



Upgraders Energi
Spar på energien - ikke lyset



Upgraders Energi

www.energireduktion.dk
kontakt@energireduktion.dk
Telefon: +45 7023 1939



Introduction to SOLARA & LUNARA Induction Lighting Systems 3

About AMKO SOLARA Lighting Co.

 AMKO Profile & OAS Statement 4

 AMKO Group 4

AMKO Inspection 5

SOLARA & LUNARA

 Main Feature 10

Green Lighting 11

Comparison 12

Photocatalyst Introduction 20

Nanoflex

 Nanoflex Technology 21

 Luminaire Effects-AF8-420 Street Light 22

 Reflectance and Diffuse Reflectance 23

Echelon LonWorks Control System

 Benefits of the LonWorks Control System 24

 Simple Installation & User-friendly system 25

 LonWorks based City of Oslo Project 26

Quality Phosphor Powder 27

Product

Luminaire

High / Low Bay Luminaire	28
--------------------------------	----

Designed efficiently and economically, it is the most effective lighting for factories, warehouses, and superstores

Garage Luminaire	38
------------------------	----

Significantly lower your operating cost of covered garages

Indoor Luminaire	44
------------------------	----

Commercial lighting for designed to cut energy and maintenances

Tunnel Luminaire	51
------------------------	----

Vibration proof lighting with IP65 rated fixtures, available with emergency 24V backup battery,

PLC/DALI dimming controls, and a range of color temperatures as required

Roadway Luminaire	54
-------------------------	----

Newly designed fixtures with various control options and real time system monitoring.

Explosion-Proof Luminaire	70
---------------------------------	----

Eliminate unnecessary risks in hazardous environments with our explosion proof enclosures designed for reliability and durability

Cleanroom Luminaire	73
---------------------------	----

Re-lamp just once every 5 years when replacing the HVAC filters, SOLARA ILS fixtures for the pharmaceutical

and semiconductor industries will cut down your total cost of operation

Induction Lamp & Electronic Ballast

Various shapes and wattages to suit your needs

Square Tubular	76
----------------------	----

Round Tubular	78
---------------------	----

Spherical	80
-----------------	----

Self-Ballasted Induction lamp	84
-------------------------------------	----

Making the switch to induction lighting easier like changing a light bulb

Installation notes	87
--------------------------	----

Product Code Index	88
--------------------------	----

What would be your reason to be more environmental?

For greener grass, for cleaner air, and for a safer place, the world is choosing to be more responsible in energy use by switching to induction lights.

Introducing SOLARA and LUNARA Induction Lighting Systems, a new lamp technology that saves more energy and lasts many times longer than compact fluorescent lamps. Without electrodes, the lamp requires no maintenance and changing for a decade.*

Imagine how the environment can benefit from it.

**Assuming 60,000 hours service life, lit 16 hours daily , 365 days per year.*



AMKO Profile

Amko Lighting Division was created in 2005 to market and distribute our induction lighting systems following ten years of research and development with some of the best universities and institutions in Asia. We put together a focused effort to gain awareness and go-to-market. In 2007, Amko SOLARA Lighting Co., Ltd. was officially founded to focus the effort on lamp, ballast and fixture designs to maximize the performance of induction lighting. We've introduced our low wattage line LUNARA, our exclusive photo catalyst solution, and our high performance fixtures for cleanroom and enhanced safety requirements.

Within our group of subsidiaries, we are one of the top ten lighting equipment manufacturer in China with more than thirty years of OEM experience in automotive parts, material handling supplies, and electrical lighting equipment. We are amongst the most established global induction lighting manufacturers, but uniquely vertically integrated to produce the most critical components internally.

OAS Statement

Amko designs and manufactures high performance lighting and luminaires for specialized environments, using next generation lighting products that set the benchmarks in areas such as energy efficiency, lifespan, and environmental friendliness.

For hazardous areas, extremely controlled spaces, remote or inaccessible places, and governmental projects in industrialized or developing countries with a high degree of energy regulations (LEED or shortage).

And lead by innovation, professionalism and technology superiority.

AMKO Group

Additional / 3rd Party Quality Assurance Facility Investments :

- Internal UL Certified TMP (Testing at Manufacturer's Premises) and Fixture Temperature Laboratory, China
- EMC and Electrical Lighting Laboratory, Taiwan
- Explosion-Proof Laboratory, Taiwan
- EMC Laboratory, Taiwan

Industry Associations :

- China Illumination Engineering Society
- The Illumination Engineering Society of Taiwan
- Taiwan Lighting Fixture Export Association
- Sponsoring Member, 26th Session of the CIE, 2007 Beijing

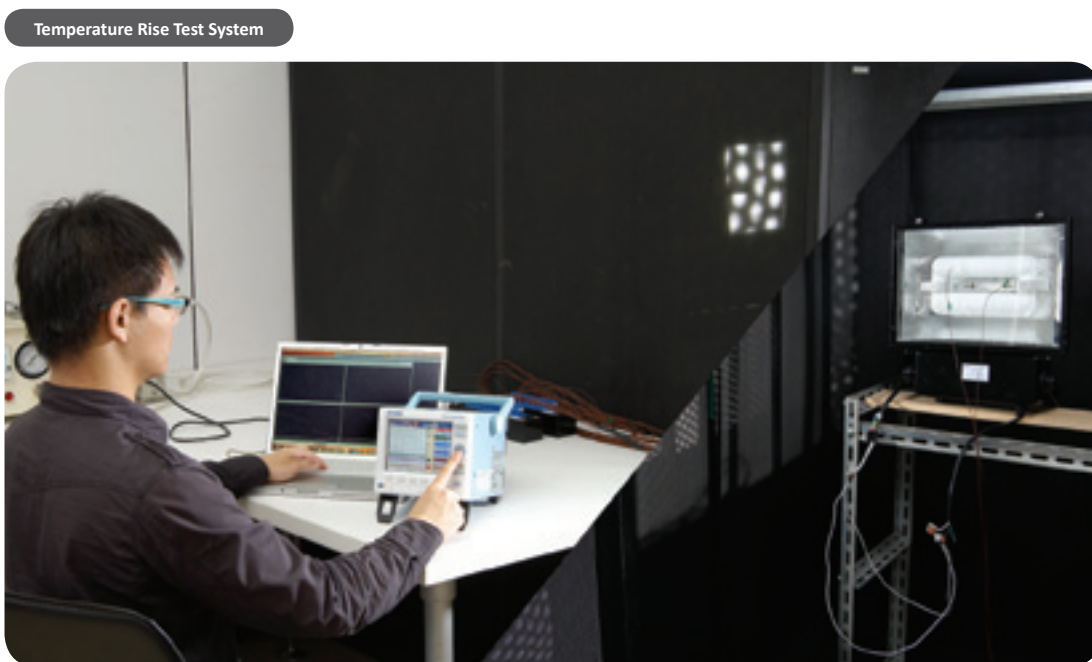
Inspection Equipments at our Facilities

- UV-VIS-NIR 200nm-800nm spectral analysis system
- Integrating Sphere – Diameter: $\Phi 1500\text{mm}$ & $\Phi 1000\text{mm}$
- Electronic ballast performance analyzer
- Digital CC & CV DC Power Supply
- Digital CC & CV AC Power Supply
- Digital Power Meter (Harmonic analyzer)
- Aging controller
- Six-channel temperature measuring system
- Automatic burn-in system
- High temperature lamp aging oven
- Digital Switch testing system





Temperature Change Chamber



Temperature Rise Test System

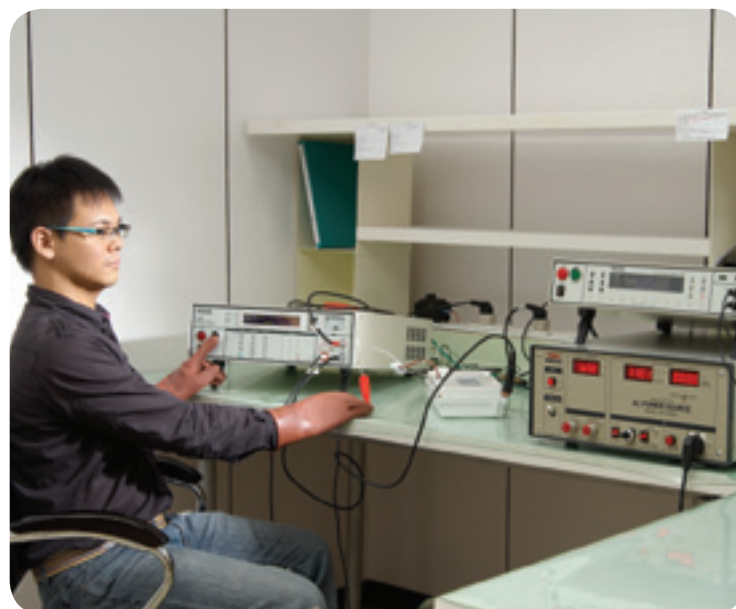
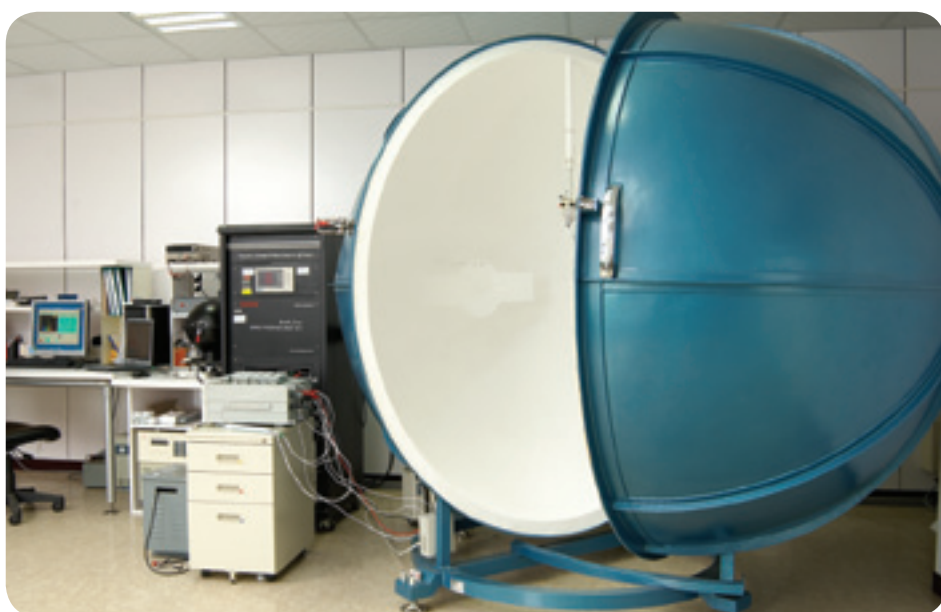


Salt Spray Tester



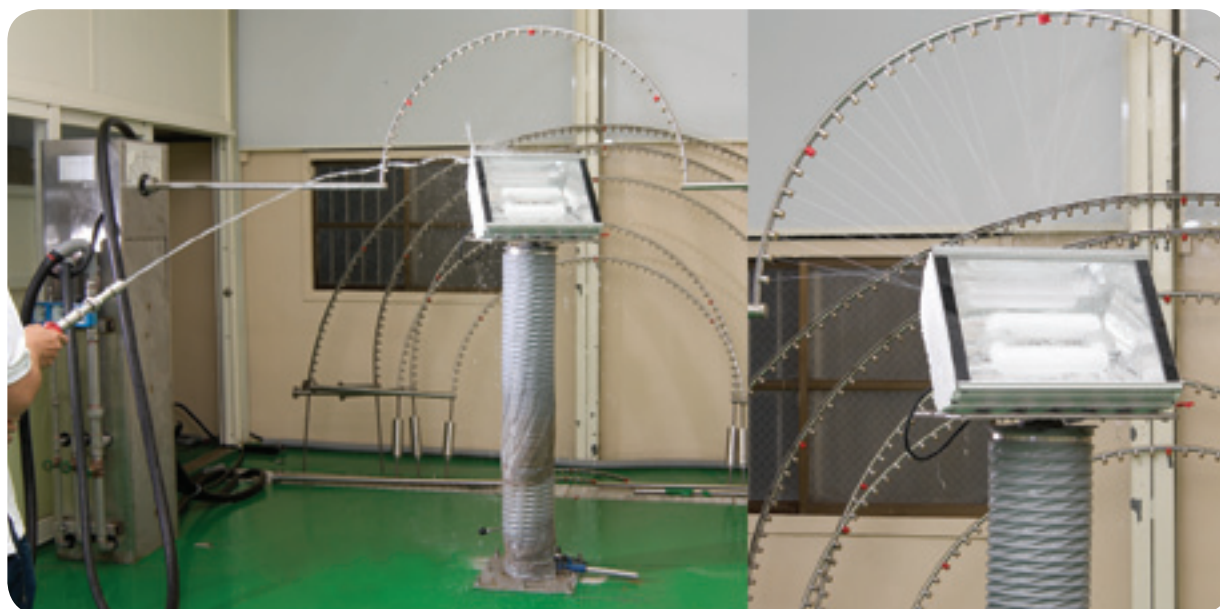
Thermal Shock Tester

Integrating Sphere



Electrical Safety Compliance Analyzer-Line Leakage Tester

IP Testing-Dust Chamber



IP Testing-Splash Water Tester

Explosion-Proof Test Chamber



Programm Humidity Chamber



Goniophotometer System



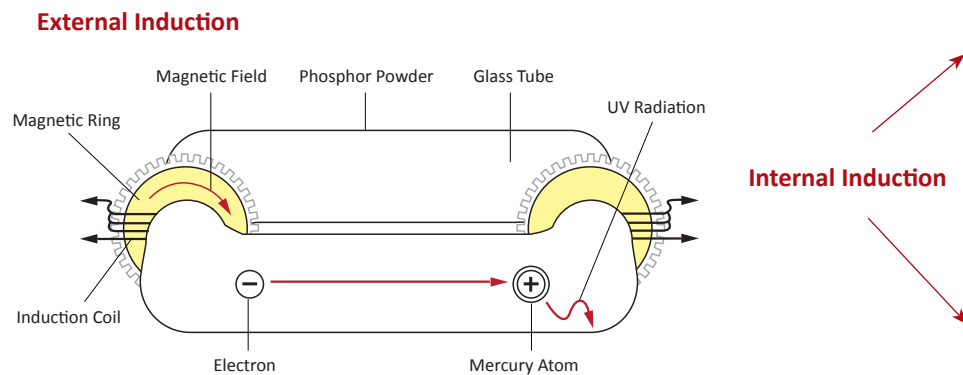
Goniophotometer System



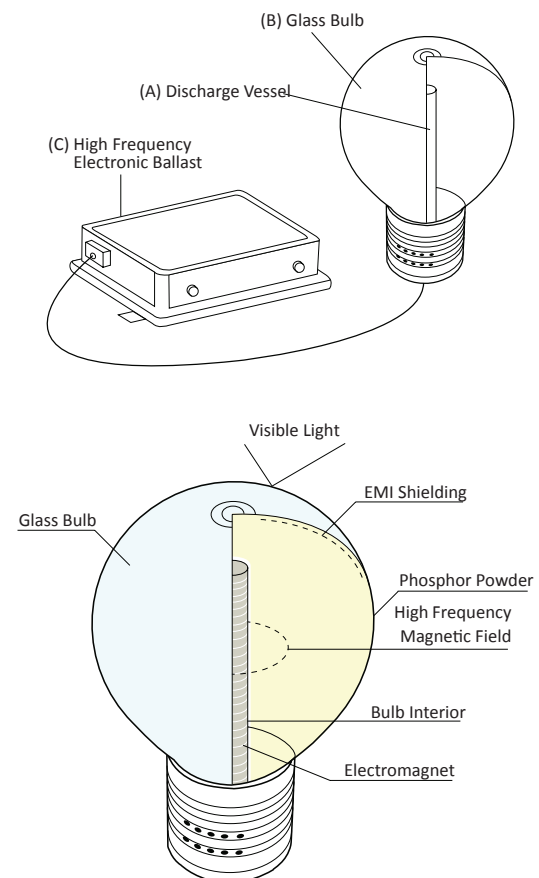
Main Features of SOLARA Induction Lighting System

- Long Service Life: up to 60,000hrs
- Energy Saving: save up to 40% compared to metal halides, 13 times more efficient than incandescent light bulbs, and up to twice as efficient as compact fluorescent lights
- Instant On/Off: no waiting time between re-strike
- High Efficiency: lighting efficiency >80lm/w
- High Lumens Maintenance: >70% after 60,000 hrs
- High Color Rendering Index: $Ra \geq 80$
- Flexible Voltage Range : fixed voltage $\pm 20\%$, wattage deviation within 3%
- Wide Selection of Color Temperature: 2720K- 6500K
- High Power Factor Ballast: $\lambda > 0.95$
- Low Total Harmonic Distortion: THD < 5%
- Flicker-free : high frequency (250KHz) creates a better and more comfortable light for users and prevents eye injury when viewed directly
- Wide Temperature Tolerance: can operate between $-40^{\circ}\text{C} \sim +50^{\circ}\text{C}$
- Optional Dimmable Ballast for Integrated Control: linearly dimmable to 30%
- Green Lighting Product: Amalgam adopted, 99.0% recycled

How Does Induction Lighting Operate?



