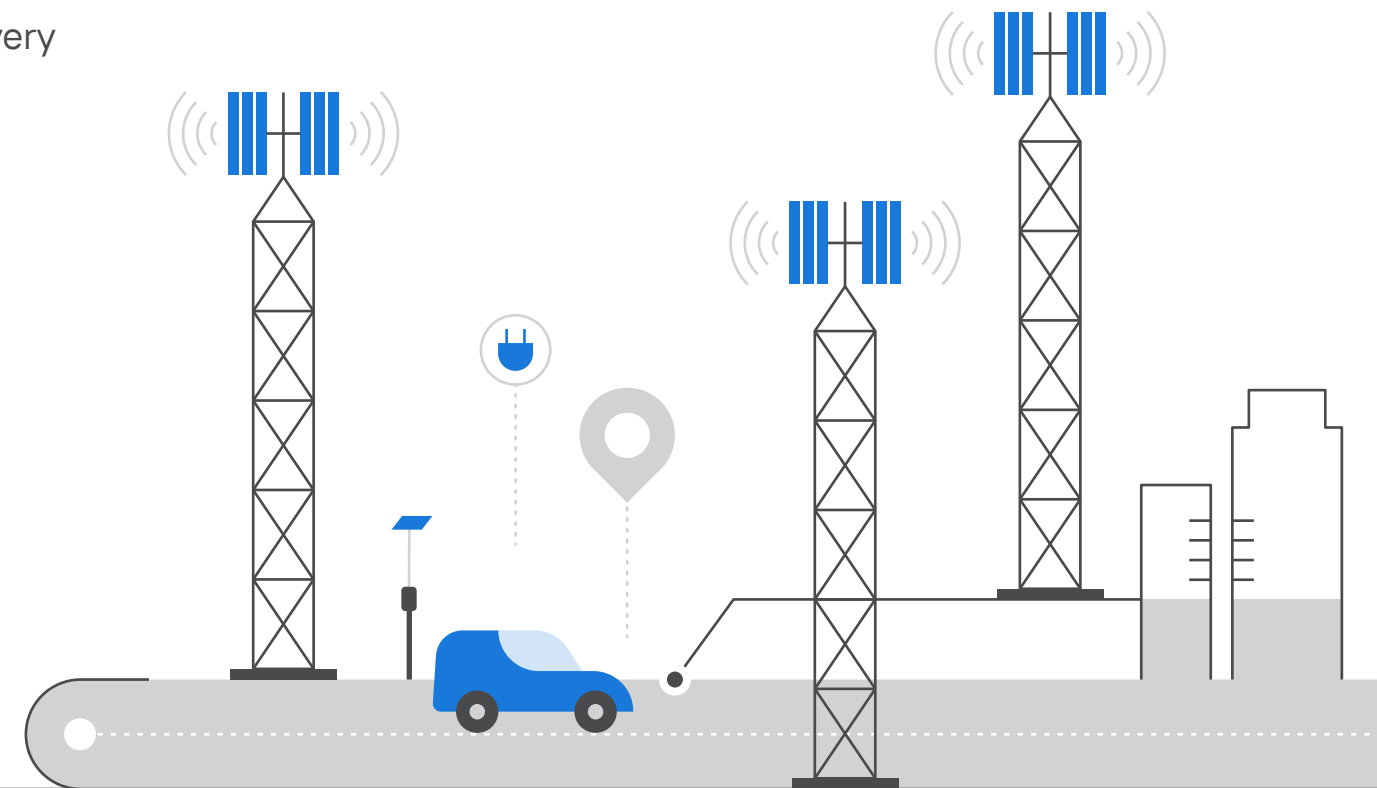
BLUE



## iLamp too

### Highlights

- A fully functioning 5G transmitter on every Lamp
  - Proprietary Early Fire Detection system on every Lamp
- + all existing tech components**





