



Arab Republic Of Egypt  
Ministry of Defense



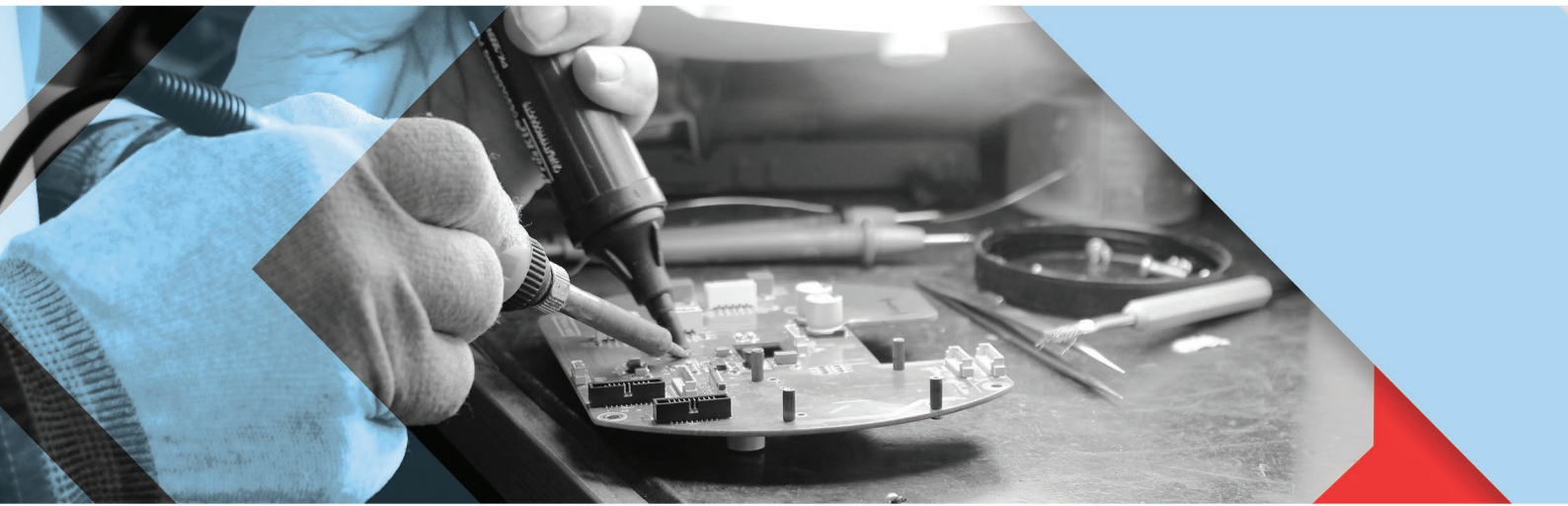
# Arab International Optronics



Innovates  
For Better Future ...



WWW.AIOEGY.COM



## LEGAL STATUS



Arab International Optronics (AIO) was established in 1982.



Started production in 1985.

## INTRODUCTION



The company is engaged in the production of Devices, equipment and systems in both fields Military and Commercial to meet the needs of the Egyptian market and foreign markets



🎯 Arab International Optronics is providing  
The following products and services:



Advanced optical, electro-optical and electronic systems for military and commercial applications.



Night Vision Systems using image intensifier technology (first, second and third generation)