Internal Induction



GREEN LIGHTING – Environmentally Friendly

Installing SOLARA Induction lamp can significantly reduce the amount of waste of used light tubes and bulbs (inclusive of packaging and shipping), and save on energy costs. Using one 400W SOLARA lamp is the equivalent of the following substitution:



Mercury Vapor x **20**



Metal Halide x **25**



T5 FL x **108**



High Power U CFL x **50**



Incandescent x **1067**

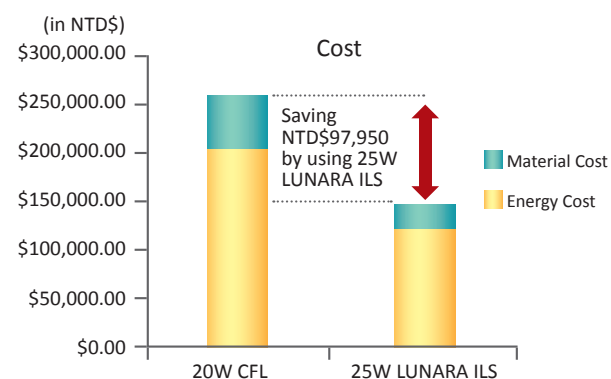
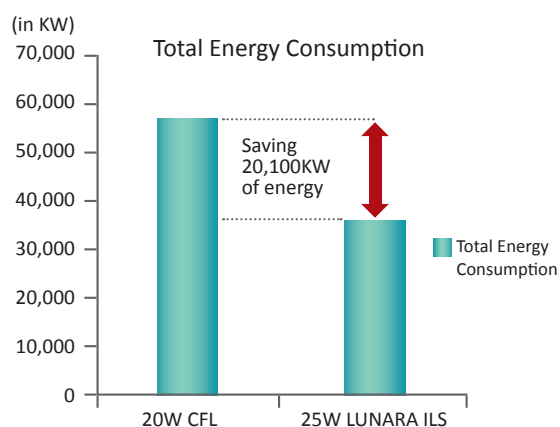


T8 FL x **500**

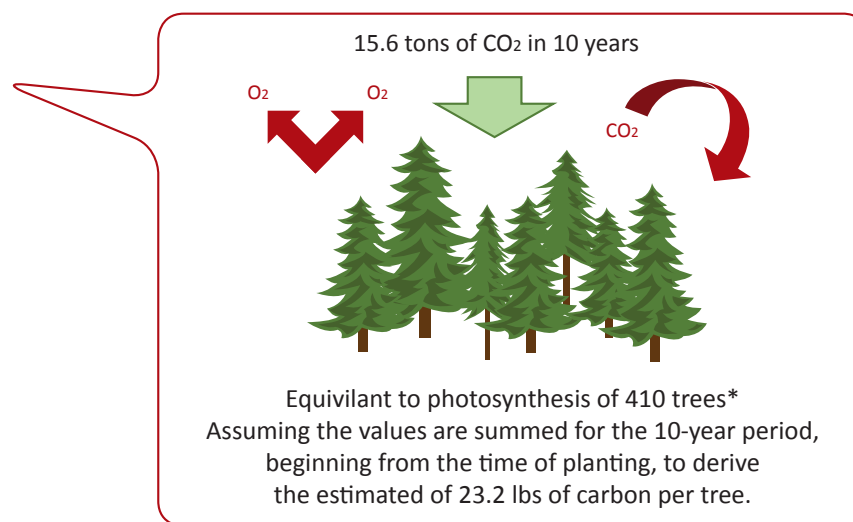
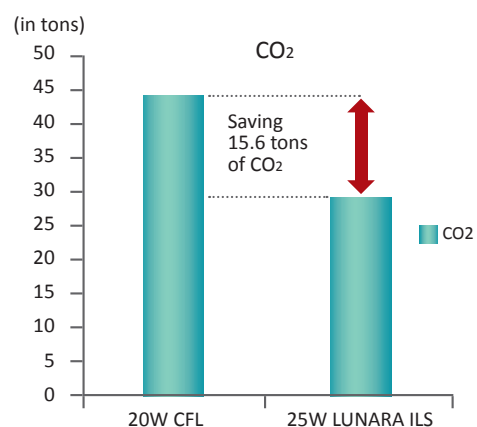


SOLARA x 1

Typical Convenience Store, 30 Sets LUNARA vs. 60 Sets CFL

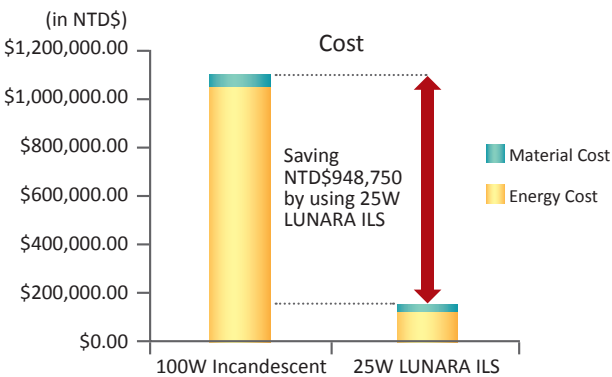
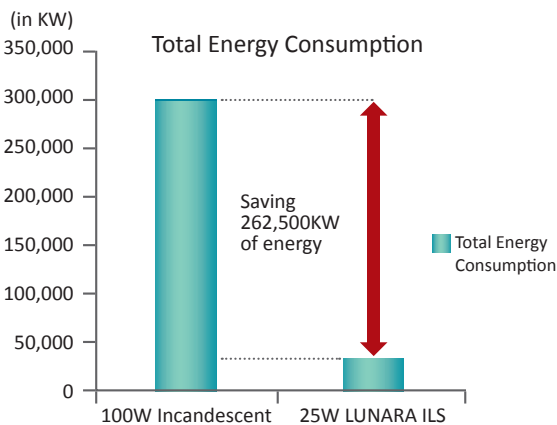


Energy Cost at NTD\$3.5 per kWh
 Material Cost of 20W CFL : NTD\$120/pcs
 Material Cost of 25W LUNARA ILS : NTD\$1000/pcs

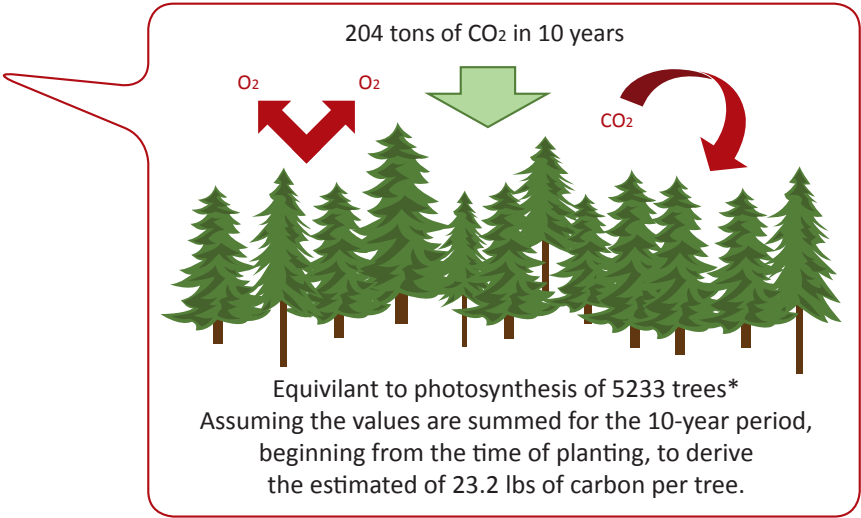
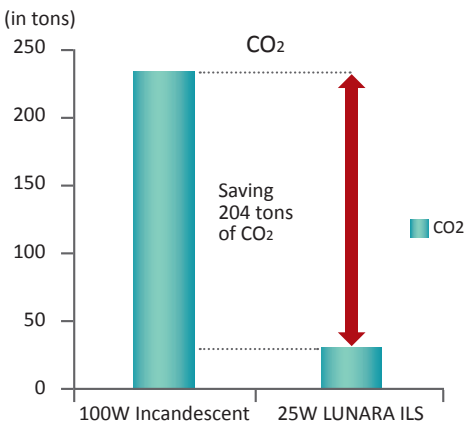


Product Item	QTY	Total Wattage	Lifespan	Replace	CO ₂	Total Energy Consumption
25W LUNARA ILS	30	750	50,000	0	29.1 tons	37,500KW
20W CFL	60	1,200	6,000	480pcs	44.7 tons	57,600KW
Reduction					15.6 tons	20,100 KW (34.9%)

Typical Convenience Store, 30 Sets LUNARA vs. 60 Sets Incandescent

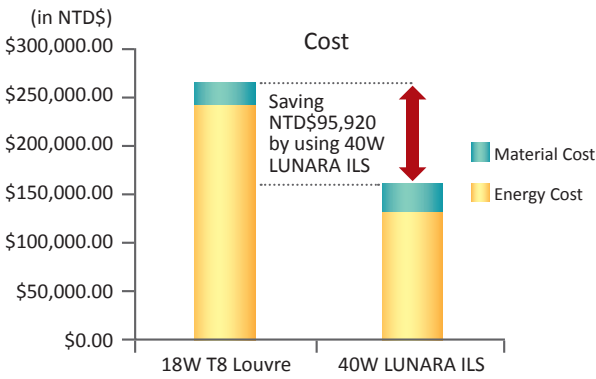
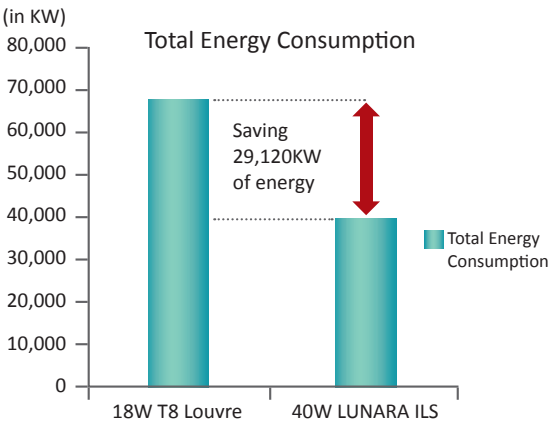


Energy Cost at NTD\$3.5 per kWh
Material Cost of 100W Incandescent : NTD\$20/pcs
Material Cost of 25W LUNARA ILS : NTD\$1000/pcs

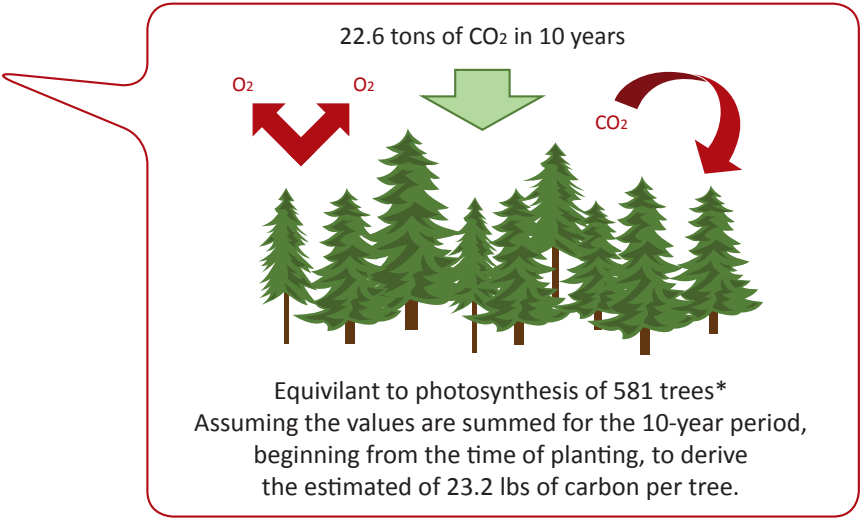
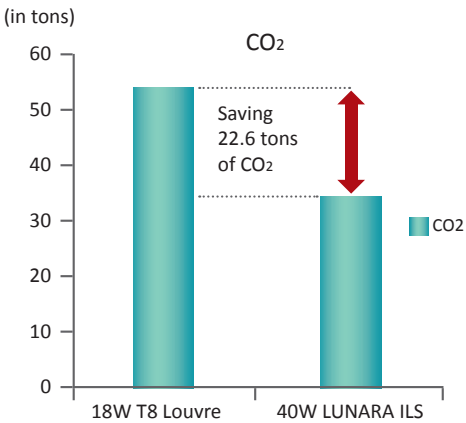


Product Item	QTY	Total Wattage	Lifespan	Replace	CO ₂	Total Energy Consumption
25W LUNARA ILS	30	750	50,000	0	29.1 tons	37,500 KW
100W Incandescent	60	6,000	1,000	3000pcs	232.8 tons	300,000 KW
Reduction					203.7 tons	262,500 KW (87.5%)

Typical Office, 20 Sets LUNARA vs. 80 Sets T8 Louvre



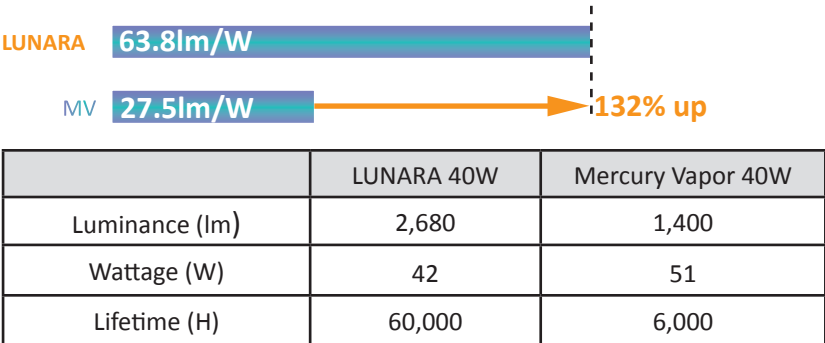
Energy Cost at NTD\$3.5 per kWh
Material Cost of 18W T8 Louvre : NTD\$40/pcs
Material Cost of 40W LUNARA ILS : NTD\$1600/pcs



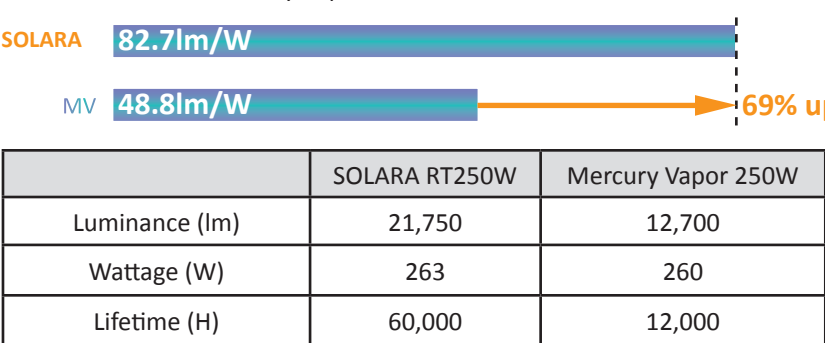
Product Item	QTY	Total Wattage	Lifespan	Replace	CO ₂	Total Energy Consumption
40W LUNARA ILS	20	800	50,000	0	31.04 tons	40,000 KW
18W T8 Louvre	80	1,440	6,000	640pcs	53.6 tons	69,120 KW
Reduction					22.56 tons	29,120 KW (42.1%)

High Efficiency and Saving More Energy

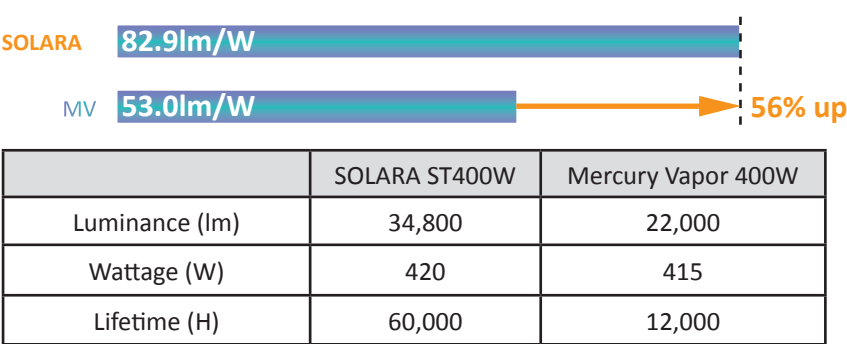
LUNARA 40W VS. Mercury Vapor 40W



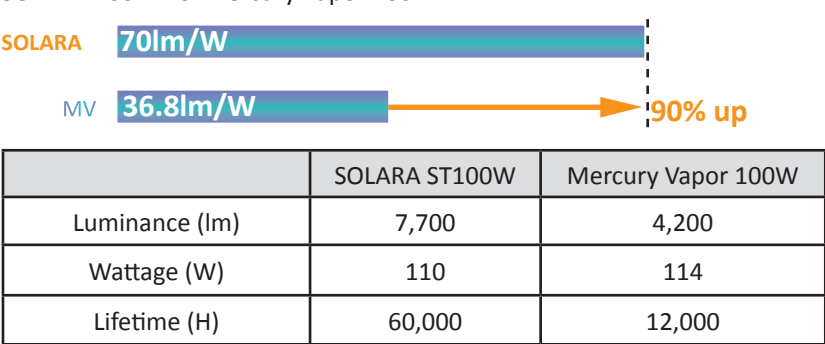
SOLARA 250W VS. Mercury Vapor 250W



SOLARA 400W VS. Mercury Vapor 400W



SOLARA 100W VS. Mercury Vapor 100W



Induction Lamp vs. High Pressure Sodium Lamp

Technology	Wattage	Lamp changes	Energy	Maintenance	Material	Cost of operation
HPS 70	70	3.7	\$927	\$201	\$73	\$1,201
Induction 35	35	0	\$375	\$0	\$0	\$375
Induction 40	40	0	\$429	\$0	\$0	\$429
HPS 150	150	3.7	\$1,971	\$201	\$73	\$2,245
Induction 70	70	0	\$750	\$0	\$0	\$750
HPS 250	250	3.7	\$3,154	\$201	\$73	\$3,427
Induction 100	100	0	\$1,072	\$0	\$0	\$1,072
HPS 400	400	3.7	\$4,878	\$201	\$73	\$5,151
Induction 150	150	0	\$1,608	\$0	\$0	\$1,608
HPS 1000	1000	3.7	\$11,563	\$201	\$224	\$11,988
Induction 400	400	0	\$4,288	\$0	\$0	\$4,288

*The calculations are based on 24 hours of on time, USD\$0.12/kWh, and USD\$55/hour labor charge.