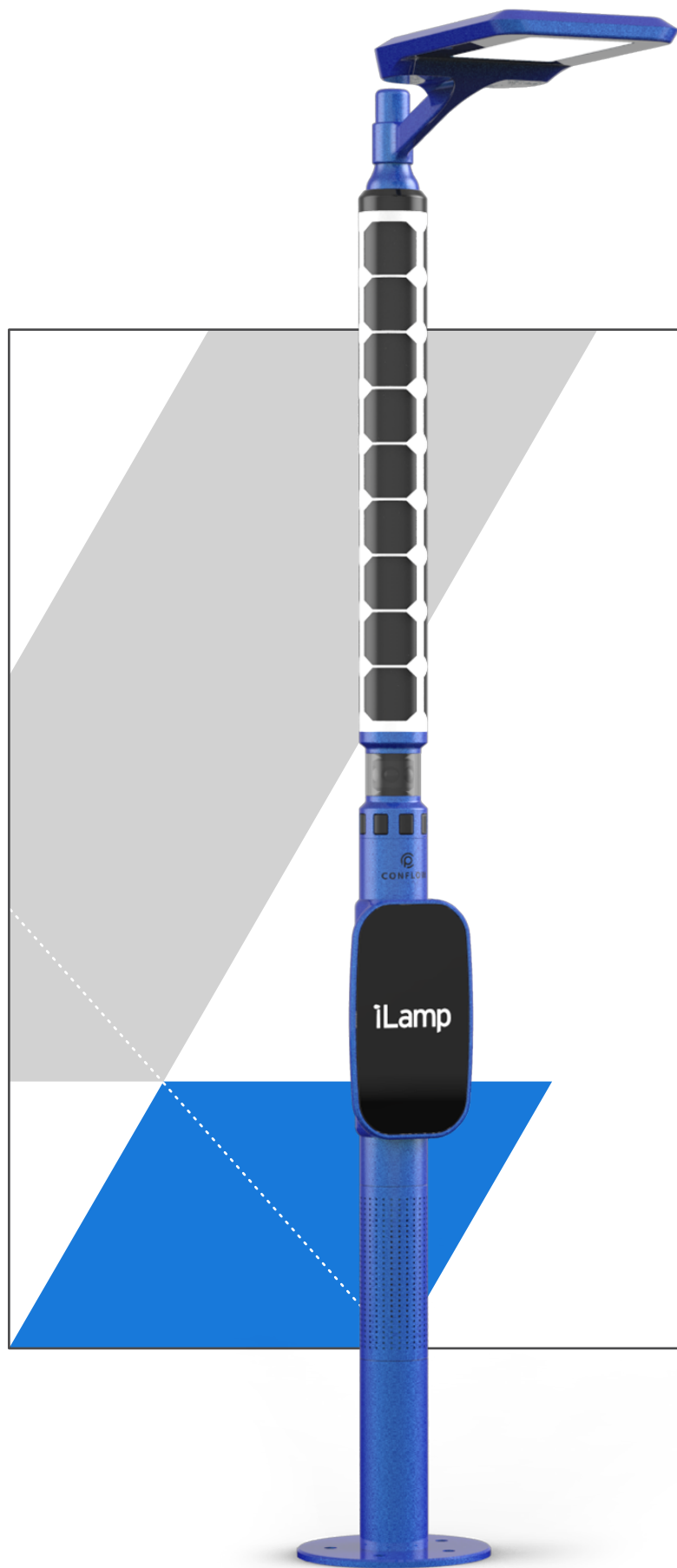
## iLamp free

*due March 2022*

### Highlights

- A totally free lamp in all jurisdictions not just where local and federal grants, rebates and tax credits apply.
- Enhancing the eco-friendly iLamp with an ecobased financial structure, using the available local and federal benefits with the revenue wrap and ILO structure to ensure the lamp can be purchased with no money down. This will follow a similar pattern like the mobile phone market established over the past 30 years.
- Customers will complete all the forms and open all the gateway accounts required to ensure delivery of their iLamp on our purpose-built portal allowing instant revenue to flow allowing the buyer to pay for the iLamp over 4 years.