Integrated Observation Systems



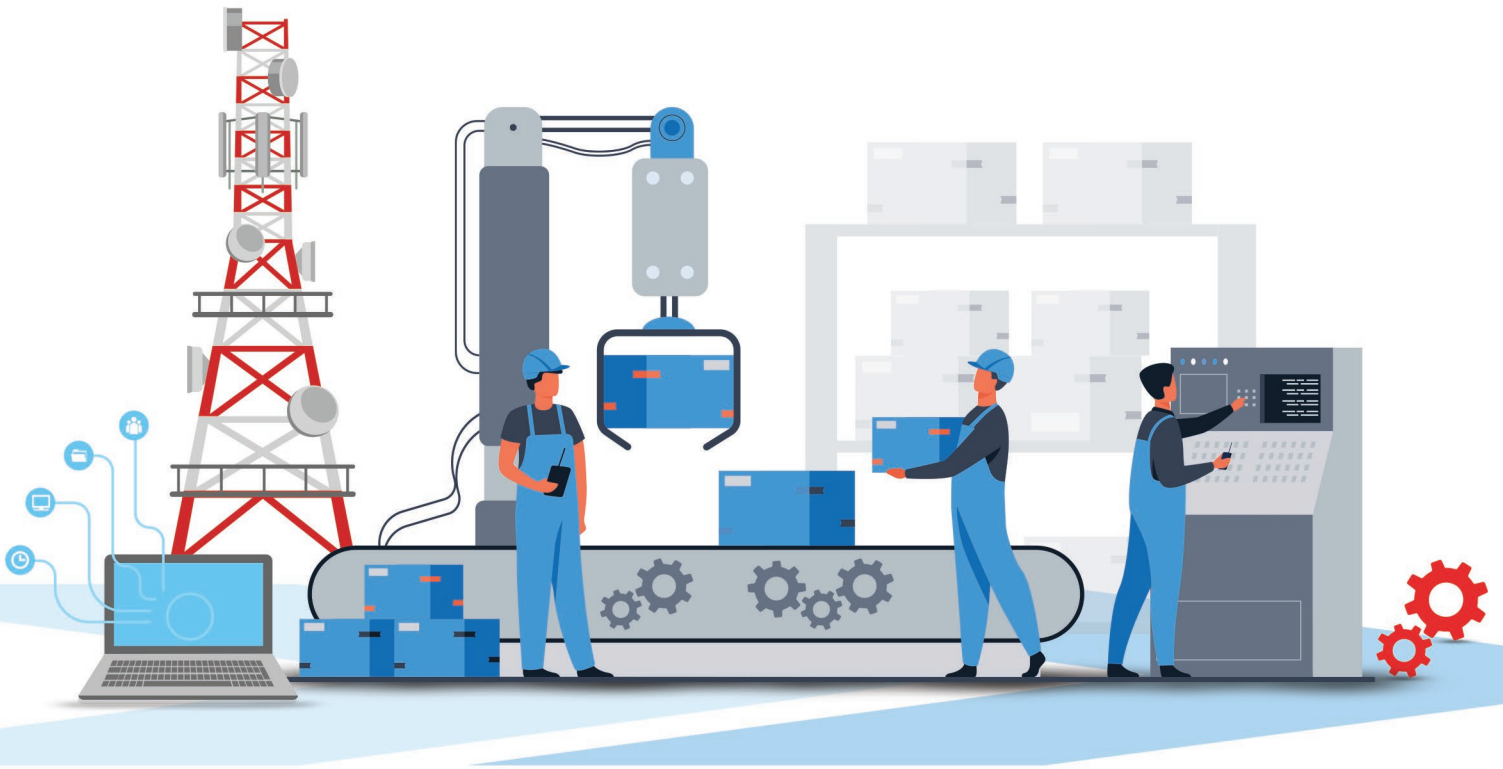
Solar Energy Systems



Energy saving LED light systems



Computer System installation and support



After sales services  
(including maintenance and repair)

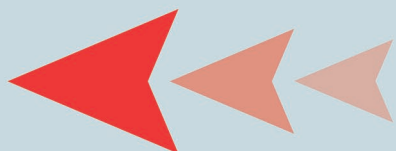


Training on operating and maintenance



Providing operating and maintenance manuals

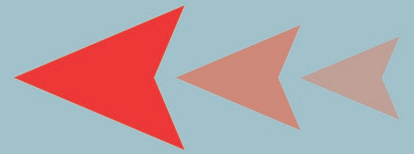
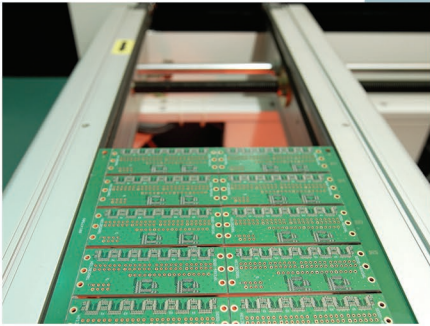
MECHANICAL PRODUCTION



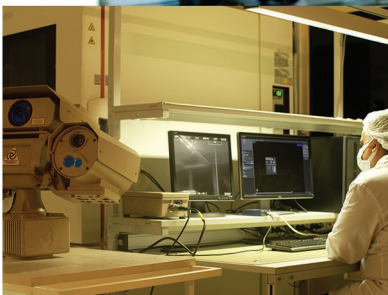
OPTICAL PRODUCTION



● ELECTRONIC PRODUCTION



● ASSEMBLY



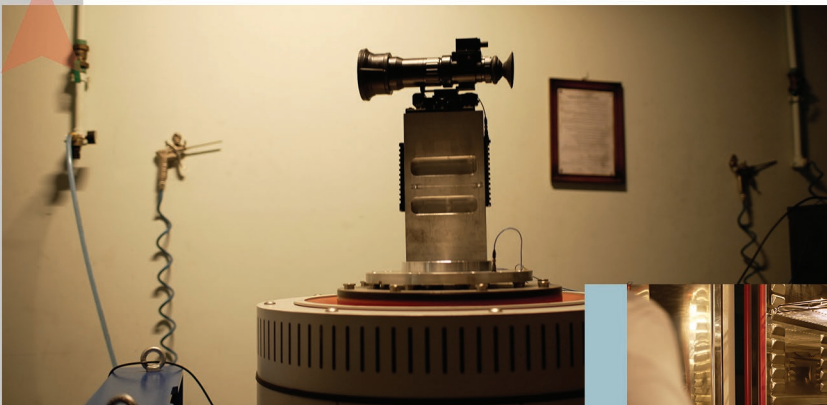
Mechanical Test Labs

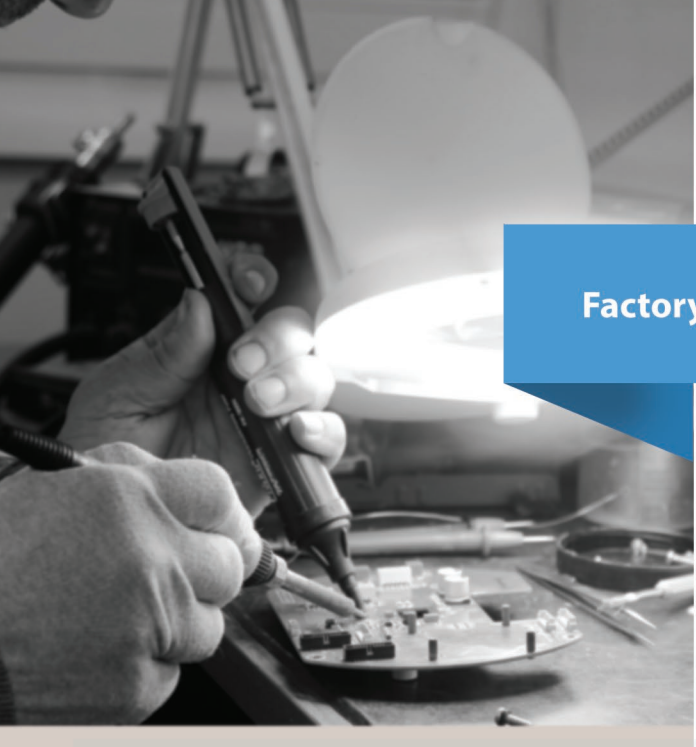


Optical Test Labs



Environmental Test Labs





## Factory for Producing TV Cameras and Digital Recorders



AIO owns production , assembly & testing lines for television surveillance cameras and NVRs and Switch with the latest global technology .

A set of fixed and PTZ CCTV cameras are produced for indoor and outdoor usage from (2 to 8 ) Mega Pixel and equipped with Starlight Technology and Night vision ( Infrared rays ) .

All television CCTV surveillance cameras and NVRs and Switch conforming to international standards and approved by the Egyptian National Authority for Visual Monitoring .

All the company's products from television surveillance cameras and NVRs have been registered and approved for .



All the cameras support intelligent detection , Image analysis techniques and video compression technology H2.65 , H.264 .