Induction lighting is still more expensive than traditional lighting,
so where are the segments that find induction lighting a suitable replacement and the numbers work out?

Actually induction lighting can realize returns on investments as soon as 2 years. We have found that street lighting and tunnel lighting are the two most expensive areas of lighting where maintenance costs and operating costs far outstrips the initial cost of the lamps themselves. Induction lighting not only reduces energy usage to just a half, but also reduces maintenance costs to just a fifth of traditional high pressure sodium lighting.

Below is a table to compares the costs of operating different lighting sources against induction lighting over 10 years.

SOLARA 150W vs. HPS 250W

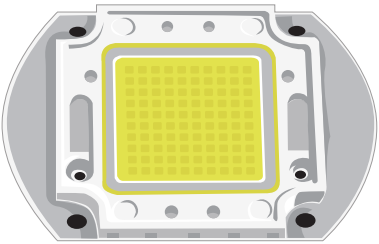
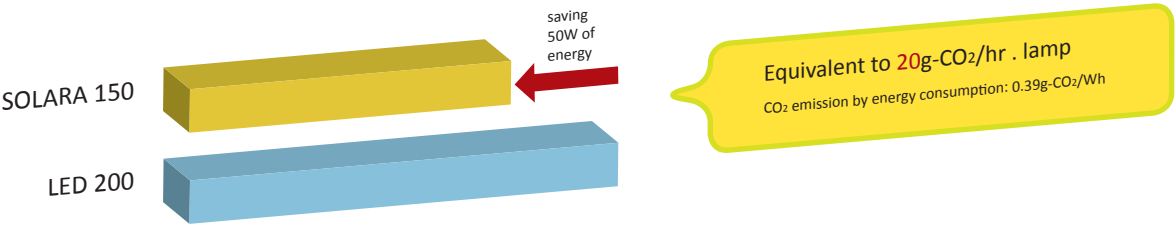


Induction Lamp vs. Light Emitting Diodes

Technology	Wattage	Lamp changes	Energy	Maintenance	Material	Cost of operation
LED 30	30	0	\$322	\$0	\$0	\$322
Induction 15	15	1	\$161	\$25	\$25	\$211
LED 60	60	0	\$643	\$0	\$0	\$643
Induction 35	35	0	\$375	\$0	\$0	\$375
Induction 40	40	0	\$429	\$0	\$0	\$429
LED 100	100	0	\$1,072	\$0	\$0	\$1,072
Induction 55	55	0	\$590	\$0	\$0	\$590
Induction 70	70	0	\$750	\$0	\$0	\$750
LED 120	120	0	\$1,286	\$0	\$0	\$1,286
Induction 70	70	0	\$750	\$0	\$0	\$750
Induction 100	100	0	\$1,072	\$0	\$0	\$1,072
LED 160	160	0	\$1,715	\$0	\$0	\$1,715
Induction 100	100	0	\$1,072	\$0	\$0	\$1,072
LED 200	200	0	\$2,144	\$0	\$0	\$2,144
Induction 150	150	0	\$1,608	\$0	\$0	\$1,608
LED 250	250	0	\$2,680	\$0	\$0	\$2,680
Induction 150	150	0	\$1,608	\$0	\$0	\$1,608

*The calculations are based on 24 hours of on time, USD\$0.12/kWh, and USD\$55/hour labor charge.

SOLARA 150W vs. LED 200W



Many people ask if we could make a replacement chart for induction lighting versus traditional lighting so below is a direct comparison chart. The most difficult comparison for us is with LED lighting because LED’s do not give enough luminance as required by the national standards for street lighting and are often underpowered to make the case that they are energy efficient. In reality, at high wattages (above 40W) they are no more efficient than metal halides. For our comparison, we have to first provide a comparable induction lamp wattage that is similar to the LED solution and then suggest a second wattage that is appropriate and more realistic for the job intended.

Advantages of induction over LED:

- 1. More lumens output and higher lux levels on the ground
- 2. Less energy consumption required at wattages above LED 20W
- 3. Reduces overall costs by reducing the costs of higher wattage solar panels and batteries
- 4. Has a better “real world” lifespan due to better design and less sensitivity to heat
- 5. Induction lighting solutions are 1/3 to 1/5 of the cost of comparable LED solutions

Induction Lamp vs. Metal Halide Lamp

Technology	Wattage	Lamp changes	Energy	Maintenance	Material	Cost of operation
MH (V) 150	150	5.8	\$1,971	\$321	\$187	\$2,479
Induction 100	100	0	\$1,072	\$0	\$0	\$1,072
MH (V) 175	175	8.8	\$2,263	\$482	\$278	\$3,022
Induction 150	150	0	\$1,608	\$0	\$0	\$1,608
MH (V) 250	250	8.8	\$3,101	\$482	\$280	\$3,863
Induction 200	200	0	\$2,144	\$0	\$0	\$2,144
MH (V) 400	400	8.8	\$4,793	\$482	\$280	\$5,556
Induction 300	300	0	\$3,216	\$0	\$0	\$3,216
MH (V) 1000	1,000	7.3	\$11,248	\$402	\$365	\$12,014
Induction 400 x2	800	0	\$8,576	\$0	\$0	\$8,576
MH (H) 150	150	7.8	\$1,971	\$428	\$249	\$2,648
Induction 100	100	0	\$1,072	\$0	\$0	\$1,072
MH (H) 175	175	11.7	\$2,263	\$642	\$370	\$3,275
Induction 150	150	0	\$1,608	\$0	\$0	\$1,608
MH (H) 250	250	11.7	\$3,101	\$642	\$374	\$4,117
Induction 200	200	0	\$2,144	\$0	\$0	\$2,144
MH (H) 400	400	11.7	\$4,793	\$642	\$374	\$5,810
Induction 300	300	0	\$3,216	\$0	\$0	\$3,216
MH (H) 1000	1,000	9.7	\$11,248	\$535	\$487	\$12,270
Induction 400 x2	800	0	\$8,576	\$0	\$0	\$8,576

*The calculations are based on 24 hours of on time, USD\$0.12/kWh, and USD\$55/hour labor charge.

SOLARA 300W vs. MH(V) 400W

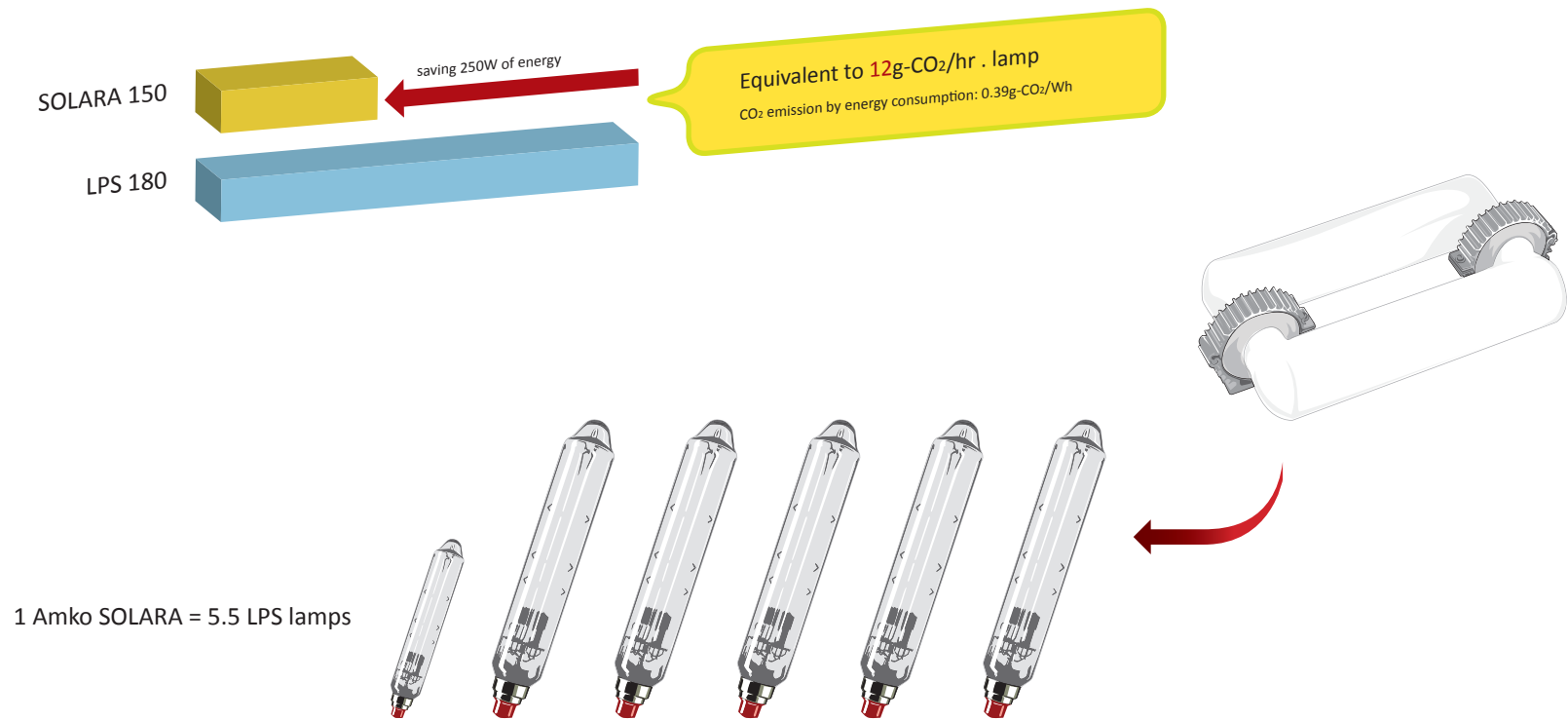


Induction Lamp vs. Low Pressure Sodium Lamp

Technology	Wattage	Lamp changes	Energy	Maintenance	Material	Cost of operation
LPS 35	35	4.9	\$629	\$268	\$161	\$1,057
Induction 35	35	0	\$375	\$0	\$0	\$375
LPS 55	55	4.9	\$838	\$268	\$161	\$1,267
Induction 40	40	0	\$429	\$0	\$0	\$429
Induction 55	55	0	\$590	\$0	\$0	\$590
LPS 90	90	5.5	\$1,306	\$301	\$203	\$1,809
Induction 70	70	0	\$750	\$0	\$0	\$750
LPS 135	135	5.5	\$1,873	\$301	\$257	\$2,432
Induction 100	100	0	\$1,072	\$0	\$0	\$1,072
LPS 180	180	5.5	\$2,308	\$301	\$345	\$2,954
Induction 150	150	0	\$1,608	\$0	\$0	\$1,608

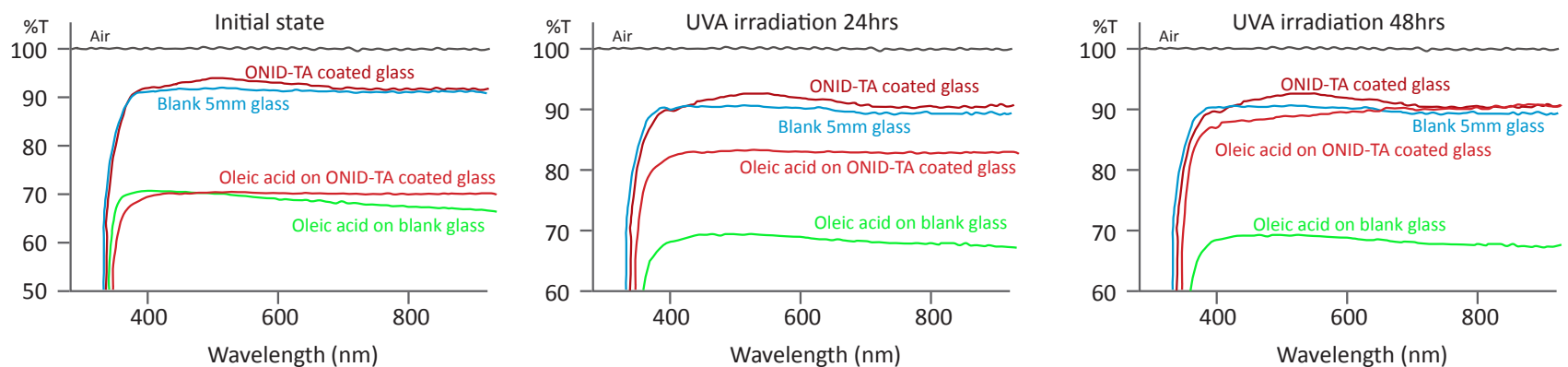
*The calculations are based on 24 hours of on time, USD\$0.12/kWh, and USD\$55/hour labor charge.

SOLARA 150W vs. LPS 180W



Principle

Photocatalyst is the substance which will perform a catalyst function after absorbing the energy of light. The electron in TiO_2 will jump from the valence band to the conduction band, and electron (e^-) and electric hole (h^+) pairs will form on the surface of photocatalyst. The negative electrons and oxygen will combine into O_2^- ; the positive electric holes and water will generate hydroxyl radicals. Since both are unstable chemical substances, organic compounds that fall on the surface of photocatalyst will combine with O_2^- and OH^- respectively turn into dioxide carbon and water. When the ONID-TA coated surface is exposed to a suitable light, the contact angle of the surface with water is reduced gradually. After sufficient exposure to the light, it becomes super hydrophilic. The static charges happened on it will be balanced by the humidity instantly. The attraction of dust to the ONID-TA coating is minimized because of its anti-static feature. The self-cleaning effect ONID-TA coated glass was tested by the decomposition of oleic acid.



Main Feature of AMKO's Photocatalytic Lighting

• Superior Photocatalyst

Amko utilizes the best photocatalyst, ONID-TA, which is a patented visible light photocatalytic TiO_2 sol manufactured with environmentally friendly process and materials and has been acknowledged and certified by the TPIA (Taiwan Photocatalyst Industry Association) to be highly efficient and effective.

• The Unique Coating System

Amko photocatalytic coating is completely developed in Taiwan, utilizing ONID exclusive coating process with superior photocatalyst ONID-TA to ensure the coating can last as long as Amko's SOLARA induction lamps.

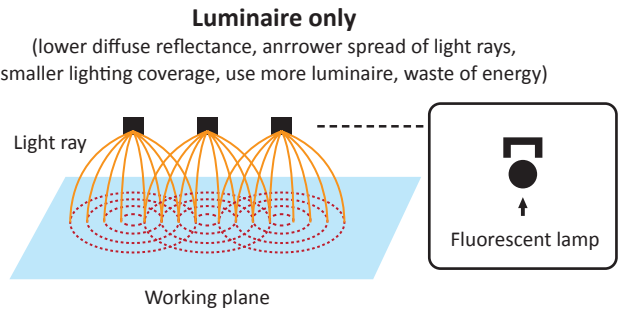
Nanoflex® Technology

Highly reflective & diffusive optical material from our advanced material science research, in the form of emulsion developed from nano-technology.