**+ all existing tech components**



## iLamp for everyone

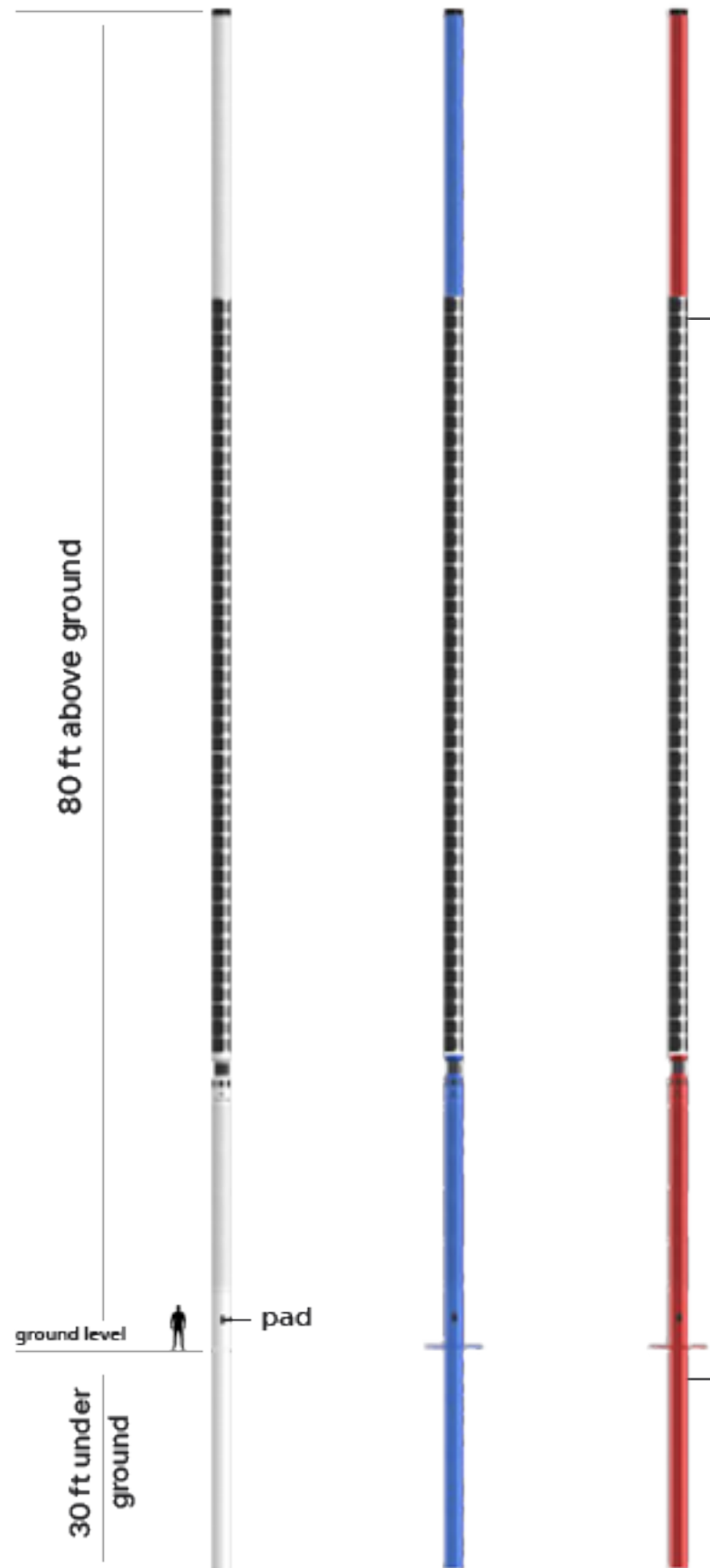
*due July 2022*

### Highlights

- Open source security for enhanced neighbourhood safety.
- Local resident high-speed communications back up.
- Networked WIFI.
- Common entry login for shared access.
- Charge accounts can be shared so multiple owners of one iLamp and municipality schemes.
- A globally established shared revenue pot for all ILO holders.
- Shared data feeds for special interest groups.
- Open housing program for new tech testing and independent review (on a per lamp or grouped basis).
- The launch of the world's biggest real estate market where everyone can participate, benefit and enhance.