All the cameras are designed to withstand specifications Ip(66) , Ip(77) Ik(10)





# SOLAR MODULES FACTORY

**The company has extensive experience in the manufacture of solar cells & Modules , as well as the design, implementation and operation of solar powered systems, which can be summarized in the following points:**

Manufacturing Solar modules with all stages and testing procedures .

Design, implementation and operation of On Grid, off Grid and Hybrid Solar Systems & Solar Pump with different power outputs.

Design, implementation and operation of systems (Supervisory And Data Acquisition) used for monitoring and controlling inputs and outputs of Solar plants

Theoretical and practical training courses on all types of Solar Powered Systems.

Designing and operating Solar road and street lighting systems.

Preparation of technical and advisory studies and simulation reports prior to implementation of solar plants starting from soil investigations to determine the best method to install the bases of solar cell matrices and to coupling to a medium voltage substation

Performing Calibration, Environmental tests inside factory laboratories which are especially assigned for all solar plants (i.e. Solar Panels, Inverters, etc.) to assure high quality and efficiency of all products before operating.



# LED LAMPS AND LUMINAIRES PRODUCTION FACTORY

All power saving LED products comply with the International Standards for performance and safety .  
( IEC 61612 , IEC 62650 , IEC 62772 Ed1 ) .

It also complies with the Egyptian Standards issued by the Egyptian Organization for Standardization and Quality EOS .



## ● Main Features of the AIO LED Lamps .

Power factor : > 0.9

Energy saving efficiency level : A ++

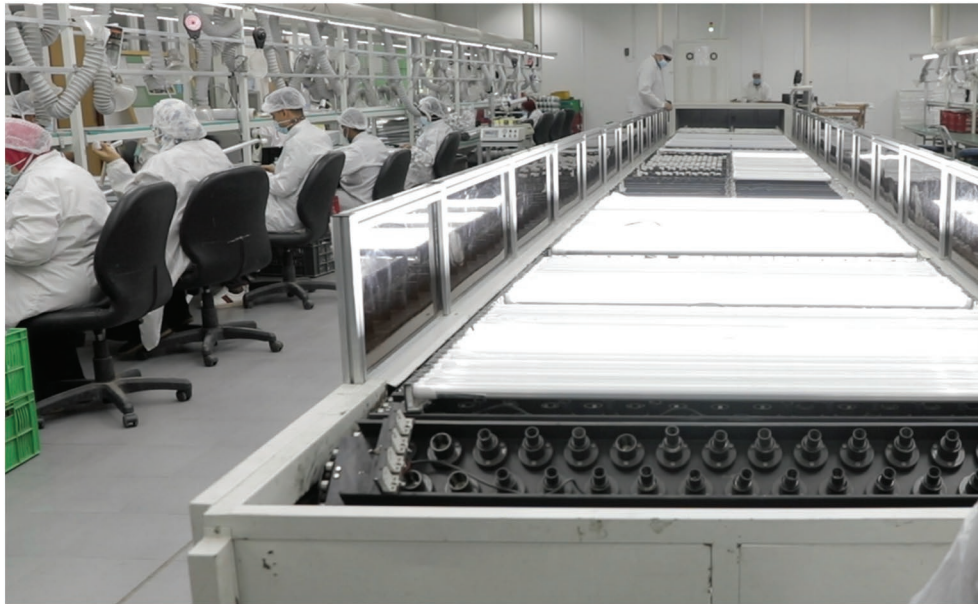
Lifetime : > 25000 operating hours

Different level of colour correlated temperature ( CCT ) , ( 2700K - 6500K )

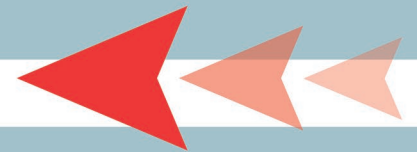
Energy saving for the electricity power consumption : > 80 %

Colour rendering index ( CRI )  $\geq 80$

Measuring and Testing Laboratories



LED Tests



Photometry test Lap. for LED light Luminaires



Inspection of the LED Lamps



Environmental test Lab for LED light Luminaires

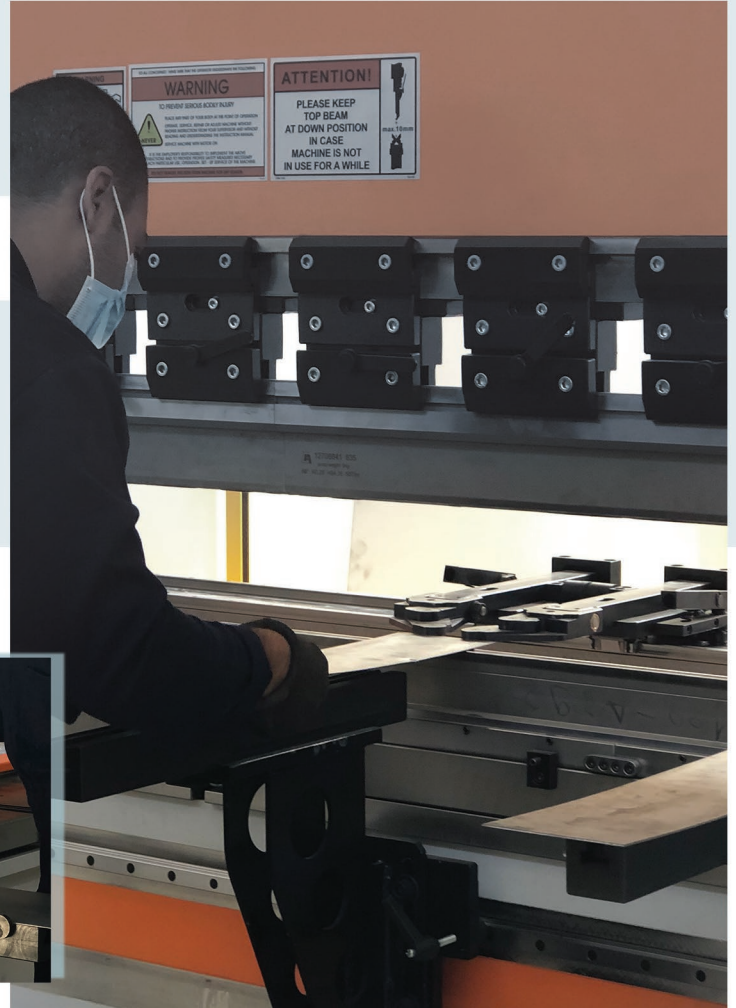


Life time test for LED light Luminaires



## Industrial complex

For manufacturing of multi purpose metal work including metal sheets , welding and bending processes



## Carpenting Workshop

For manufacturing multi purpose wooden products .