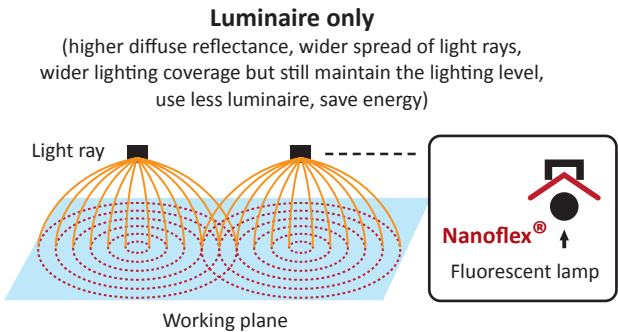
Nanoflex® Improves Efficiency, Saves on Delamping

End-User Need	Features (NFX)	Benefits
<ul style="list-style-type: none">• Low investment & maintenance Cost• Energy SAVING• Reduce materials wastage	<ul style="list-style-type: none">• 95% Total Reflectance, 94% Diffuse Reflectance• Resistance to UV degradation	<ul style="list-style-type: none">• Less fittings installed in the ceiling to achieve the IEC Standard• Less electricity bill & lamps replacement and extend fittings lifetime
<ul style="list-style-type: none">• Comfort	<ul style="list-style-type: none">• White Paint	<ul style="list-style-type: none">• Glare-free fitting
<ul style="list-style-type: none">• Safety	<ul style="list-style-type: none">• No hazardous substances• BS 476 Pt.6 & 7• Green label	<ul style="list-style-type: none">• Comply RoHS• Fire Safety• Provide Environmental friendly product

Up to 94% Diffuse Reflectance

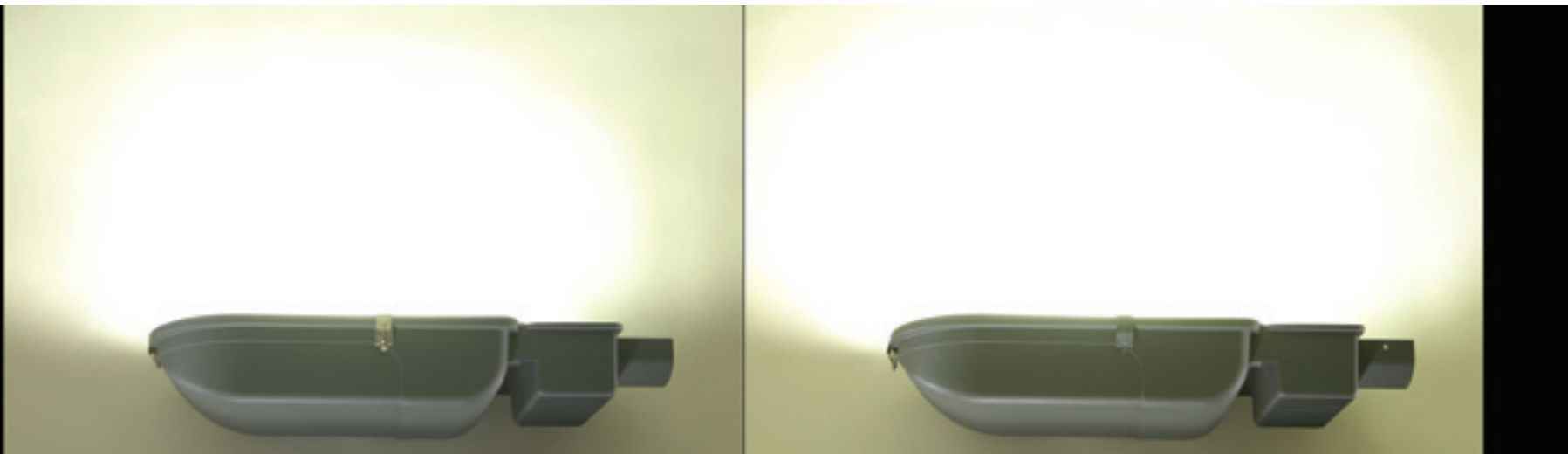


Energy saving via Delamping



Luminaire Effects-AF8-420 Street Light

Highly reflective & diffusive optical material from our advanced material science research, in the form of emulsion developed from nano-technology

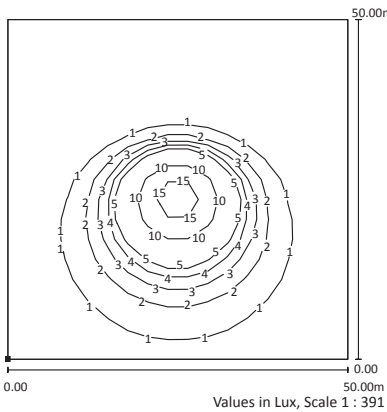


	Wattage (W)	Luminaire Efficiency
AF8-420 w/Nanoflex®	100W	86%
AF8-420	100W	66%

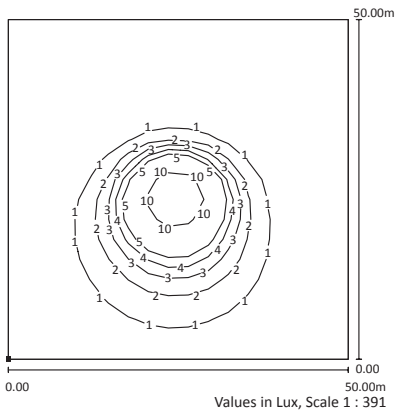
**20% Luminaire Efficiency Increase*

Features of Nanoflex®

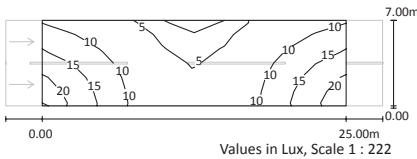
- Up to 95% reflective
- Up to 94% diffusive
- Acid and UV resistant
- Fire safe, heat resistance up to 400°C
- RoHS compliant materials
- Anti-glare



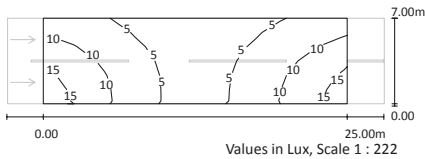
Nano-coated AF8-420 at 30' angle:
Average LUX: 1.69
Max LUX: 20



AF8-420at 30' angle:
Average LUX: 1.23
Max LUX: 16



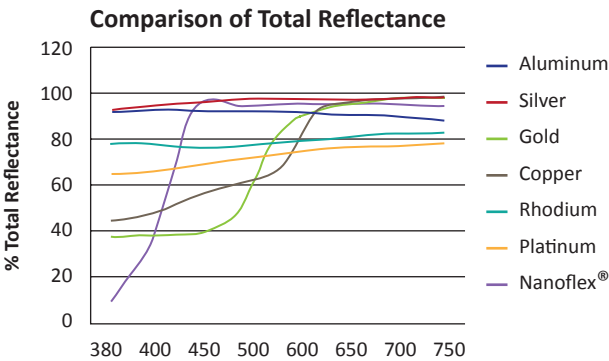
Nano-coated AF8-420 Field:
Average LUX: 9.77
Min LUX: 3.83
Max LUX: 21



AF8-420 Field:
Average LUX: 7.69
Min LUX: 2.83
Max LUX: 16

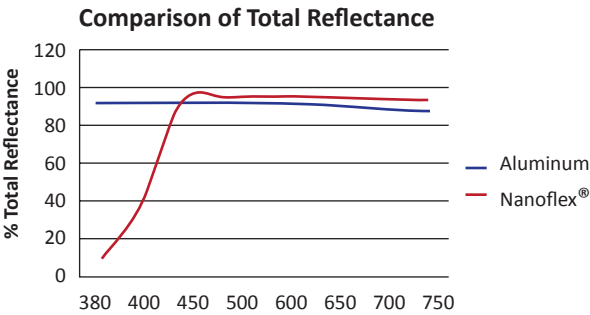
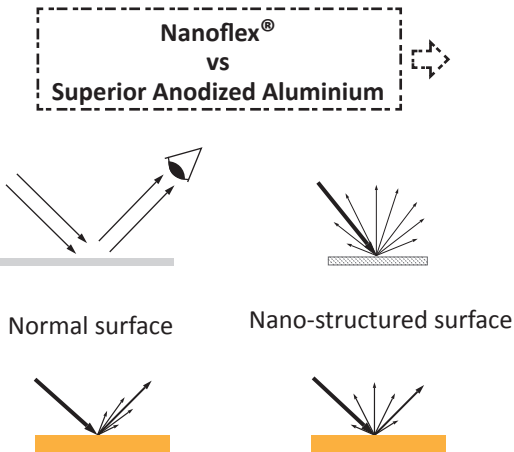
Reflectance and Diffuse Reflectance

Highly reflective & diffusive optical material from our advanced material science research, in the form of emulsion developed from nano-technology.



violet	380-450nm
blue	450-495nm
green	495-570nm
yellow	570-590nm
orange	590-620nm
red	620-750nm

Nanoflex[®]
vs
different materials



ACCREDITATIONS

1. Superior Spectral Reflectance
Measurement by PSB Corporation
2. Complies with BS Fire Safety Standard (BS 476 Part 6 & 7)
3. Passed UV Aging Test
4. Complies with the Restriction of Hazardous Substances Directive (RoHS)
5. Awarded the GREEN LABEL by Green Council of HKSAR

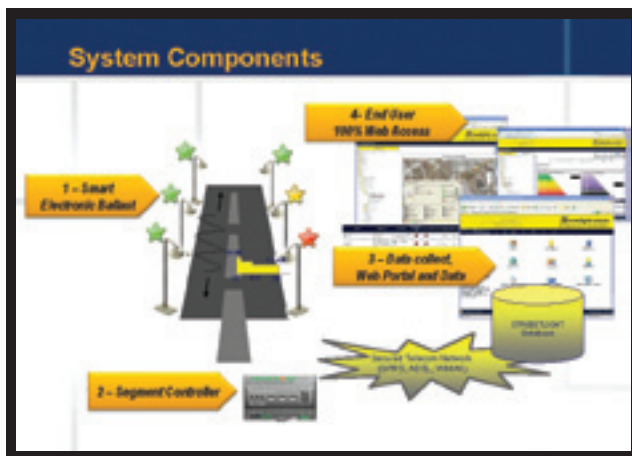


Echelon LonWorks Control System

Echelon control system enables smart grid in building controls, street and area lighting, and home controls.

(ECHELON is a registered trademark by Echelon Corporation Limited.)

Benefits of the LonWorks Control System:



- Environmental friendly
Dramatic reductions in energy use, CO2 emissions, and light pollution.
- Networked system
Individual luminaire monitoring to detect outage and early failure.
- Low maintenance & operations costs.
- Liability, security and safety
Status reporting and monitoring with an archived past performance data.

The i.LON SmartServer Segment Controller



Features:

- Local master controller
- Built-in Astronomical clock & Real-time clock.
- Multiple schedulers.
- Built-in data logging, alarming, HTML Web Server, etc.
- Built-in I/O (metering inputs, digital, relays)
- MODBUS extensions for additional data measurement.
- Powerline Interface with signal repeating.
- Bridge to data networks
- Integrated 10/100 Ethernet port.
- Integrated serial ports for connectivity to GSM/GPRS modems.
- Realtime collection using SOAP/XML protocol.
- Remote commissioning, troubleshooting and upgrades
- No on-site system services required post installation

Simple Installation & User-friendly system

Secured/Customized Multi-City Web Portal



Secured/Customized Multi-City Web Portal



Real-Time control using City Maps

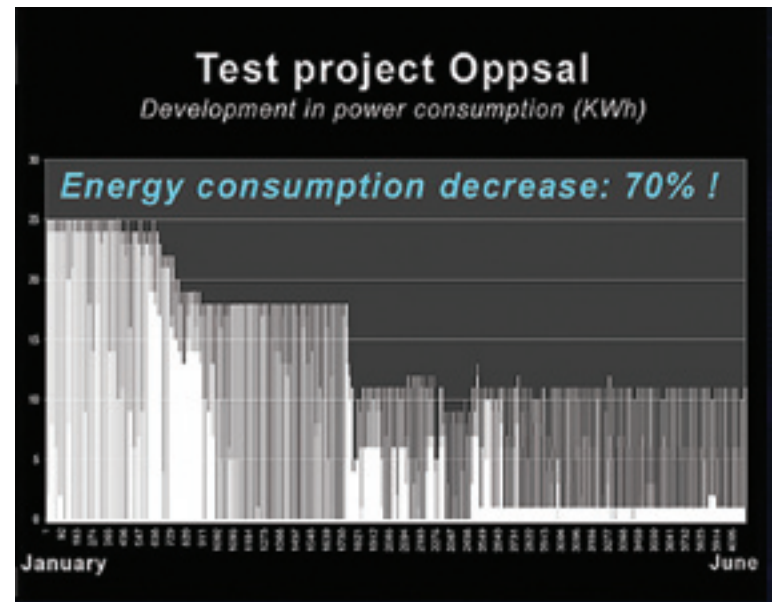
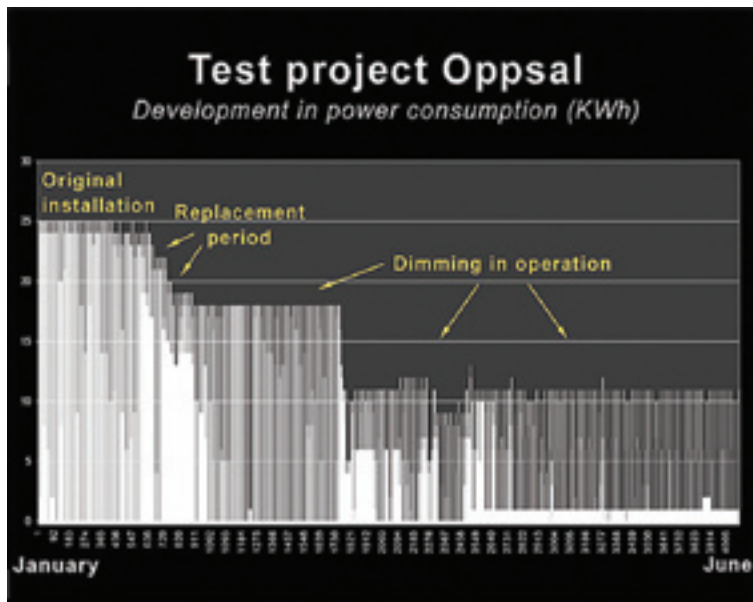


Expansion Capabilities



LonWorks based City of Oslo Project

10, 000 intelligent streetlights saves 1440 tons of CO2 and reduces energy consumption by 70%.



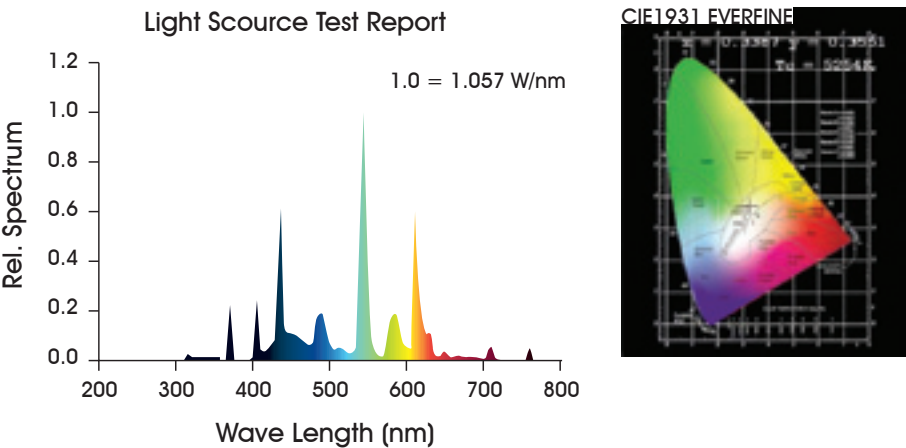
Active LonWorks Streetlights Projects



Partners and Customers



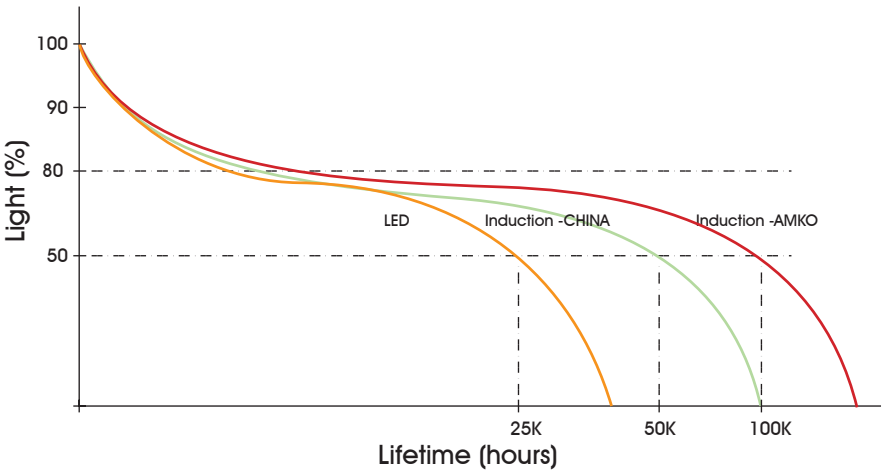
Amko SOLARA only uses imported, quality-assured phosphor powder for our induction lamps.

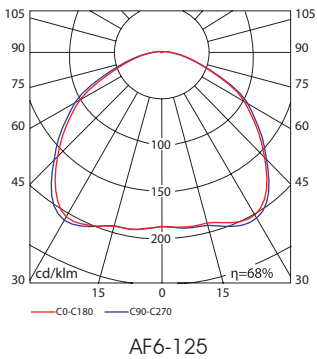
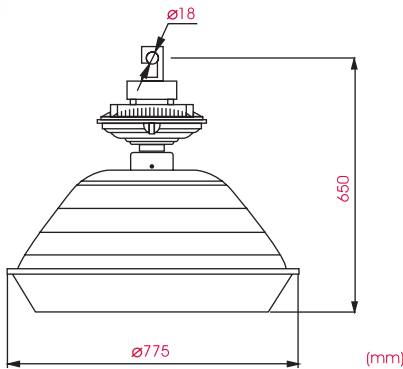


CIE Color Parameters:								
Chromaticity Coordinate: x=0.3443 y=0.3564/u=0.2091 v=0.3246								
CCT: Tc=5043K			Prpc: d=569.5nm Purity=10.3%					
Peak WaveL: λp=545nm			Half Width:Δλp=8.5nm			Ratio: R=19.7%		
R1 =93Z	R2 =88		R3 =54	R4 =84		R5 =85	Rendering Index: Ra=80.2	
R6 =76			R7 =84			R8 =76		
R9 =16	R10=43	R11=75	R12=58	R13=94	R14=70	R15=92		

Photo Parameters:		
Flux: Φ= 16661(lm)	Eeff* = 0.8655mW/klm	Kred = 14.61%
Instrucment Status:	Interval: 5.0nm	Ip = 18655
Scan Range: 200.0nm-800.0nm	% = 0.00%	TMP (PMT) = 25.6degrees celcius
REF = 21567		

Unlike the powder used in other Chinese induction lamps, Amko’s phosphor powder produces higher efficiency with longer life time.