**+ all existing tech components**





# iLamp alive

*due December 2022*

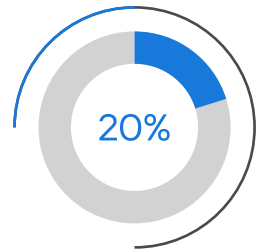
## Highlights

- Disciplined Ai integration and machine learning capability on every lamp.
  - Enhanced data revenue opportunity for all iLamp owners
  - 180-foot lamp without light head
  - Enhanced communication distribution
  - Enhanced power generation and storage
  - Near global triangulation capability
- + all existing tech components**

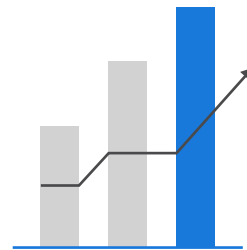
iLamp Alive will not be a street lamp but a power generator and power storage pole, a towering giant sitting 30 feet in the ground and 180 feet into the sky. Connecting the earth with the earth's atmosphere, connecting more than just advanced security and high quality super-fast communications, iLamp alive will be a man-made component of nature, providing the cornerstone of human needs owned by and accessible to everyone.

# Summary

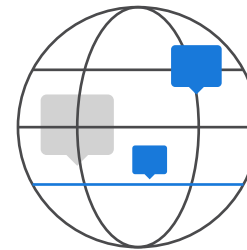
Conflow Power is in discussions with numerous new license holders in multiple jurisdictions globally. We have now completed the full tests on our new iLamp and will be ready for mass manufacture 8 months ahead of the first contract deadline. We have secured orders, partners, multiple manufacturing options in strategic locations, we have options to buy and buy into a great combination of smart and complimentary businesses, we are positioned for fast and sustainable growth.



CPG owns 20% of Power as a Service Limited and 100% of BatteryWare Limited



CPG has deferred revenue of approx. 75m USD.



CPG has sold territorial licenses for its technologies in 15 countries.