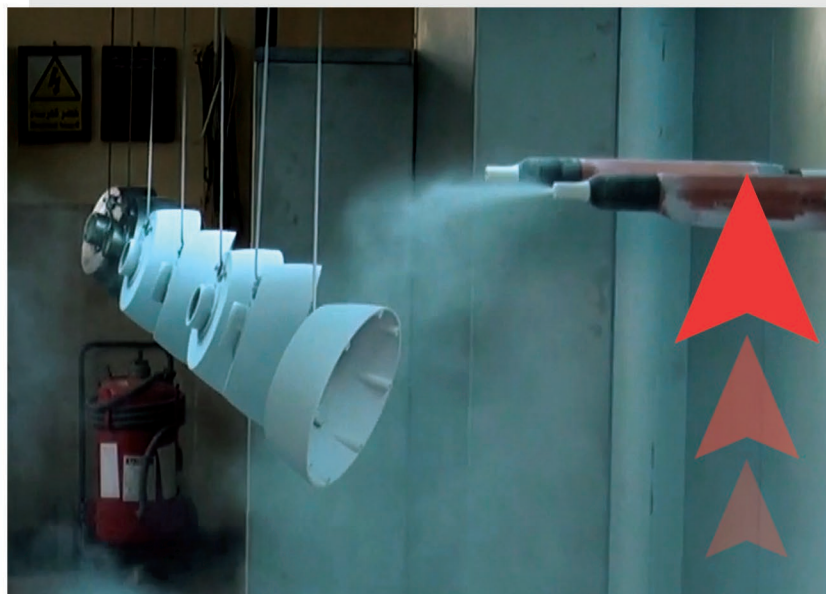


### ● Chemical Surface treatment & Coating Factory

- A laboratory for measuring pond concentrations
- Metal chemical Treatment for Aluminum Alloy , steel , stainless steel .
- Indoor protection anodizing layer for Aluminum Thk for 8-13mm .
- Outdoor protection hard anodizing layer for Aluminum 80mm .
- Trivalent yellow chromate for conductive Aluminum .
- Passivation for stainless steel .
- Black oxide for steel , st .. steel & brass .
- Colour anodizing for aluminum
- ( red anodize , yellow arodize , green anodize ... etc ) .
- Steel zinc plating in different colours .
- Gold plating .
- Nickle plating .

### ● Automatic Line for Electro - static Painting Technology Manufacturing factory includes

- Pre - treatment dipping Tanks .
- Drying Oven Automatic painting Cabinet .
- Curing oven . Loading / unloading suspended conveyor .



# ● Products for National projects

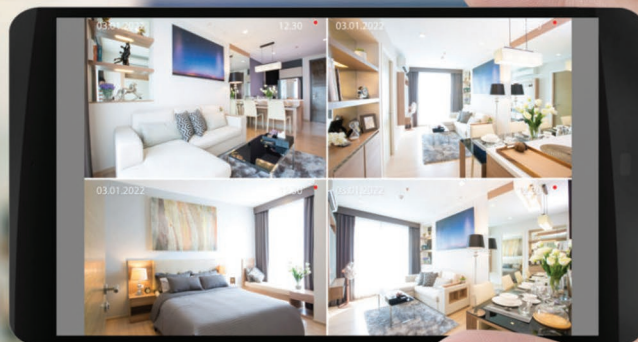


## CCTV Cameras Model Optic-Vision



AI Dome Network Camera-8MP  
(AIO-OV-DIR81D2-AI)

- 8-MP 1/1.8" CMOS image sensor, low illuminance, high image definition.
- Outputs max. 8 MP (3840 × 2160) @30 fps.
- Max. IR distance: 40 m.
- ROI, SMART H.264+/H.265+, flexible coding, applicable to various bandwidth and storage environments.
- Rotation mode, WDR, 3D NR, HLC, BLC, digital watermarking, applicable to various monitoring scenes.
- Alarm: 1 in, 1 out; audio: 1 in, 1 out; supports max. 256 G Micro SD Card.
- 24V AC/PoE/12V DC power supply.
- ePoE, IP67, IK10 protection.
- SMD 3.0.



## CCTV Cameras Model Optic- Vision

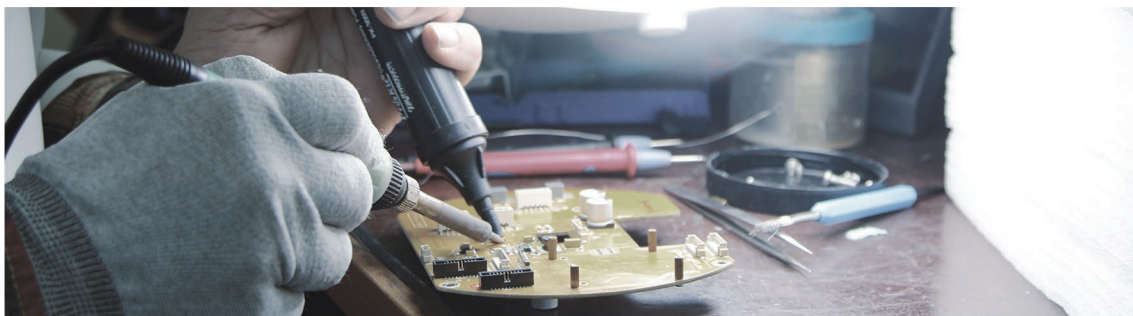


### 2MP WDR IR Dome Network Camera (AIO-OV-DIR21D2-P-A)

- 1/2.8" 2Megapixel progressive scan STARVIS™ CMOS
- H.265&H.264 triple-stream encoding
- 50/60fps@1080(1920×1080)
- Smart Detection supported
- WDR(120dB), Day/Night(ICR), 3DNR, AWB, AGC, BLC
- Multiple network monitoring: Web viewer, CMS(DSS/PSS) & DMSS
- 2.7mm ~13.5mm motorized lens
- 1/1 Alarm in/out, 1/1 audio in/out
- Max. IR LEDs Length 50m
- Micro SD memory, IP67, IK10, PoE+