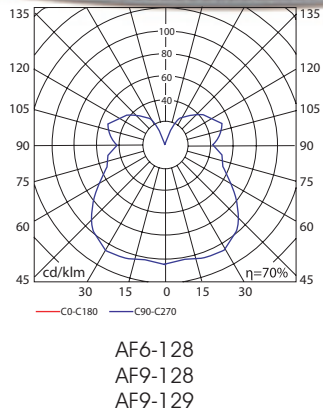
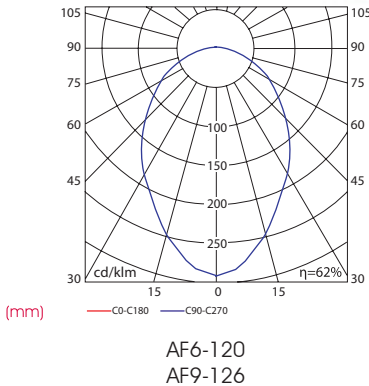
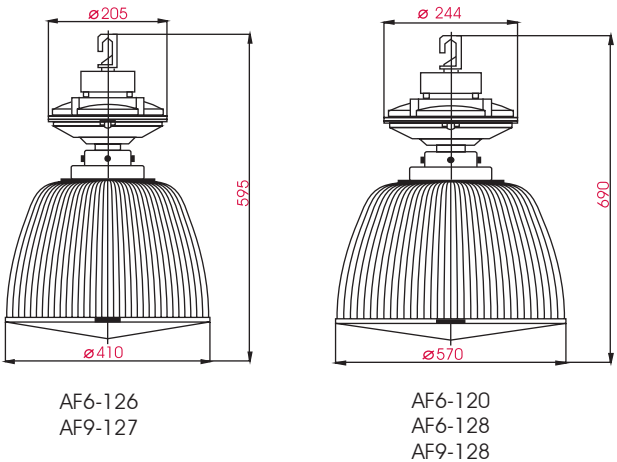


AF6-125



- Features:**
- 32" Aluminum housing with anodized aluminum reflector for superior lighting performance.
 - UV stabilized acrylic cover fastened with clamp band.
 - Die-casted aluminum ballast casing with white powder coated finish for corrosion-resistance.
- Lamps and ballasts:**
- 300W Round tubular induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.
 - Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.
- Ambient temperature for lighting fixture:**
- 20°C ~ 40°C
- Applications:**
- Warehouses, supermarkets, retail showrooms, exhibition halls, factories.

Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF6-125	300W Round Tubular	50/60	120~277	2.65~1.20	43



Features:

- Temperature-resistant polycarbonate hood.
- UV stabilized polycarbonate cover fastened with clamp band.
- Die-casted aluminum ballast casing with white powder coated finish for corrosion-resistance.

Lamps and ballasts:

70/80/100/120/150/200/250W Round tubular Induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.

Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

Ambient temperature for lighting fixture:

-20°C ~ 40°C

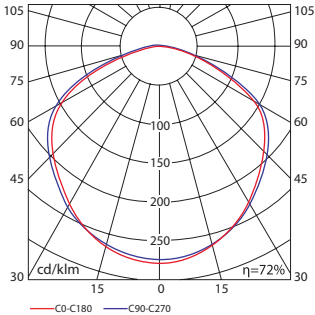
Applications:

Warehouses, supermarkets, retail showrooms, exhibition halls, factories.

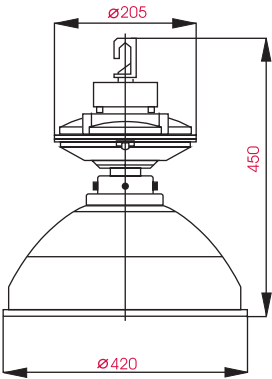
AF6-120
AF6-126
AF6-128
AF9-126
AF9-127
AF9-128
AF9-129

Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF6-126	100W Round tubular	50/60	120~277	0.93~0.42	43 (Control gear)
AF6-120	150W Round tubular			1.35~0.61	
AF6-128	200W Round tubular			1.77~0.80	
AF9-126	70W Round tubular			0.62~0.27	
AF9-127	80W Round tubular			0.70~0.32	
AF9-128	120W Round tubular			0.73~0.31	
AF9-129	250W Round tubular			2.19~1.05	

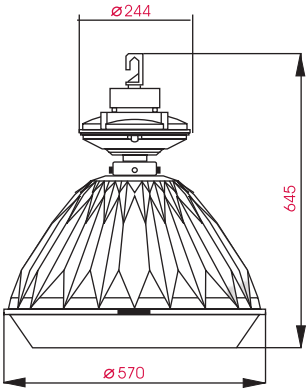




AF6-129



AF6-127
AF9-130
AF9-131



AF6-122
AF6-129
AF9-132

(mm)

Features:

- Anodized aluminum reflector to optimize light distribution.
- UV stabilized acrylic cover fastened with clamp band.
- Die-casted aluminum ballast casing with white powder coated finish for corrosion-resistance.

Lamps and ballasts:

- 70/80/100/150/200/250W Round tubular induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.
- Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

Ambient temperature for lighting fixture:

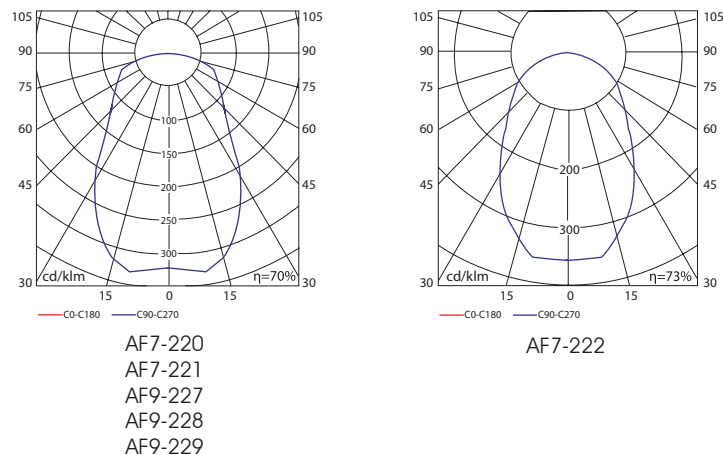
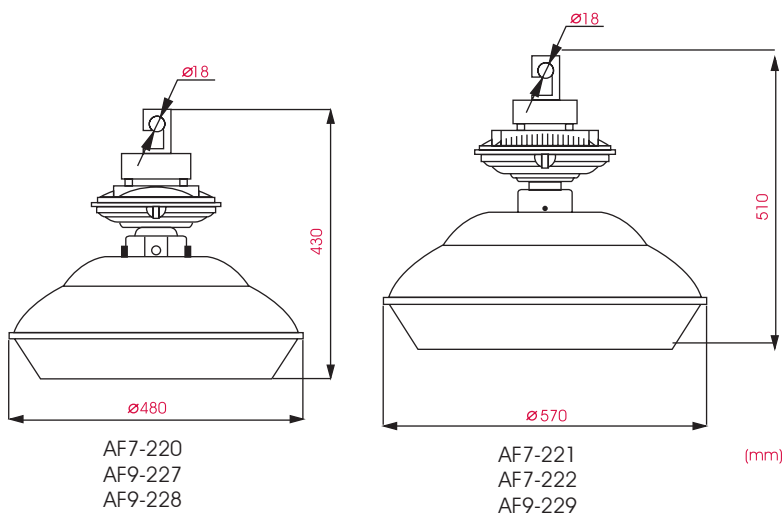
- AF6-127 : 0°C ~ 40°C
- AF6-122/AF6-129 : -20°C ~ 40°C

Applications:

Warehouses, supermarkets, retail showrooms, exhibition halls, factories.



Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF6-127	100W Round Tubular	50/60	120~277	0.93~0.42	43 (Control gear)
AF6-122	150W Round Tubular			1.35~0.61	
AF6-129	200W Round Tubular			1.77~0.80	
AF9-130	70W Round Tubular			0.62~0.27	
AF9-131	80W Round Tubular			0.70~0.32	
AF9-132	250W Round Tubular			2.19~1.05	



Features:

- Anodized aluminum reflector to optimize light distribution.
- UV stabilized acrylic cover fastened with clamp band.
- Die-casted aluminum ballast casing with white powder coated finish for corrosion-resistance.

Lamps and ballasts:

70/80/100/120/150/200W Round tubular induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.

Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

Ambient temperature for lighting fixture:

-20°C ~ 40°C

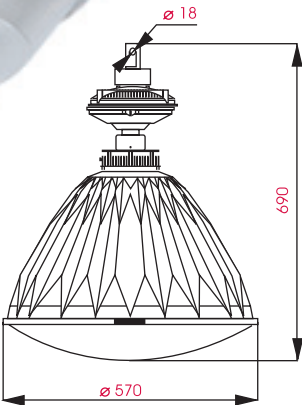
Applications:

Warehouses, supermarkets, retail showrooms, exhibition halls, factories.

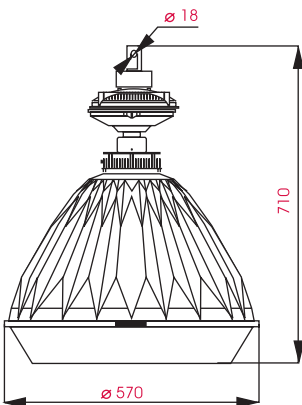
AF7-220
AF7-221
AF7-222
AF9-227
AF9-228
AF9-229

Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF7-220	100W Round Tubular	50/60	120~277	0.93~0.42	43 (Control gear)
AF7-221	150W Round Tubular			1.35~0.61	
AF7-222	200W Round Tubular			1.77~0.80	
AF9-227	70W Round Tubular			0.62~0.27	
AF9-228	80W Round Tubular			0.70~0.32	
AF9-229	120W Round Tubular			0.73~0.31	

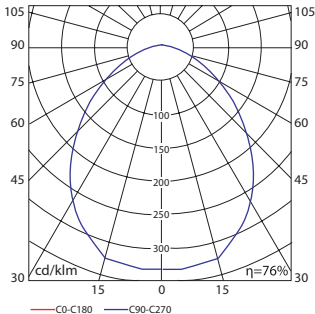




AF7-212
AF9-218 (mm)



AF7-211 AF9-215
AF9-216 AF9-217



AF7-211

AF7-211
AF7-212
AF9-215
AF9-216
AF9-217
AF9-218

Features:

AF7-211 : 22" Aluminum reflector with anodized inner surface and UV stabilized acrylic lens.
AF7-212 : 22" Aluminum reflector with anodized inner surface and UV stabilized tempered glass lens.
Custom designed heat sink maximizes heat dissipation.
Die-casted aluminum ballast casing with white powder coated finish for corrosion-resistance.

Lamps and ballasts:

35/55/165/200W Spherical induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.
Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

Ambient temperature for lighting fixture:

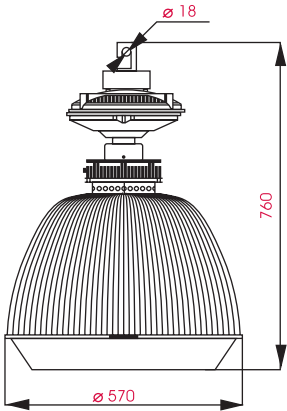
-20°C ~ 40°C

Applications:

Warehouses, supermarkets, retail showrooms, exhibition halls, factories.



Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF7-211	200W Spherical	50/60	120~277	1.77~0.80	43 (Control gear)
AF7-212					
AF9-215	35W Spherical			0.31~0.14	
AF9-216	55W Spherical			0.49~0.21	
AF9-217	165W Spherical			1.46~0.67	
AF9-218	165W Spherical			1.46~0.67	



Features:

- AF7-210 : 22" Temperature-resistant polycarbonate hood and lens.
- Custom designed heat sink maximizes heat dissipation.
- Die-casted aluminum ballast casing with white powder coated finish for corrosion-resistance.

Lamps and ballasts:

- 35/55/85/120/165/200W Spherical induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.
- Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

Ambient temperature for lighting fixture:

-20°C ~ 40°C

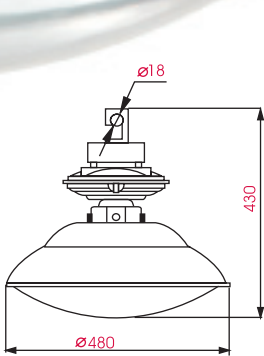
Applications:

Warehouses, supermarkets, retail showrooms, exhibition halls, factories.

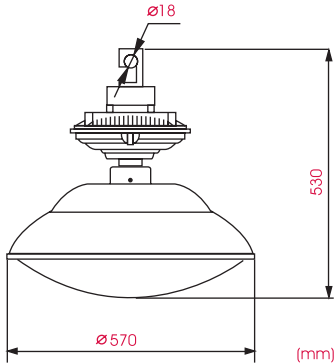
- AF7-210
- AF9-210
- AF9-211
- AF9-212
- AF9-213
- AF9-214



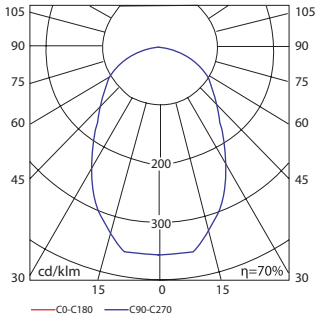
Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF7-210	200W Spherical	50/60	120~277	1.77~0.80	43 (Control gear)
AF9-210	165W Spherical			1.46~0.67	
AF9-211	35W Spherical			0.31~0.14	
AF9-212	55W Spherical			0.49~0.21	
AF9-213	85W Spherical			0.73~0.31	
AF9-214	120W Spherical			1.11~0.48	



AF7-240
AF9-240



AF7-241
AF7-242
AF9-241
AF9-242



AF7-240
AF7-242
AF9-240

AF7-240
AF7-241
AF7-242
AF9-240
AF9-241
AF9-242

Features:

- Anodized aluminum reflector to optimize light distribution.
- UV stabilized polycarbonate cover fastened with clamp band.
- Die-casted aluminum ballast casing with white powder coated finish for corrosion-resistance.

Lamps and ballasts:

70/80/100/120/150/200W Round tubular induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.

Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

Ambient temperature for lighting fixture:

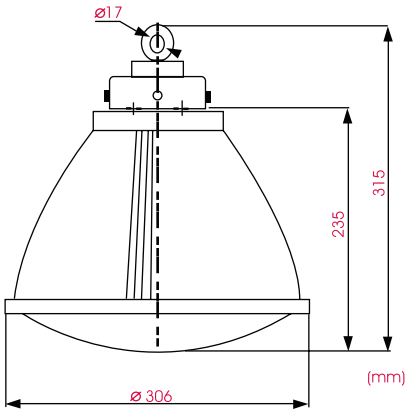
-20°C ~ 40°C

Applications:

Warehouses, supermarkets, retail showrooms, exhibition halls, factories.



Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF7-240	100W Round Tubular	50/60	120~277	0.93~0.42	43 (Control gear)
AF7-241	150W Round Tubular			1.35~0.61	
AF7-242	200W Round Tubular			1.77~0.80	
AF9-240	70W Round Tubular			0.62~0.27	
AF9-241	80W Round Tubular			0.70~0.32	
AF9-242	120W Round Tubular			0.73~0.31	



Features:

- 12" Temperature-resistant polycarbonate reflector.
- UV stabilized polycarbonate lens fastened with clamp band.
- Die-casted aluminum ballast casing with white powder coated finish for corrosion-resistance.

Lamps and ballasts:

- 40W Round tubular self-ballasted induction lamp (E27 lamp base) with high lighting efficacy at rated 30,000hrs lifetime, about 5 years burning on 6000hrs/year.
- Electronic ballast features high power factor (>0.6), flickering free, and constant output wattage.

Ambient temperature for lighting fixture:

0°C ~ 40°C

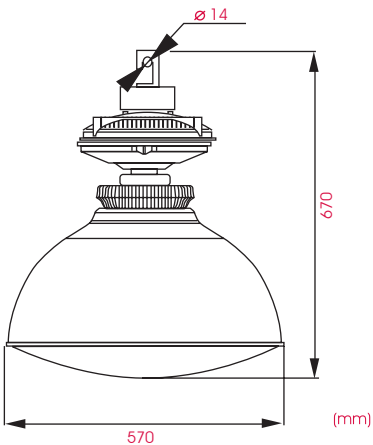
Applications:

Warehouses, supermarkets, retail showrooms, exhibition halls, factories.