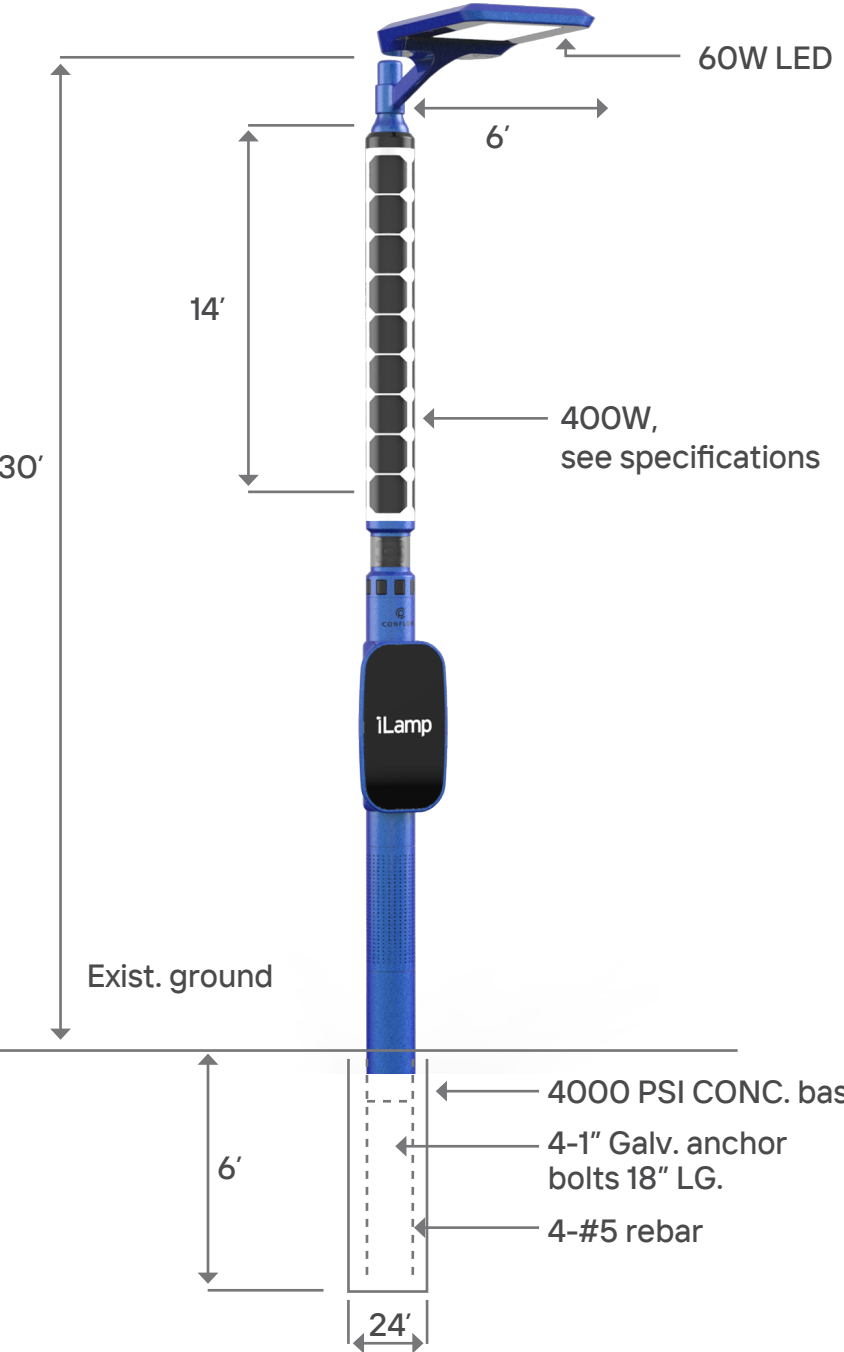
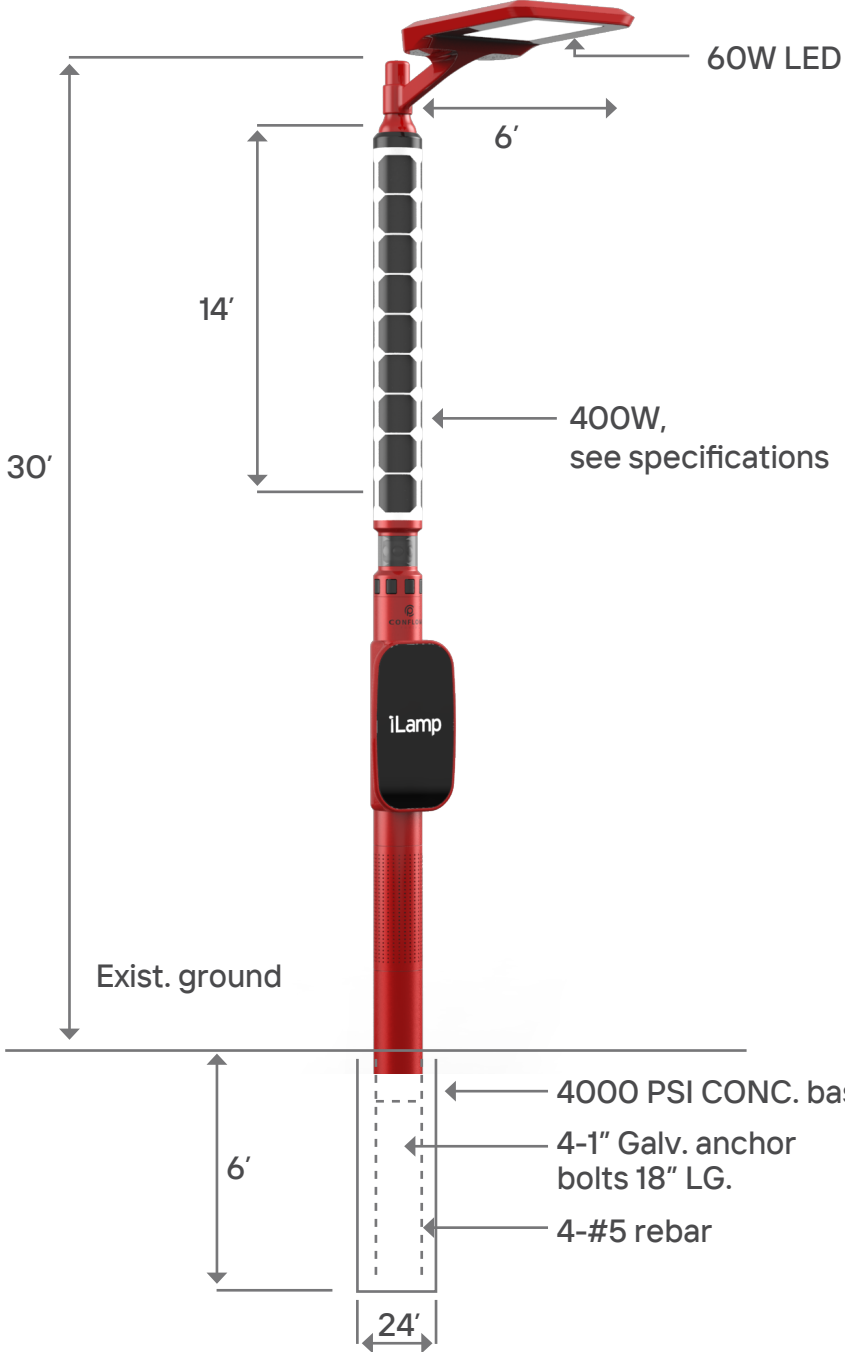
CPG owns 100% of the iLamp brand.