### 4MP WDR IR Dome Network Camera (AIO-OV-DIR41D2-P-A)

- 1/3" 4Megapixel progressive scan CMOS
- H.265&H.264 triple-stream encoding
- 25/30fps@4Mp(2688×1520)
- WDR(120dB), Day/Night(ICR), 3DNR, AWB, AGC, BLC
- Multiple network monitoring: Web viewer, CMS(DSS/PSS) & DMSS
- 2.7mm ~13.5mm motorized lens
- Max. IR LEDs Length 50m
- Micro SD card memory, IP67,IK10, PoE+



## CCTV Cameras Model Optic-Vision



**IR Network PTZ Camera 4MP 45x Starlight  
( AIO-OV-PTZIR6B445D-T )**

**1/2.8" 4Megapixel CMOS  
Powerful 45x optical zoom**

**Starlight technology**

**Max. 25/30 fps@4MP**

**Deep-learning-based auto tracking  
and perimeter protection**

**Support face detection**

**Support Hi-PoE**

**SMD PLUS**

**IP67**

**4MP 33x Starlight+ IR Network PTZ Camera  
(AIO-OV-PTZIR6B433D-T)**

**1/1.8" 4Megapixel CMOS**

**Powerful 33x optical zoom**

**Starlight+ technology**

**IR distance up to 200m**

**Deep-learning-based auto tracking  
and perimeter protection**

**Support Hi-PoE**

**IP67, IK10**

**SMD Plus**

**Face detection**

## CCTV Cameras Model Optic- Vision - PTZ



### 2MP 25X Starlight IR PTZ Network Camera (AIO-OV-PTZIR5B225D-T)

- 1/2.8" 2Megapixel STARVIS™ CMOS
- Powerful 25x optical zoom
- Starlight technology
- H.265 Encoding
- Max. 50/60fps@1080P
- Auto-tracking and IVS
- Support PoE+
- IR distance up to 150m
- IP66



### 2MP 30X Starlight IR PTZ Network Camera (AIO-OV-PTZIR6B230D-T)

- 1/2.8" 2Megapixel STARVIS™ CMOS
- Powerful 30x optical zoom
- Starlight technology
- Max. 50/60fps@1080P
- Auto-tracking and IVS
- IR distance up to 200m
- Support PoE+
- IP67, IK10



### 4MP 30x Starlight IR PTZ Network Camera (AIO-OV-PTZIR5B430D-T)

- 1/3" 4Megapixel CMOS
- Powerful 30x optical zoom
- H.265 Encoding
- Max. 25/30fps@4M/3M, 25/30/50/60fps@1080P
- Auto-tracking and IVS
- Support PoE+
- IR distance up to 100m
- IP66



## CCTV Cameras Model Optic-Vision



### IR Bullet Network Camera - 8MP (AIO-OV-BIR81D2-AI)

8-MP 1/1.8" CMOS image sensor, low illuminance, high image definition (high definition image).

Outputs max. 8 MP (3840× 2160) @30 fps.

- Max. IR distance: 60 m.
- ROI, SMART H.264+/H.265+, Flexible coding, applicable to various bandwidth and storage environments.
- Rotation mode, WDR, 3D NR, HLC, BLC, digital watermarking, applicable to various monitoring scenes.
- Alarm: 2 in, 1 out; audio: 1 in, 1 out; supports max. 256 G Micro SD card.
- 12 VDC/PoE power supply.
- ePoE, IP67, IK10 protection.
- SMD 3.0



## CCTV Cameras Model Optic- Vision



### 2MP WDR IR Bullet Network Camera (AIO-OV-BIR21D2-P-A)

- 1/2.8" 2Megapixel progressive scan STARVIS™ CMOS
- ROI, SMART H.264+/H.265+, flexible coding, applicable to various bandwidth and storage environments
- 25/30 fps@1080P (1920 × 1080)
- WDR (120 dB), Day/Night (ICR), 3D DNR, AWB, AGC, BLC
- Multiple network monitoring: Web viewer, CMS (DSS/PSS) & DMSS
- 2.7 mm–13.5 mm motorized lens
- 2/1 Alarm in/out, 1/1 audio in/out
- Max. IR LEDs Length 50 m
- Micro SD memory, IP67, IK10

### 4MP WDR IR Bullet Network Camera (AIO-OV-BIR41D1-P-A)

- 1/3" 4Megapixel progressive scan CMOS
- H.265&H.264 triple-stream encoding
- 25/30fps@4Mp(2688×1520)
- Smart Detection supported
- WDR(120dB), Day/Night(ICR), 3DNR, AWB, AGC, BLC
- Multiple network monitoring: Web viewer, CMS(DSS/PSS) & DMSS
- 2.7mm ~13.5mm motorized lens
- 2/1 Alarm in/out, 1/1 audio in/out
- Max. IR LEDs Length 50m
- Micro SD memory, IP67, IK10, PoE



### 6MP WDR IR Bullet Network Camera (AIO-OV-BIR61D1-P-A)

- 1/2.9" 6Megapixel progressive scan STARVIS™ CMOS
- H.265&H.264 dual-stream encoding
- 20fps@6M(3072×2048),25/30fps@4M(2688×1520)
- Day/Night(ICR), 3DNR, AWB, AGC, BLC
- Multiple network monitoring: Web viewer, CMS(DSS/PSS) & DMSS
- 7mm ~35mm 5x zoom lens
- 2/1 Alarm in/out, 1/1 audio in/out
- Max. IR LEDs Length 100m
- Micro SD memory, IP67, IK10, PoE

