



USILAND OPTRONICS
Power Industry Solutions

PRODUCT INTRODUCTION

WWW.USILAND.COM



COMPANY PROFILE

SUZHOU USILAND OPTRONICS CO., LTD. was founded in 2015, with a registered capital of 26 million RMB. After 10 years of development, Usiland has developed three series of products: the Raptor series cleaning machine, the Cyclone series laser obstacle cleaner and the Eagle series bird repellent. the Cyclone series Smart Grid Cleaning Device has obtained orders from Tokyo Electric Power, European Energy, Belarus Electricity, State Grid, Southern Power Grid and so on. Tire mold cleaning system is the largest domestic sales, export to Europe.

COMPANY ADVANTAGE

Our company uses cutting-edge and environmentally-friendly laser techniques to create first-class laser equipment for user experience and improve people's quality of life.

Our team is particularly skilled in design and user experience, with complete equipment. Our management team is composed of optical experts, laser experts, and a group of passionate young researchers. We jointly develop and share resources with top universities and research institutes at home and abroad, thus mastering the latest techniques and information.

USILAND has a sound organizational management system and has passed certifications such as ISO9001、CE. Our company has unique advantages in the industrial field.





SMART GRID CLEANING DEVICE



Working Principle

High-energy laser is utilized to instantly dissolve foreign objects entangled in high-voltage lines without damaging transmission lines. When it is found that there is a foreign object hanging on the grounding wire that affects safe operation, the operator aims at the target through a sight on the ground, controls the laser device to emit laser. Through several seconds of burning and melting, the plastic-fiber foreign object is melted off, and the laser is turned off, thus completing the entire processes of handling foreign object with electricity.

Application Scenarios





UAV-Cyclone-60/120

Working Distance : 10/20m

Power: 60W/120W



Cyclone-200

Working Distance : 200m

Power: 200W



Cyclone-500

Working Distance : 300m

Laser Power: 500W



Cyclone-1000

Working Distance : 400m

Laser Power: 1000W

Product Introduction

Product Name	UAV-Cyclone-60	UAV-Cyclone-120	Cyclone-200	Cyclone-500	Cyclone-1000
Size[mm ³]	205*123*72	281*219.8*76.6	630*490*312	610*440*326	630*490*312
Weight[kg]	16	22	33.5	24.5	39
Laser power[W]	60W	120W	200+30	500+50	1000+50
Power range[%]	100	100	20-100	20-100	20-100
Wavelength[mm]	1080	1080	1080	1080	1080
Working distance[m]	10	20	200	300	400
Humidity [%]	10- 90	10- 90	10- 90	10- 90	10- 90
OTR [°C]	-20~40	-20~40	-20~40	-20~40	-20~40
Fiber length[cm]	35	150	270	270	300
Battery spec[V AH]	48V 1.3AH	48V 10AH	48V 55AH	48V 55AH	48V 83AH
Battery life[H]	0.33	0.5	4	2	1.2
Battery weight[kg]	0.45	2.6	12.6	12.6	20
Power consumption [W]	210	450	800	1600	3300
Cooling system	Air cooling	Air cooling	Air cooling	Air cooling	Air cooling



Application Cases



Frequently Asked Questions(FAQ)

Q: What foreign objects can this device remove?

A: The target objects of the smart grid cleaning device mainly include balloons, kites, and plastic bags. Additionally, the 500W model can remove branches within a diameter of 4cm. The 1000W model, with high power, is specifically designed for clearing tree branches (above 10cm).

Q: Can this device be used on rainy days?

A: The smart grid cleaning device is basically unaffected by the weather (except for heavy rain and thick fog), but rainproof measures should be taken as much as possible.

Q: Can lasers damage wires?

A: The melting point of the wire (bare stranded wire) is 670 ° C-720 ° C, and the melting point of foreign objects is around 300 ° C. Moreover, most of the thermal energy at this wavelength is scattered on the metal material, making it difficult for the bare stranded wire to absorb. The whole process lasts very short, 3 to 5 seconds.

Q: Is laser harmful to human health? How to avoid accidental injuries?

A: Laser is a type of energy-focused, directional, and non-dispersive light. In principle, laser is harmless to the human body, but in practical applications, laser protective glasses should be worn to avoid laser accidentally penetrating the eyes and causing damage.

Q: Is there any foreign object that cannot be removed?

A: The device can remove non-metallic substances without affecting metals.



ANTI-BIRD LASER DEVICE



Eagle-V

Working distance:
500m at day / 2000m at night
Weight: 1kgs



Eagle-II

Working distance:
500m at day/2000m at night
Weight: 7kgs
Application: Power substations,
orchards farms, etc



Auto-Eagle-VI

Working distance: 10m
Weight: 5kgs
Optional: AI recognition
Application: Power Tower

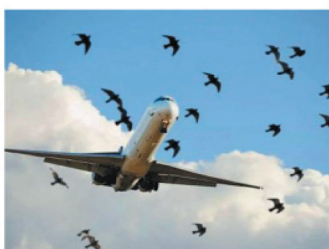


Eagle-II-Smart

Working distance:
500m at day/2000m at night
Weight: 37kgs
Camera recognition with AI algorithm,
It's monitored when there are no bird!

Product Name	Eagle-V	Eagle-II	Auto-Eagle-VI	Eagle-II-Smart
Laser power[W]	0.5	1	0.5	1
Spot[mm]	30	40	Straight line	40
Wavelength [nm]	520	532	532	532
Power supply [V]	3.7	220	12	220
Working temperature[°C]	-20-40	-20-40	-20-40	-20-40

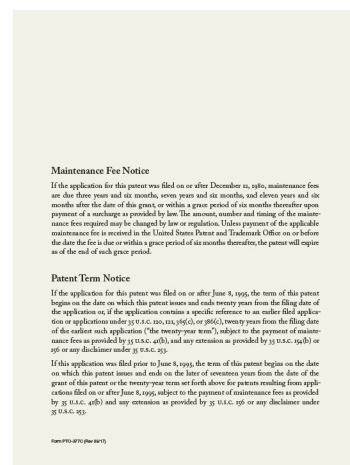
Application Scenarios



Partners



Certificates



USILAND®

CUSTOMER FIRST, SERVICE FOREMOST



WeChat subscription

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