AF7-370



Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF7-370	40W Round Tubular Self-ballasted (LUNARA 40W)	50/60	120/220	0.36/0.21	20
			240	0.18/0.15	



Features:

- Die-casted aluminum ballast casing with powder coated finish for corrosion-resistance.
- Custom designed heat sink maximizes the heat dissipation.
- High purity aluminum reflector with vacuum coated inner surface.

Lamps and ballasts:

- 35/55/85/120/165/200/250W Spherical induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.
- Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

Ambient temperature for lighting fixture:

-20°C ~ 40°C

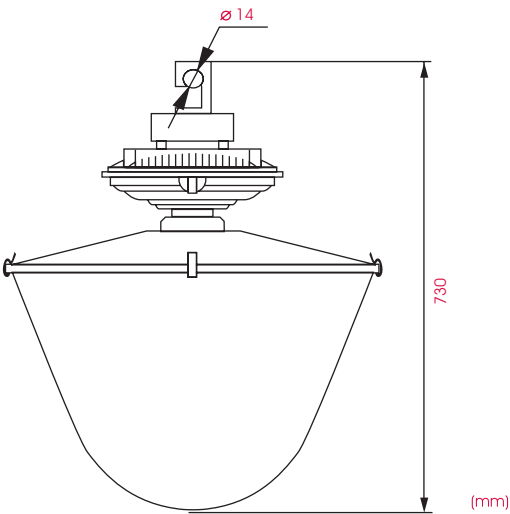
Applications:

Stadium, workshop, warehouse, airport, railway station, gas station, amusement park, exhibition hall, supermarket.

AF8-213
AF9-219
AF9-220
AF9-221
AF9-222
AF9-223
AF9-224



Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF8-213	250W Spherical	50/60	220V	2.29~1.00	43 (Control gear)
AF9-219	35W Spherical			0.31~0.14	
AF9-220	55W Spherical			0.49~0.21	
AF9-221	120W Spherical			0.73~0.31	
AF9-222	85W Spherical			1.11~0.48	
AF9-223	165W Spherical			1.46~0.67	
AF9-224	200W Spherical			1.76~0.80	



Features:

Die-casted aluminum ballast casing with powder coated finish for corrosion-resistance.
Strawberry shaped temperature-resistant polycarbonate cover.

Lamps and ballasts:

200/250W Round tubular induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.
Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

Ambient temperature for lighting fixture:

-20°C ~ 40°C

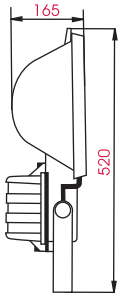
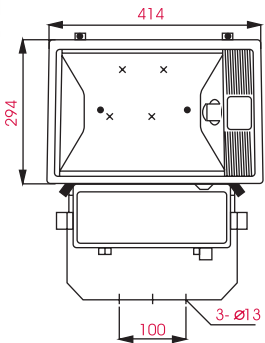
Applications:

Stadium, workshop, warehouse, airport, railway station, gas station, amusement park, exhibition hall, supermarket.

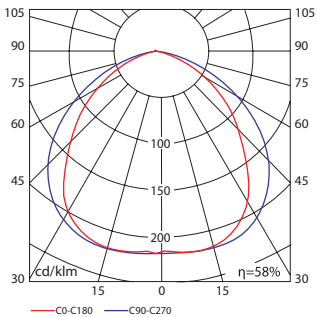
AF8-243
AF9-243



Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF8-243	250W Round Tubular	50/60	220V	1.76~0.80	43 (Control gear)
AF9-243	200W Round Tubular			1.79~0.77	

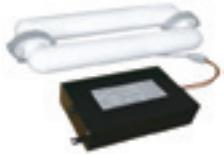


(mm)



AF6-111

AF6-111



Features:

Die-casted aluminum housing with black powder coated finish for corrosion-resistance.
Anodized aluminum reflector and clear tempered glass lens are designed to optimize light distribution.
Gas-tight silicon rubber seal made for wet locations.

Lamps and ballasts:

100W Square tubular induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.
Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

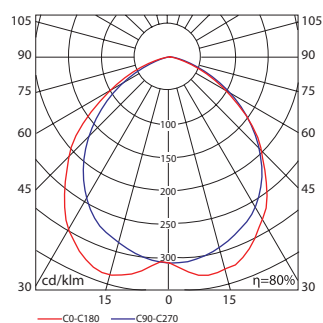
Ambient temperature for lighting fixture:

-20°C ~ 40°C

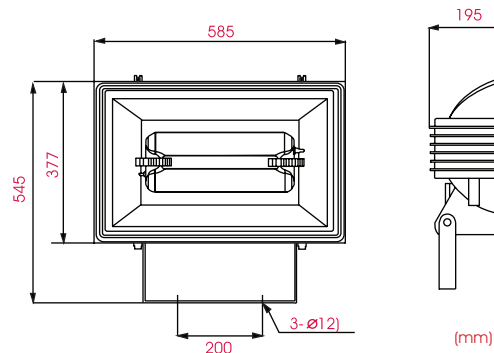
Applications:

Billboards, buildings, parks, pools, parking lots, plazas, tennis courts.

Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF6-111	100W Square Tubular	50/60	120~277	0.93~0.42	54



AF6-112



Features:

Die-casted aluminum housing with black powder coated finish for corrosion-resistance.
Anodized aluminum reflector and clear tempered glass cover are designed to optimize light distribution.
Gas-tight silicon rubber seal made for wet locations.
Separated ballast casing for easy installation.

Lamps and ballasts:

150W Square tubular induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.

Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

Ambient temperature for lighting fixture:

-20°C ~ 40°C

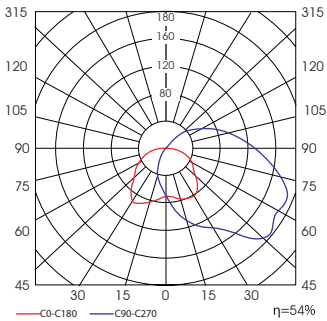
Applications:

Billboards, buildings, parks, pools, parking lots, plazas, tennis courts

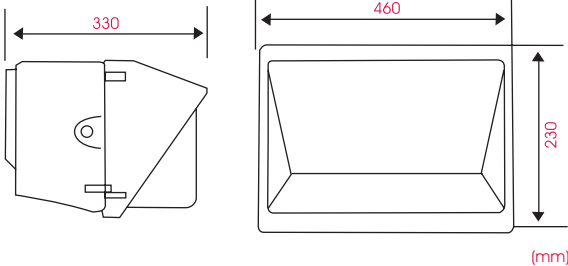


AF6-112

Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF6-112	150W Square Tubular	50/60	120~277	0.93~0.42	65



AF6-130



- AF6-130
- AF8-130
- AF8-131
- AF9-136



Features:

- Die-casted aluminum housing available with grey, bronze, black and white powder coated finish for corrosion-resistance.
- Anodized aluminum reflector and UV stabilized prismatic cover.
- Gas-tight silicon rubber seal made for wet locations.

Lamps and ballasts:

- 70/80/85/100W Spherical induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.
- Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

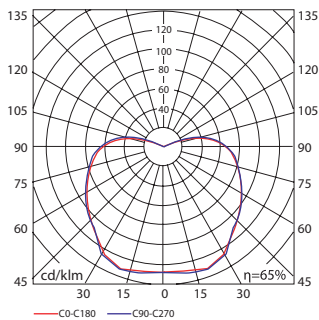
Ambient temperature for lighting fixture:

-25°C ~ 40°C

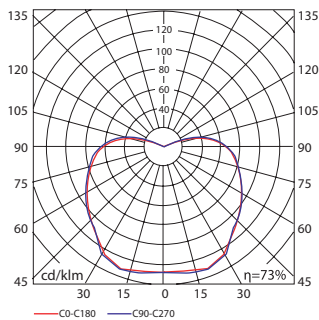
Applications:

Parks, shopping malls, outlets, plazas, outdoor open areas.

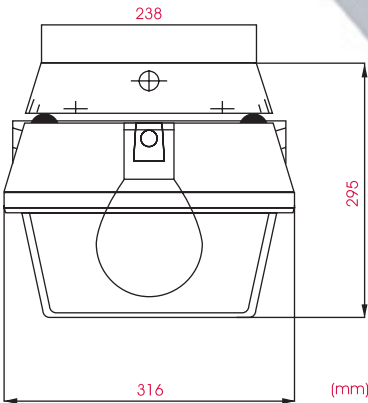
Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF6-130	85W Spherical	50/60	120~277	0.76~0.34	54
AF9-136	70W Spherical			0.93~0.40	
AF8-130	80W Spherical			0.62~0.27	
AF8-131	100W Spherical			0.70~0.32	



AF6-133
AF9-134
AF9-135



AF7-133



Features:

- Die-casted aluminum housing available with grey, bronze, black and white powder coated finish for corrosion-resistance.
- UV stabilized and heat resistant polycarbonate lens.
- Light weight and compact structure for easy maintenance.

Lamps and ballasts:

- 70/85/85/100W Spherical induction lamp or 100W Round tubular induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.
- Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

Ambient temperature for lighting fixture:

-20°C ~ 40°C

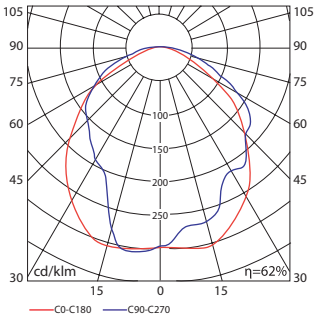
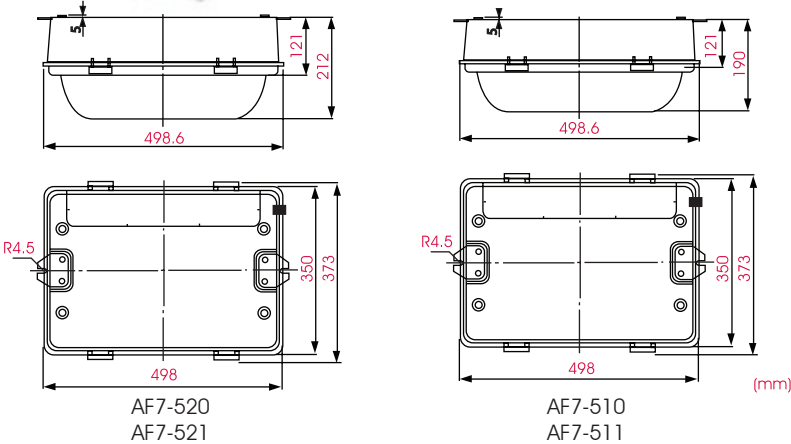
Applications:

Parking garages, gas stations, schools, shopping malls.

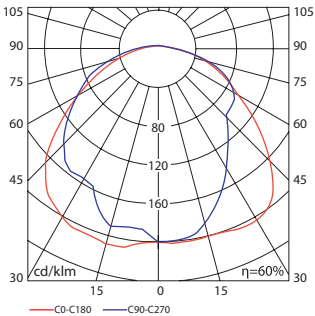
AF6-133
AF7-133
AF9-134
AF9-135



Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF6-133	85W Spherical	50/60	120~277	0.76~0.34	43
AF7-133	100W Round Tubular			0.93~0.42	
AF9-134	70W Round Tubular			0.62~0.27	
AF9-135	80W Round Tubular			0.70~0.32	

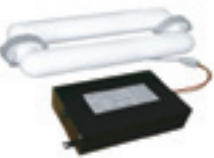


AF7-511



AF7-510
AF7-520
AF7-521

AF7-510
AF7-511
AF7-520
AF7-521



Features:

Die-casted aluminum housing available with grey, bronze, black and white powder coated finish for corrosion-resistance.
AF7-510/511 : Crystal clear tempered glass lens.
AF7-520/521 : UV stabilized and heat resistant polycarbonate cover.

Lamps and ballasts:

100W/150W Square tubular induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year. Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

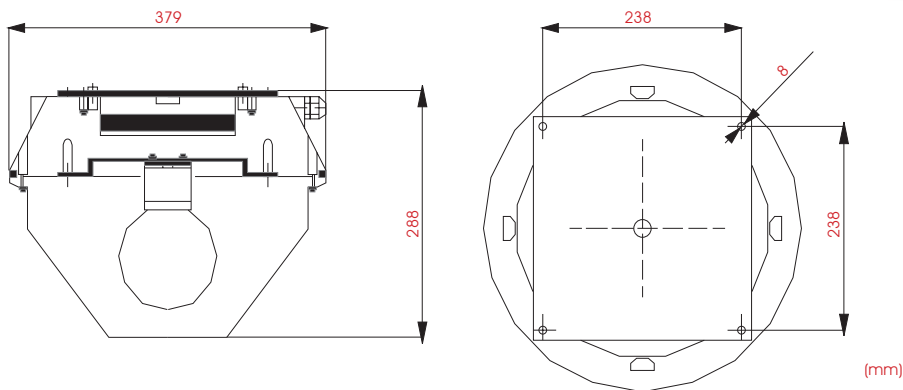
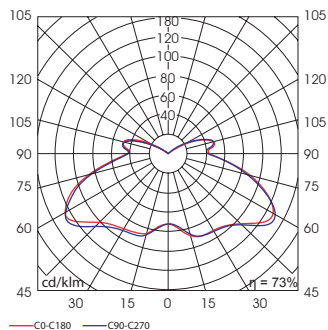
Ambient temperature for lighting fixture:

-20°C ~40°C

Applications:

Parking garages, gas stations, schools, shopping malls.

Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF7-510	100W Square Tubular	50/60	120~277	0.93~0.42	65
AF7-511	150W Square Tubular			1.35~0.61	
AF7-520	100W Square Tubular			0.93~0.42	
AF7-521	150W Square Tubular			1.35~0.61	



Features:

- High pressure die-casted aluminum alloy housing for corrosion-resistance.
- Anodized aluminum reflector to optimize light distribution.
- Anodized aluminum reflector to optimize light distribution.

Lamps and ballasts:

35/55W Spherical induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.

Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

Ambient temperature for lighting fixture:

-20°C ~40°C

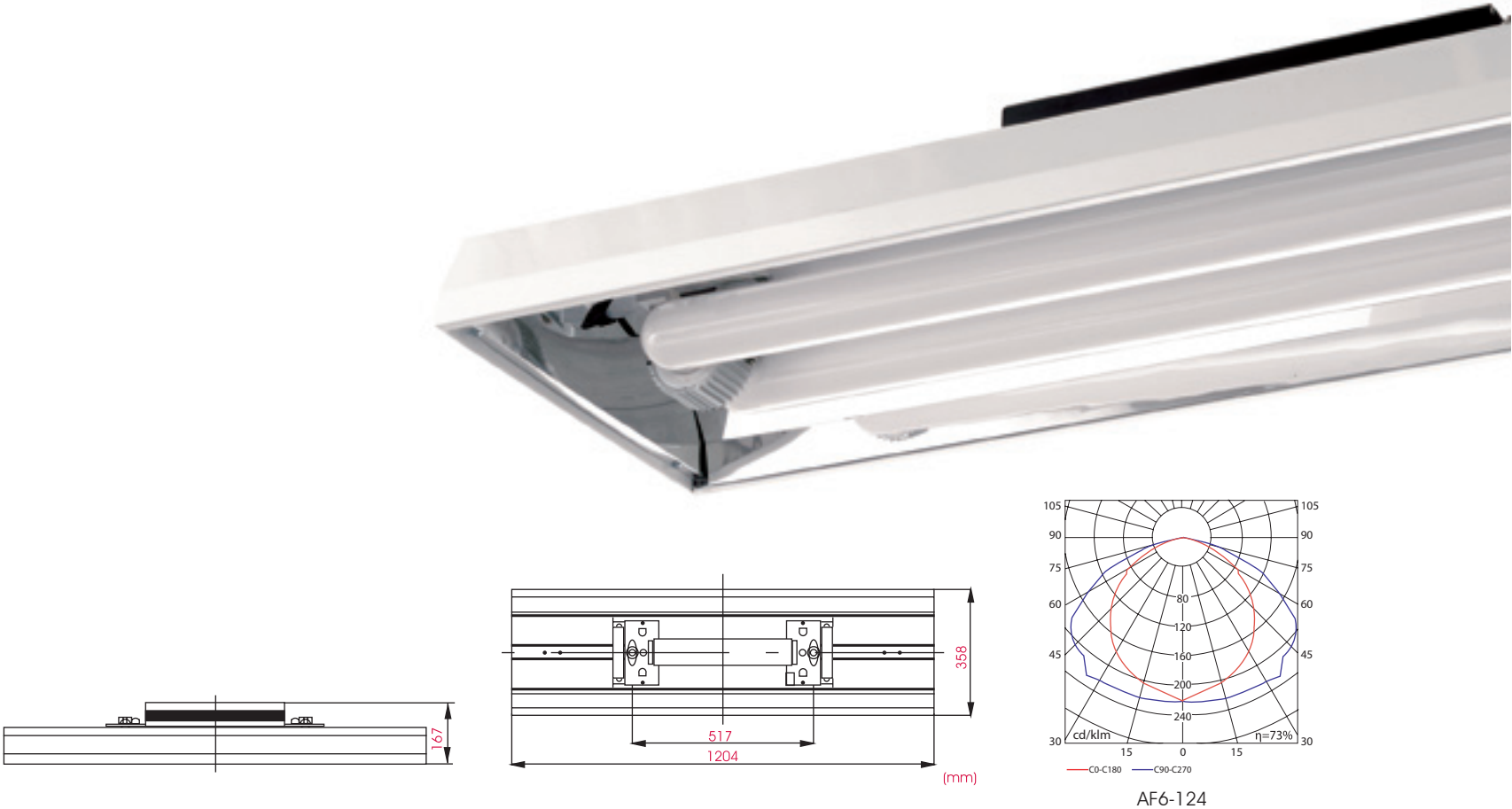
Applications:

Freeway, highway, parking lots, public entrances, off-street areas.