### 8MP WDR IR Bullet Network Camera (AIO-OV-BIR81D1-P-A)

- 1/2.5" 8Megapixel progressive scan CMOS
- H.265&H.264 dual-stream encoding
- 15fps@4K(3840×2160),25/30fps@3Mp(2304×1296)
- Day/Night(ICR), 3DNR, AWB, AGC, BLC
- Multiple network monitoring: Web viewer, CMS(DSS/PSS) & DMSS
- 7mm ~35mm 5x zoom lens
- 2/1 Alarm in/out, 1/1 audio in/out
- Max. IR LEDs Length 100m
- Micro SD memory, IP67, IK10, PoE

## CCTV Cameras Model Optic-Vision-NVR



### AI Network Video Recorder 32 Channel (AIO-OV-NVR328SD-4K-AI)

Smart H.265+/H.265/Smart H.264+/H.264/MJPEG

Up to 4 Channel video metadata

Up to 12 Channel perimeter protection, SMD Plus

Up to 4 Channel video stream face recognition

Up to 16 face pictures/sec processing

Up to 20 face databases with 200,000 face images in total



### Network Video Recorder 32 Channel (AIO-OV-NVR328SD-12M)

Smart H.265+/H.265/Smart H.264+/H.264/MJPEG

Max 320Mbps Incoming Bandwidth

Supports RAID 0/1/5/10

Up to 12MP Resolution for Preview and Playback

2HDMI/2VGA simultaneous video output



## CCTV Cameras Model Optic-Vision - NVR



### PoE Network Video Recorder 16 channel (AIO-OV-NVR1608PD- 4K)

- Smart H.265+/H.265/Smart H.264+/H.264/MJPEG
- Max 320Mbps Incoming Bandwidth
- Up to 12MP Resolution for Preview and Playback
- 2HDMI/2VGA simultaneous video output
- 1-8 PoE Ports Support 800m ePoE & EoC



### Network Video Recorder 16 channel (AIO-OV-NVR1608SD- 4K)

- Smart H.265+/H.265/Smart H.264+/H.264/MJPEG
- Max 320Mbps Incoming Bandwidth
- Up to 12MP Resolution for Preview and Playback
- 2HDMI/2VGA simultaneous video output



## PoE Switches



### 24-Port PoE Gigabit Managed Switch (AIO-OV-S224D-24GF-360)

- Support IEEE802.3af, IEEE802.3at standard
  - Support Hi-PoE 60W
- Network Redundancy: STP/RSTP/MSTP
- Layer 2 network management PoE switch
  - Network management based on SNMP
  - Configuration: Web, Telnet, CLI Command
- QoS (IEEE802.1p/1Q), CoS/ToS to Increase Determinism
  - Support IPv4/IPv6, and DHCP
- Large data cache(4M), real-time transmission
- MAC auto study and aging, MAC address list capacity is 8K
  - EMC high protection design



## Television Observation Systems Used in Securing Cities and Regulating Traffic

- The Company produces the latest versions of observation systems ( Day / Night / Thermal) , ( Fixed / Mobile ) . These systems utilize observation , recording and highly accurate image analysis cameras
- It's characterized by a zoom feature to identify people and vehicles data .
- The system transmits the video to the Central Observation and Control Room and also to sub - control room .
- It receives the control signals through a wireless network .



Displays and Controls

DVR

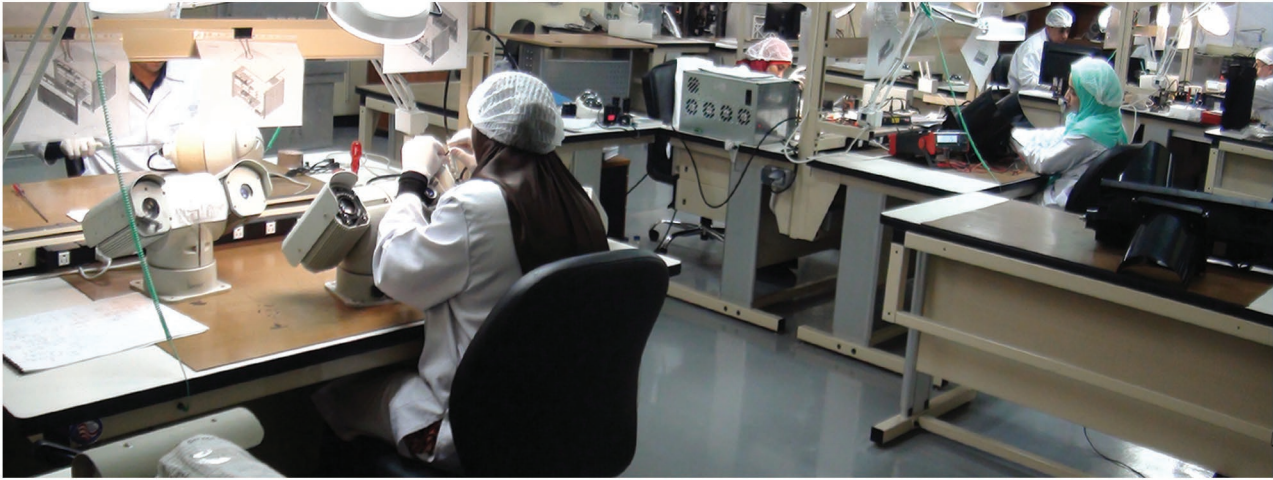


Night / Day/Thermal  
Surveillance Camera



# Television Observation Systems Used in Securing Regulating Cities and Regulating Traffic

Maintenance and repair of cameras



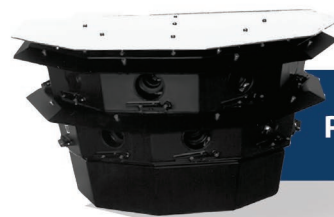
➤ Offering operation and maintenance training on all levels of production

Availability of spare parts and after sales services for all optical , mechanical and electronic components .