CPG has an option to invest in Taiwan for 30m USD.

# Example Drawings

\*All arm and head options are interchangeable



Specifications	400W
Hardware	Patented Adjustable Aluminium Array
Solar Panels	400W
Battery Pack	24V, 75AH Lithium Ion / ConFlow Device 24V
Lighting & Charge Controller	Victron / BatteryWare / PaaS
LED Light	50-60W LED, 162 lumens per watts
Dimensions (length)	14.5'
EPA	5.26ft <sup>2</sup>
Weight (lbs.)	200


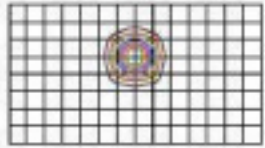
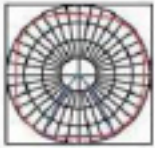


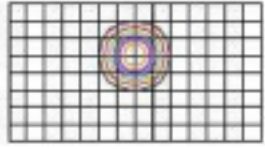
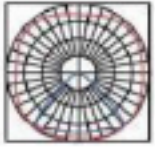


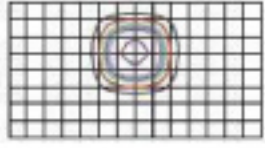
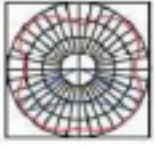


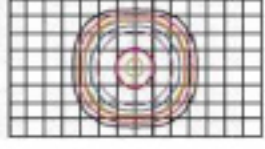
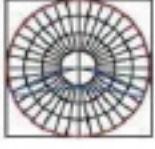


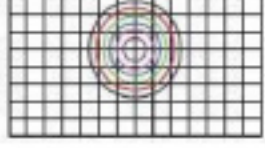


Patented Adjustable Aluminium Array	
Dimensions	10.66" OD x 164.5" L
Material mounted to	Wooden, Aluminium, Steel or Concrete
Internal Mounting Options	Adjustable universal arm mount for poles up to 5" OD
Material	Anti-corrosive mounting hardware and array
Shape	Circular backing panels