All - In - One Real Time  
20MP Camera




Panoramic Camera



Long Range Camera

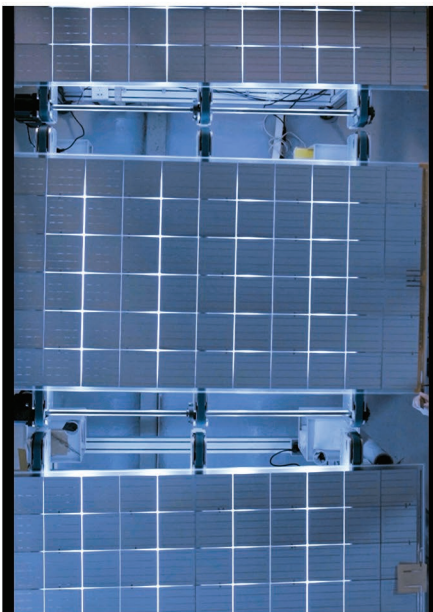


# PV SOLAR ENERGY SYSTEM



## Solar cells and modules production lines

➤ The company uses solar energy cells and modules of various sizes , with a production capacity that reaches 50 megawatts annually , and plans to increase them to 100 megawatts annually



# Energy Saving LED Light Systems



15Watt -1350Lumen



12Watt -1080Lumen



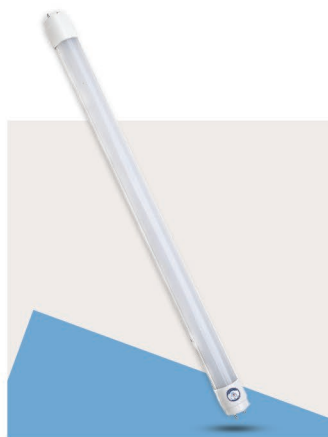
9Watt -850Lumen



LED



6Watt -540Lumen



18Watt -1800Lumen-120 cm



9Watt -900Lumen-60 cm

# Energy Saving LED Light Systems



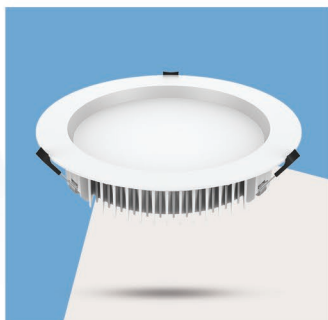
**7Watt -630Lumen**



**5Watt -450Lumen**



**40Watt -3600Lumen**



**18Watt -1800Lumen**



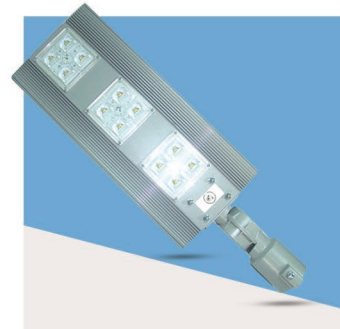
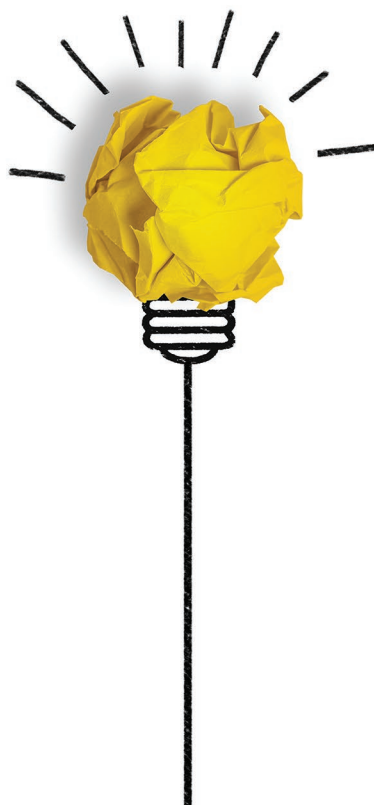
**Flood Light (50-100)W  
(100Lm / W)**



**40Watt -4000Lumen  
Size 60x60**



**LED Street (225-55)W  
(145Lm / W)**



**LED Street (60-110-130)W  
(100Lm / W)**



**Led street ( 45-75 )W**



Luminaire Type - GL	GL-45	GL-55	GL-65	GL-75
Lifetime	L80B10 > 100.000h			
Operating Temperature	-40°C To +55°C			
Supply Voltage	120-277Vac			
Electrical Power	45 W	55 W	65 W	75W
Lumens	6525 lm	7975 lm	9425 lm	10875 lm
Luminaire Efficacy	145 lm/w	145 lm/w	145 lm/w	145 lm/w
Factor of Color Rendering	CR ≥70			
Surge Protection in Class I	6kv & (10-15kv external protection ) { optional }			
Protection Class	IP66 ,IK09			
Power Factor	> 0.97			
Guarantee	10 years			





Led street ( 85-120 )W



Luminaire Type - GL	GL-85	GL-95	GL-110	GL-120
Lifetime	L80810 > 100.000h			
Operating Temperature	-40°C To +55°C			
Supply Voltage	120-277Vac			
Electrical Power	85 W	95 W	110 W	120W
Lumens	12325 lm	13775 lm	15950 lm	17400 lm
Luminaire Efficacy	145 lm/w	145 lm/w	145 lm/w	145 lm/w
Factor of Color Rendering	CR ≥70			
Surge Protection in Class I	6kv & (10-15kv external protection ) { optional }			
Protection Class	IP66, IK09			
Power Factor	> 0.97			
Guarantee	10 years			





## Led street ( 130-150 )W



Lifetime	L80810 > 100.000h		
Operating Temperature	-40°C To +55°C		
Supply Voltage	120-277Vac		
Electrical Power	130 W	140 W	150 W
Lumens	18850 lm	20300 lm	21750 lm
Luminaire Efficacy	145 lm/w	145 lm/w	145 lm/w
Factor of Color Rendering	CR ≥70		
Surge Protection in Class I	6kv & (10-15kv external protection ) { optional }		
Protection Class	IP66 ,IK09		
Power Factor	> 0.97		
Guarantee	10 years		





## Led street ( 160-200 )W



Luminaire Type - GL	GL-160	GL-170	GL-180	GL-190	GL-200
Lifetime	L80B10 > 100.000h				
Operating Temperature	-40°C To +55°C				
Supply Voltage	120-277Vac				
Electrical Power	160W	170W	180W	190W	200W
Lumens	23200 lm	24650 lm	26100 lm	27550 lm	29000 lm
Luminaire Efficacy	145 lm/w	145 lm/w	145 lm/w	145 lm/w	145 lm/w
Factor of Color Rendering	CR ≥70				
Surge Protection in Class I	6kv & (10-15kv external protection ) { optional }				
Protection Class	IP66, IK09				
Power Factor	> 0.97				
Guarantee	10 years				





## Led street ( 225-315 )W



Luminaire Type - GL	GL-225	GL-250	GL-275	GL-300	GL-315
Lifetime	L80810 > 100.000h				
Operating Temperature	-40°C To +55°C				
Supply Voltage	220-240Vac				
Electrical Power	225W	250W	275W	300W	315W
Lumens	32625 lm	36250 lm	39875 lm	43500 lm	45675 lm
Luminaire Efficacy	145 lm/w	145 lm/w	145 lm/w	145 lm/w	145 lm/w
Factor of Color Rendering	CR ≥70				
Surge Protection in Class I	6kv & (10-15kv external protection ) { optional }				
Protection Class	IP66 ,IK09				
Power Factor	> 0.97				
Guarantee	10 years				





## Led street AIO ( 100-150 )W



100 W



150 W



100 W



150 W

Luminaire type - AIO	AIO-100	AIO-150
Life time	50000 H	
Operation temperature	-40° c to +55° c	
Supply voltage	AC85-305V Or AC 165-277V	12B5CX3
Base	A. fixed type      B. Rotatable angle from 90 -60 -30 -0—30 -60 -90 (OPTIONAL)	
Material	Die cast aluminum + , pc lens, lens shine angle 70*140	
Electrical power	100 w	100 w
Pole diameter	60 mm	60 mm
Luminaire efficacy	90-110 lm/w, 120-130 lm/1w , 130-140/1w	
Factor of color rendering (CRI)	> 70	
Surge protection in class I (SPD)	4kv ,6kv, 10kv	
PROTECTION CLASS	IP65, IK08	
POWER FACTOR (PF)	>0.95	
CCT	3000-3500k , 4000-4500k ,5000-5500k , 6000-6500k	
Body color	Black or grey or white, the product can choose to install photocell sensor	
Guarantee	3 YEARS	





## Led street ( 110-130 )W

Luminaire Type - GL	GL-110	GL-130
Luminaire Total Power	110W	130W
LED Lumen Efficacy	110 lm/W at 700.0 mA	110 lm/W
Operating Voltage Range	220V(120-277) V <sub>AC</sub>	
Power Factor	> 0.95	
C.C.T	4000 k	
CRI	0.80	
Lumen Efficacy	110 Lm/w	
LED Chip-Type	SMD-OSRAM-DURIS	
Temperature	+55° c	
Lifetime	65000 Hrs	
Housing	Extended Aluminum	
Tilt Angle	0-90	
Overheating protection	Included	
Driver	OSRAM	
Luminous flux overtime	90% After 60.000Hrs	
Impact Resistance	IK08	
LENS	PMMA/SILICON-(LEDIL)	
THD	≤ 15%	
Weight	5-15 kg	
Dimensions	640.0 X 200.0 X 80.0 mm	



# Smart Pole Features

- Smart Pole Height varies from 6 m up to 10 m .
- Smart pole can be equipped with more than one lighting unit from 10 watt up to 320 watt .
- The Smart pole is equipped with A surge protection unit UPS to face any power brokage .
- Access control unit to control and monitor every component remotely .
- The smart pole can be connected to command control center to send and receive data from/to the pole .
- Its unique and futuristic design added the Future proof element since it is made out of metal sheets so user can add more elements and units without changing the entire pole .

## Main Elements



- CCTV Surveillance
- LED Screen
- Public Wifi
- Speakers
- Smart Lighting
- And many other optional elements based on request





## »Wood Products Factory«

Furniture Specially Designed and manufactured for you with an egyptian hand , wood products with very precise and professionalism quality reflects Art.



**Sketch**

**Design**

**Build**

**We manufacture your product prefesionally**

We manufacture all wooden products with highest quality and distinctive design for all applications  
(office furniture -organization furniture- outdoor- home furniture)

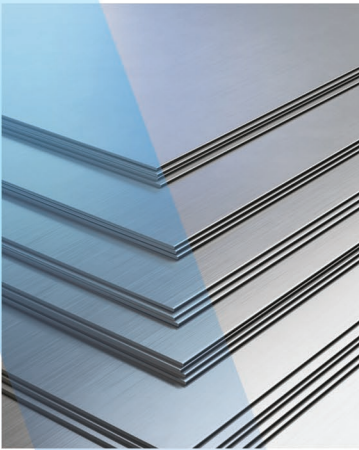


**"Qualit reflects art"**



# «Metal Products Factory»

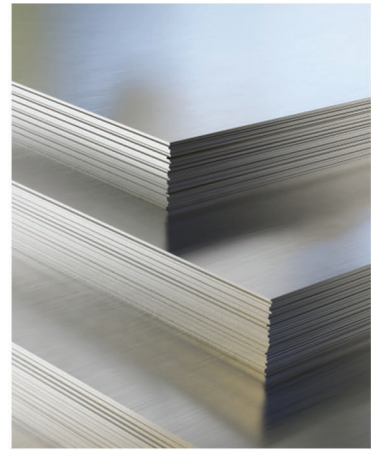
➤ Steel ◀



➤ Stainless Steel ◀



➤ Alminum ◀



- Metal Products Factory Is pioneer in manufacturing metal products with high precision technology and speed of implementation.
- We plan, design and manufacture various metal products that suit your needs.



# Decision Is Our Mission

01



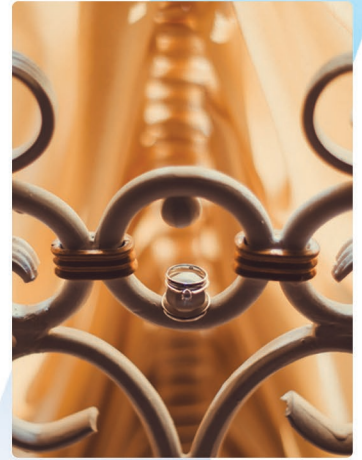
02



03



04



- You can implement different designs and shapes.
- We have distinctive forging capabilities in our facility.



# International Exhibition (EDEX 2021)



EDEX 2021



# International Exhibition (EDEX 2023)



**EDEX 2023**

Innovates  
For Better Future ...



# Arab International Optronics

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