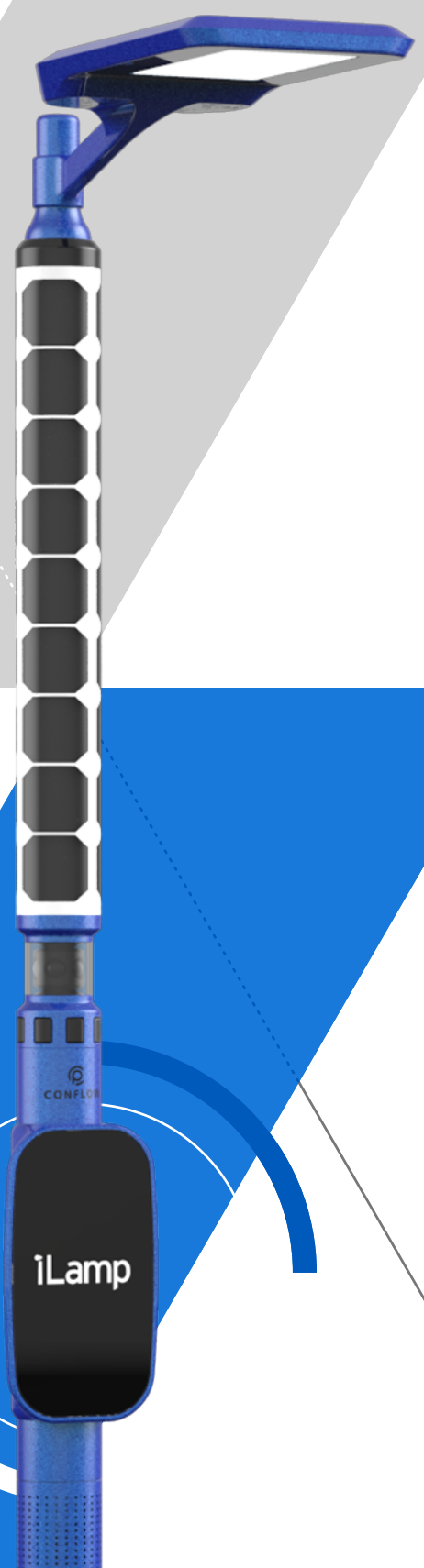
LED Lights	LED Lights 50-50W Lantern or Street Light LED
Lumens	162 LM/W
Input Voltage	24V
CRI Minimum	70 (80 or 90 available special order)
CTT	4000K, 5000K (3000K and 5700K available special order)
Lighting Type	Solid state LED. T4M & T3L stocked. Other types available special order. IES Files available upon request
Life	>100,000 hours
Safety Certification	IP65, UL 1598, UL8750, CE, CB, ANSI C136.31-2001, RoHS Compliant, Meets Buy American requirements with ARRA

Solar Arrays CIGS	400W
Cell Efficiency	15.9%
Rated Peak Power (Pmpp)	400 watts
Power Output Tolerance	+5/-0
Open Circuit Voltage (VoC)	62.6
Max Power Voltage (Vmpp)	50.2
Short Circuit Current (Isc)	4.56
Panel Length (mm)	3457
Max Power Current (Impp)	3.99
Safety Certification	UL 1703, IEC 61646, IEC 61730, cUL 1703, IEC 62716, IEC 61701 (Salt Spray)
Manufacturer Warranty	90% at 10 years, 83.5% at 20 years, 80% at 25 years

Batteries	Lithium Ion / ConFlow device Battery Pack
Nominal Capacity	75AH
Nominal Voltage	24V
Operating Voltage	20.0V up to 29.2V
Max Discharge Current	20A
Impedance	< 100m
Dimensions	L = 31.5cm, W = 23.0cm, H = 14.0cm
Weight	<16kg
Temperature Range	-30°C to +60°C
Expected Life	12-15 years based on shallow discharge of 4,500 Life Cycle
Autonomy	8 Days

MPPT / BatteryWare	Controller
Max Open PV Voltage Max Current	75.0V DC 15 amps
Battery Voltage Battery Current	29.4V DC 3.0 mps
Light Voltage Light Current	LED Specific
Dimming	0-5V DC
Efficiency	98% peak efficiency
CTemperature Range	-30°C to +60°C
Communications	Bluetooth Connection / Wifi where available
Safety	EN/IEC 62109-1, UL 1741, CSA C22.2

	ISO Plot	Polar Curve	Cu Graph
			
	<b>T5 S</b> Average beam angle 60°		
			
	<b>T5 M</b> Average beam angle 90°		
			
	<b>T5 L</b> Average beam angle 120°		
			
	<b>T5 X</b> Average beam angle 150°		
			
	<b>T5 D</b> Diffuser		



Presented by

**Edward Fitzpatrick**

CEO CPG

edward@conflowpower.com

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ILOCX.com

ConflowPower.com

ConflowNigeria.com

iLamp.com

Oregon.iLamp.com

ILOCX.com/iLamp

BatteryWare.com

PowerAsAService.com

DroneReady.com