AF9-311
AF9-310



Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF9-311	35W Spherical	50/60	120~277	0.31~0.14	43
AF9-310	55W Spherical			0.49~0.21	



AF6-124



Features:

- Powder painted square profile aluminum housing for heat and corrosion-resistance.
- Anodized aluminum reflector to optimize light distribution.
- Open structure for good of ventilation and prolonged lifetime.
- Mounting options: suspended by chains or poles.

Lamps and ballasts:

- 400W Square tubular induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.
- Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

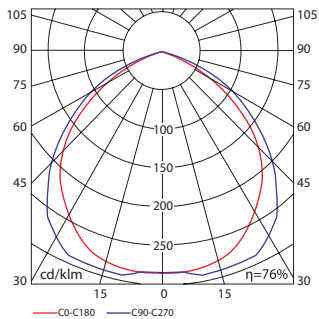
Ambient temperature for lighting fixture:

0°C ~ 40°C

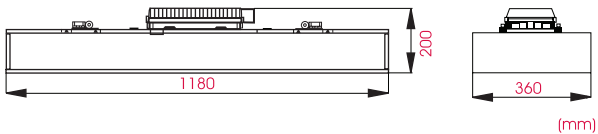
Applications:

Warehouses, supermarkets, retail showrooms, exhibition halls, factories.

Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF6-124	400W Square Tubular	50/60	120~277	3.54~1.60	20



AF7-362



Features:

- White powder coated steel frame for corrosion-resistance.
- Low glare, anodized aluminum parabolic louver for excellent visual control.
- Mounting options: suspended by poles, or wall mounted.

Lamps and ballasts:

- 250/400W Square tubular induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.
- Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

Ambient temperature for lighting fixture:

0°C ~ 40°C

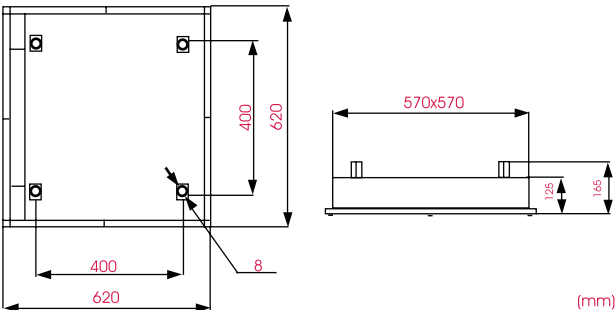
Applications:

Offices, corridors, gas stations, schools, shopping malls.

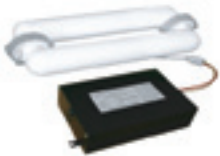
AF7-362
AF7-361



Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF7-362	400W Square Tubular	50/60	120~277	3.54~1.60	20
AF7-361	250W Square Tubular			2.19~1.05	



- AF7-380
- AF7-381
- AF9-381
- AF9-382
- AF9-383



Features:

- Electrostatic white powder paint finished iron frame for corrosion-resistance.
- UV stabilized and heat resistant polycarbonate cover.
- Light weight and compact structure for easy maintenance.
- Customized size and mounting available upon request.

Lamps and ballasts:

- 100/120/150W Square tubular induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.
- Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

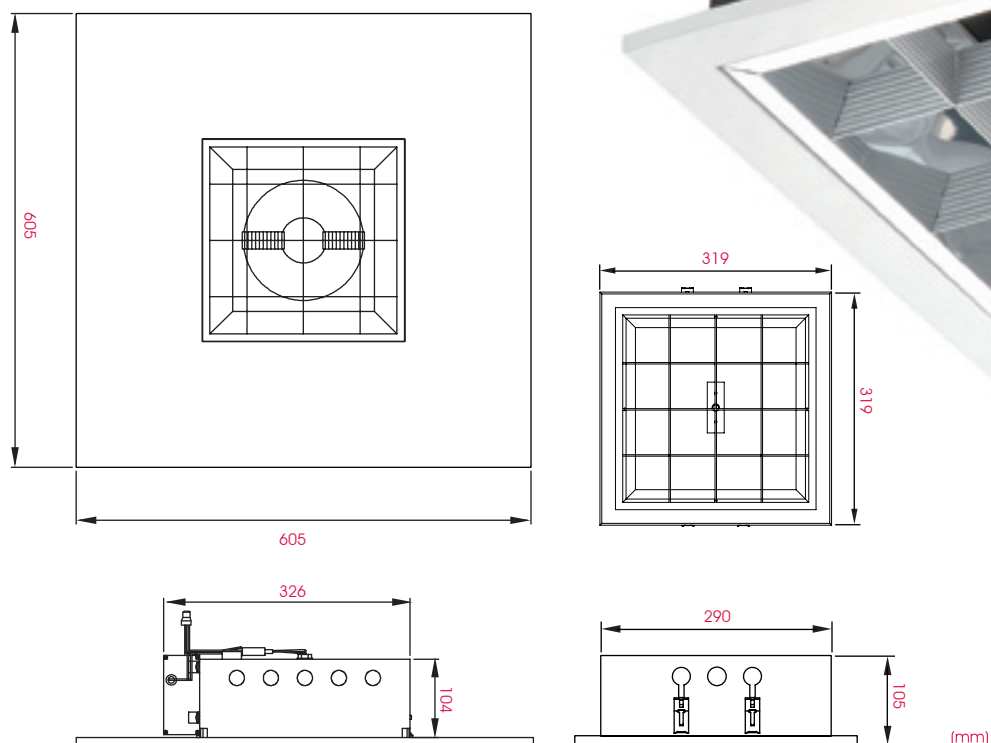
Ambient temperature for lighting fixture:

0°C ~ 40°C

Applications:

Offices, gas stations, schools, shopping malls.

Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF7-380	100W Square Tubular	50/60	120~277	0.93~0.42	20
AF7-381	150W Square Tubular			1.35~0.61	
AF9-381	100W Square Tubular			0.93~0.40	
AF9-382	120W Square Tubular			1.05~0.46	
AF9-383	150W Square Tubular			1.36~0.59	



AF8-914
AF8-915

Features:

- Electrostatic white powder paint finished iron frame for corrosion-resistance.
- Light weight and compact structure for easy maintenance.
- Customized size and mounting available upon request.

Lamps and ballasts:

40W Round tubular induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.

Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs

Ambient temperature for lighting fixture:

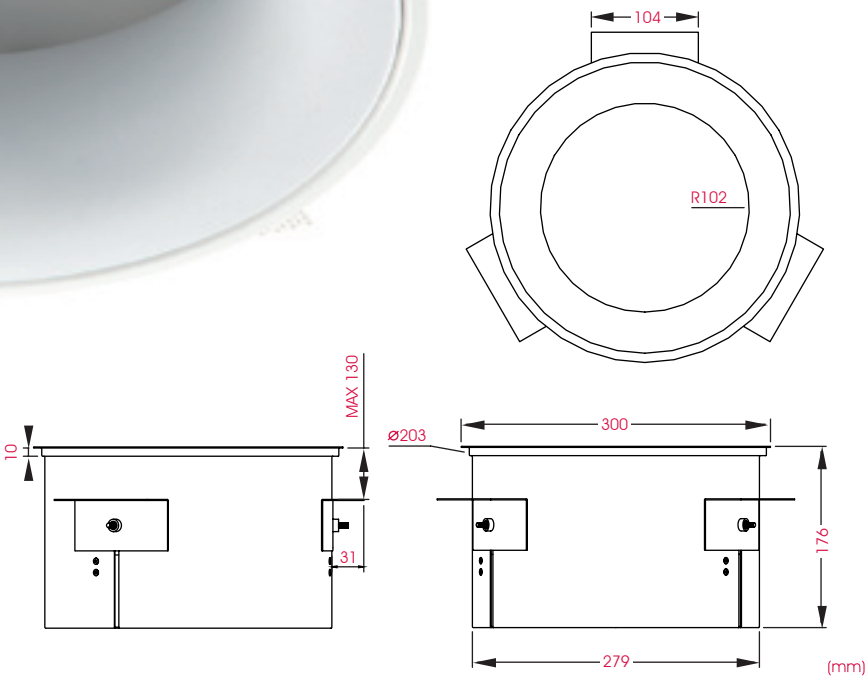
-10°C ~ 40°C

Applications:

Offices, schools, shopping malls.



Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF8-914	40W Round Tubular	50/60	120~277	0.40~0.17	20
AF8-915	40W Round Tubular (with louver)				



AF8-918



Features:

- Electrostatic white powder paint finished iron frame for corrosion-resistance.
- Light weight and compact structure for easy maintenance.
- UV stabilized polycarbonate lens fastened with clamp band.

Lamps and ballasts:

- 40W Round tubular induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.
- Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

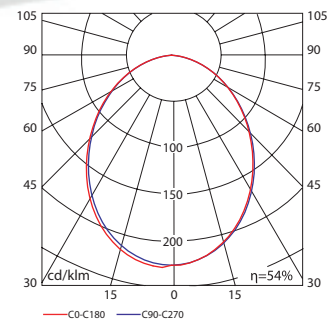
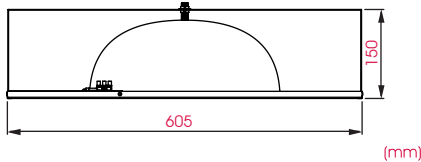
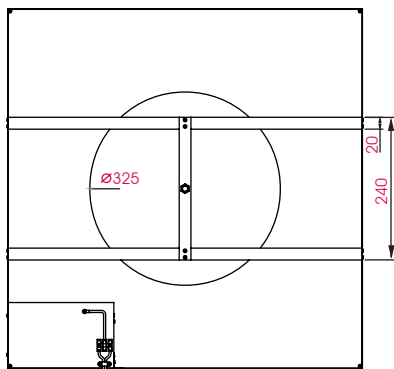
Ambient temperature for lighting fixture:

-10°C ~ 40°C

Applications:

Offices, schools, shopping malls.

Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF8-918	40W Round Tubular	50/60	120~277	0.40~0.17	20



AF8-290

AF8-290

Features:

- Electrostatic white powder paint finished iron frame for corrosion-resistance.
- Light weight and compact structure for easy maintenance.
- UV stabilized polycarbonate lens fastened with clamp band.

Lamps and ballasts:

- 40W Round tubular induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.
- Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

Ambient temperature for lighting fixture:

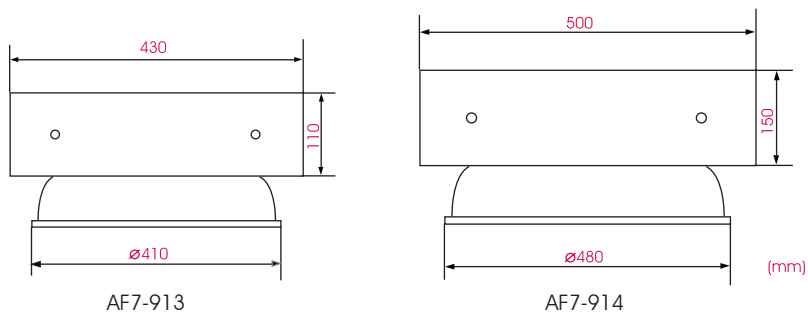
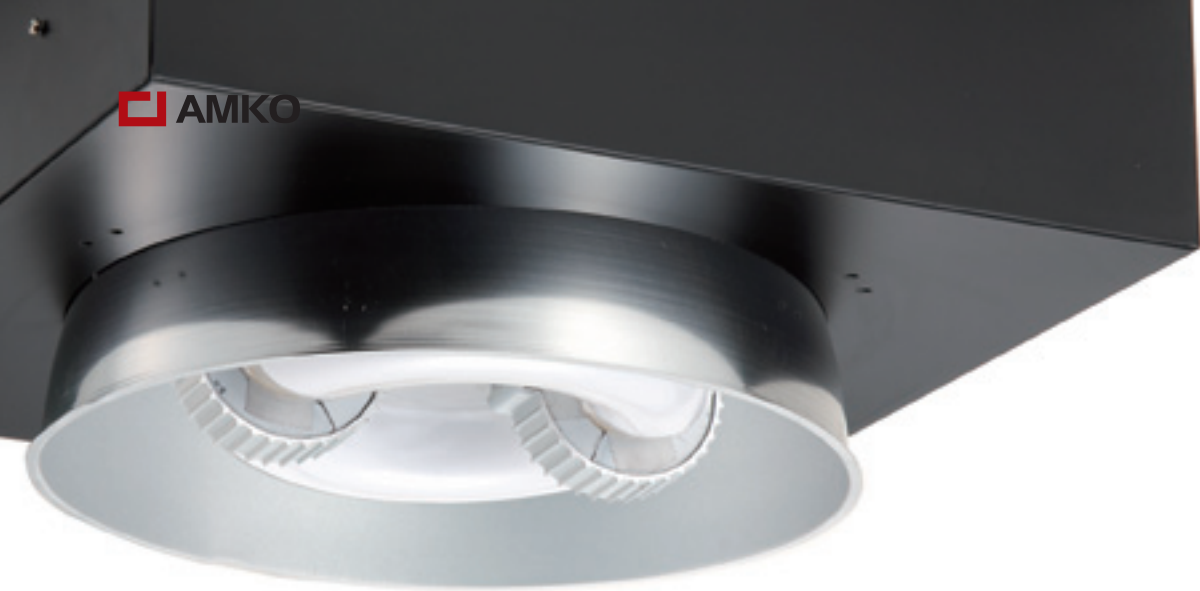
0°C ~ 40°C

Applications:

Offices, schools, shopping malls.



Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF8-290	40W Round Tubular	50/60	120~277	0.40~0.17	20

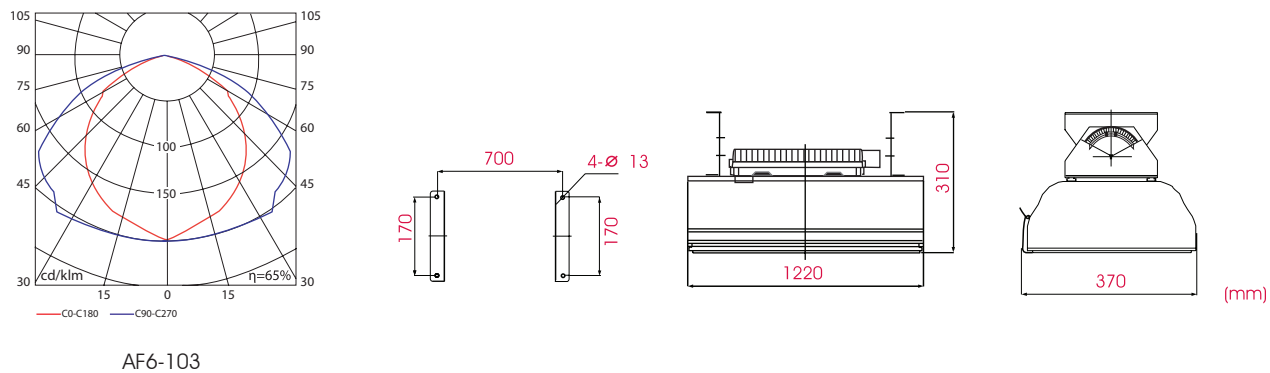


AF7-913
AF7-914



- Features:**
Sand blasted and anodized aluminum reflector with base constructed of 1.5mm gauge powder painted steel.
- Lamps and ballasts:**
100/150W Round tubular induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year. Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.
- Ambient temperature for lighting fixture:**
0°C ~ 40°C
- Applications:**
Suitable for retail space, hotels, indoor spaces.

Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF7-913	100W Round Tubular	50/60	120~277	0.93~0.42	20
AF7-914	150W Round Tubular			1.36~0.61	



Features:

Square profiled aluminum housing concealed with two extruded welding side covers for high IP rating. Anodized aluminum reflector and clear tempered glass cover are designed to optimize light distribution. Gas-tight silicon rubber seal made for wet locations.
Mounting: suspended by poles or well/surface mount.

Lamps and ballasts:

400W Square tubular induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.

Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

Ambient temperature for lighting fixture:

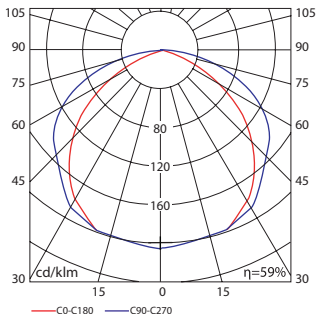
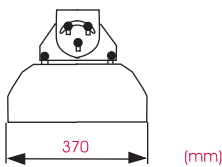
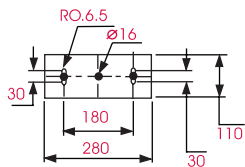
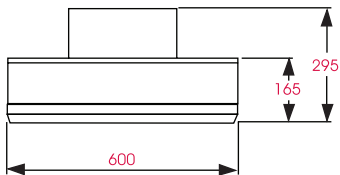
-20°C ~ 40°C

Applications:

Tunnels, bridges, highways, airports, stadiums.



Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF6-103	400W Square Tubular	50/60	120/220/277	3.54~1.60	65



AF7-120

Features:

- Tunnel luminaire with emergency lighting battery backup option.
- Square profiled aluminum housing concealed with two extruded welding side covers for high IP rating.
- Anodized aluminum reflector and clear tempered glass cover are designed to optimize light distribution.
- Gas-tight silicon rubber seal made for wet locations.
- Mounting options : suspended by poles or well/surface mount.
- Standard DC 24V battery runs for two hours with 50% lamp watt dimming during power outage.
- Dimming level and battery life can be varied upon request.

Lamps and ballasts:

- 100W Square tubular induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.
- Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

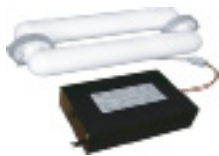
Ambient temperature for lighting fixture:

-20°C ~ 40°C

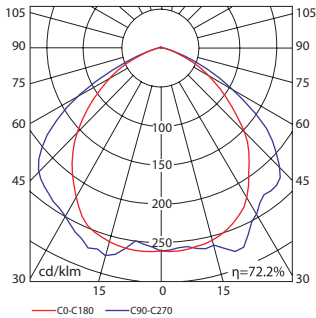
Applications:

Tunnels, bridges, highways, airports, stadiums.

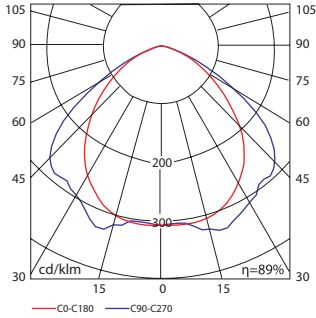
AF7-120



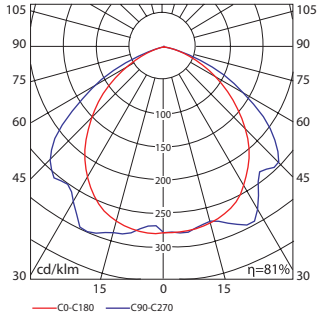
Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF7-120	100W Square Tubular	50/60	120/220/277	0.93~0.42	65



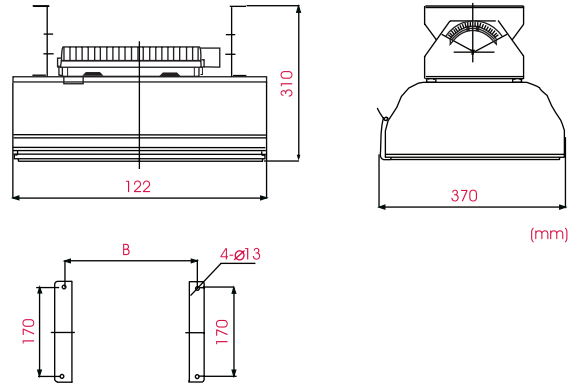
AF7-111
AF9-111



AF7-110
AF9-110



AF7-112 AF9-111
AF9-112 AF9-113
AF9-114



Features:

- Square profiled aluminum housing concealed with two extruded welding side covers for high IP rating.
- Anodized aluminum reflector and clear tempered glass cover are designed to optimize light distribution.
- Gas-tight silicon rubber seal made for wet locations.
- Mounting options : suspended by poles or well/surface mount.

Lamps and ballasts:

- 70/80/100/120/150/200/250/300W Square tubular induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.
- Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

Ambient temperature for lighting fixture:

-20°C ~ 40°C

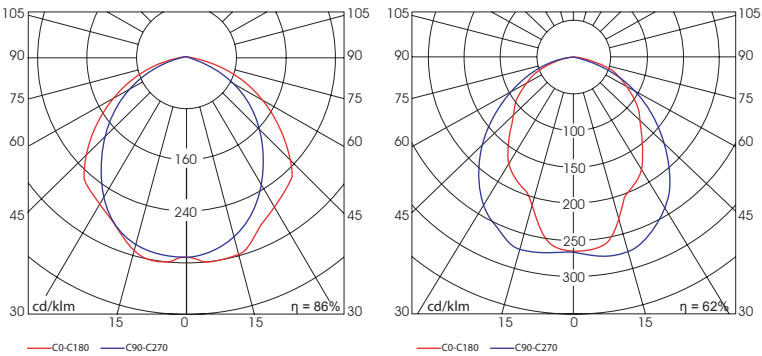
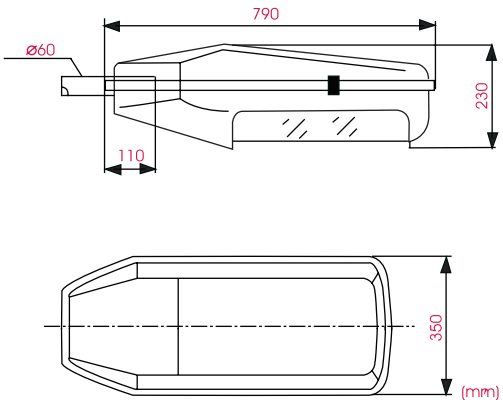
Applications:

Tunnels, bridges, highways, airports, stadiums

AF7-110
AF7-111
AF7-112
AF9-110
AF9-111
AF9-112
AF9-113
AF9-114

Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF7-110	100W Square Tubular	50/60	120/220/277	0.93~0.42	65
AF7-111	150W Square Tubular			1.35~0.61	
AF7-112	200W Square Tubular			1.77~0.80	
AF9-110	70W Square Tubular			0.62~0.27	
AF9-111	80W Square Tubular			0.70~0.32	
AF9-112	120W Square Tubular			1.05~0.46	
AF9-113	250W Square Tubular			2.19~1.05	
AF9-114	300W Square Tubular			2.63~1.20	

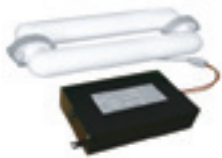




AF7-420

AF9-420

AF7-420
AF9-420
AF9-421



Features:

- High pressure die-casted aluminum alloy housing for corrosion-resistance.
- Anodized aluminum reflector with vacuum coated inner surface.
- Clear tempered glass lens with transmittance up to 90%.

Lamps and ballasts:

- 100/120/150W Square tubular induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.
- Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

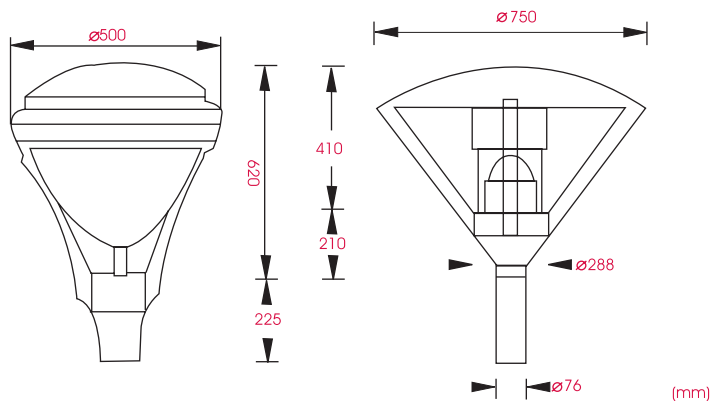
Ambient temperature for lighting fixture:

-20°C ~ 40°C

Applications:

Freeway, highway, parking lots, public entrances, off-street areas.

Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF7-420	100W Square Tubular	50/60	120-277	0.93~0.40	54
AF9-420	120W Square Tubular			1.05~0.46	
AF9-421	150W Square Tubular			1.36~0.59	



AF7-730

AF7-740

Features:

High pressure aluminum alloy housing with PET with silver powder coated finish for corrosion-resistance.
Glass options: transparent, translucent, and opalescent.

Lamps and ballasts:

85W Spherical induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.
Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

Ambient temperature for lighting fixture:

AF7-730 : -20°C ~ 40°C
AF7-740 : -15°C ~ 40°C

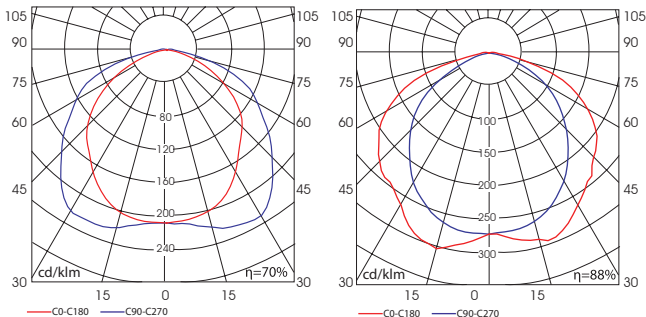
Applications:

Parks, shopping malls, outlets, plazas, outdoor open areas.

AF7-730
AF7-740
AF7-750

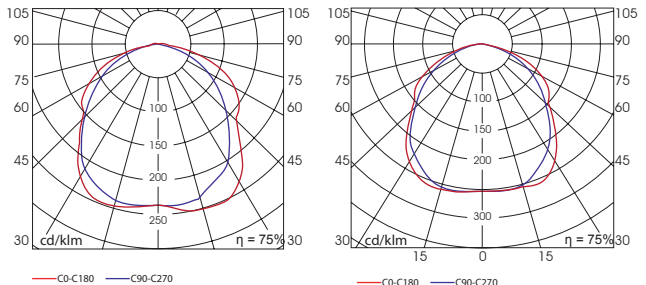


Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF7-730	85W Spherical	50/60	120/220/277	0.76~0.34	54
AF7-740					44
AF7-750					43



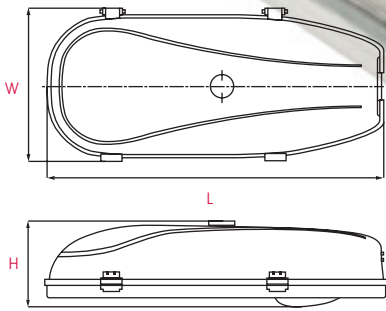
AF7-450

AF7-453



AF9-450

AF9-453



	L	W	H
AF9-450/AF9-451/AF9-452	801	368	195
AF7-450/AF7-451	1054	419	212
AF9-453/AF9-454/AF9-455	801	368	269
AF7-452/AF7-453	1054	419	307

AF7-450
AF7-451
AF7-452
AF7-453
AF9-450
AF9-451
AF9-452
AF9-453
AF9-454
AF9-455

Fixture Efficiency: >85%

Features:

High pressure die-casted aluminum alloy housing for corrosion-resistance.
All metal parts are anti-corrosion treated and electrostatic powder painted.
AF7-450/AF7-451/AF9-450/AF9-451/AF9-452: Cover constructed of polycarbonate plastic is impact resistant and resilient against high temperature and ultra-violet rays.
AF7-452/AF7-453/AF9-453/AF9-454/AF9-455: Cover constructed of tempered heat strengthened glass is impact resistant and resilient against high temperature.
Sealed with high temperature air tight silicon o-ring.

Lamps and ballasts:

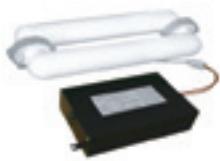
100/120/150/200/250W Square tubular induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.
Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

Ambient temperature for lighting fixture:

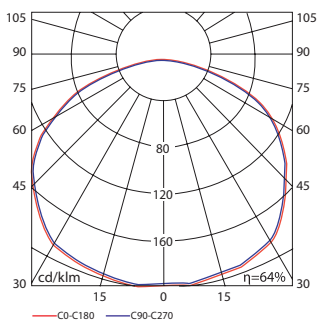
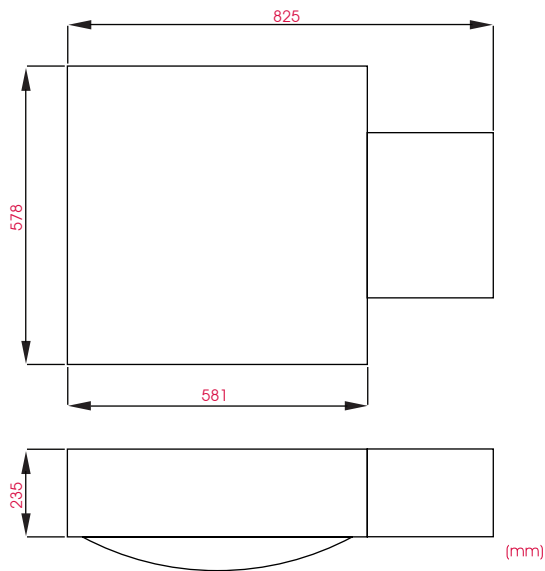
-20°C ~ 40°C

Applications:

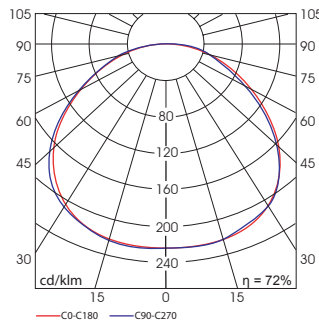
Suitable for roadside illumination under 12 meters height.



Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF7-450/AF7-452	250W Square Tubular	50/60	120~277	2.19~1.05	54
AF7-451/AF7-453	200W Square Tubular			1.79~0.77	
AF9-450/AF9-453	100W Square Tubular			0.93~0.40	
AF9-451/AF9-454	120W Square Tubular			1.05~0.46	
AF9-452/AF9-455	150W Square Tubular			1.79~0.77	



AF8-703



AF7-701

Fixture Efficiency: >80 %

Features:

- Square welded aluminum housing with powder coated finish for corrosion-resistance.
- AF7-701/AF8-703/AF9-901-clear tempered glass lens.
- AF7-702/AF9-903-stabilized and heat resistant polycarbonate lens.
- Anodized aluminum reflector with vacuum coated inner surface designed to optimize light distribution.

Lamps and ballasts:

- 200/250/300W Round Tubular induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.
- Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

Ambient temperature for lighting fixture:

-20°C ~ 40°C

Applications:

Parking lots, plazas, shopping malls, tennis courts.

AF8-703
AF7-701
AF7-702
AF9-901
AF9-903



Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF7-701	200W Round Tubular	50/60	120-277	1.79~0.77	54
AF7-702/AF9-901	250W Round Tubular			2.19~1.05	
AF8-703/AF9-903	300W Round Tubular			2.63~1.20	



AF7-750



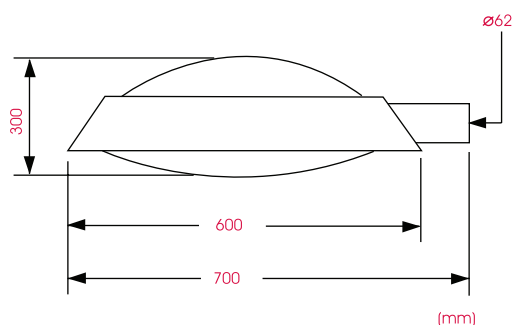
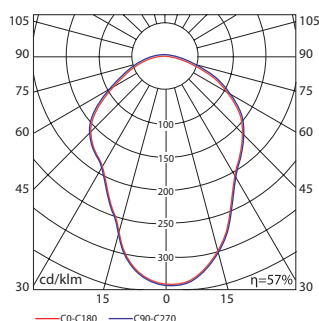
Features:
Aluminum alloy housing with green powder coated finish for corrosion-resistance.
Anodized aluminum reflector and prismatic glass lens.

Lamps and ballasts:
85W Spherical induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.
Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

Ambient temperature for lighting fixture:
-20°C ~ 40°C

Applications:
Parks, shopping malls, outlets, plazas, city halls, historic areas.

Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF7-750	85W Spherical	50/60	120/220/277	0.76~0.34	43



AF7-901

Features:

- Luminaire casing is an aluminum alloy, water resistant design.
All metal parts are anti-corrosion treated and powder painted.
Cover constructed of polycarbonate plastic is impact resistant and resilient against high temperature and ultra-violet rays.
Anti-corrosion treated and electrostatic powder painted (white).
Reflector is anodized aluminum to provide increased luminaire efficiency.

Lamps and ballasts:

- 100W/150W Round tubular induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.
- Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

Applications:

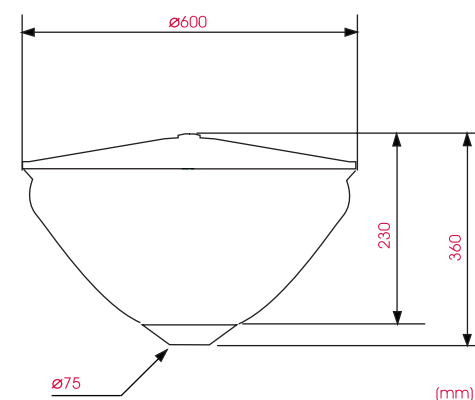
Suitable for parks, plazas, parking lots, roadside

AF7-901
AF7-902



Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF7-901	100W Round Tubular	50/60	120/220/277	0.93~0.42	65
AF7-902	150W Round Tubular			1.36~0.61	

AF7-903



Features:

Top cover constructed of 1.5mm gauge anodized aluminum, locking bolt diameter is 75mm made of die-casted aluminum.

Funnel lamp cover is made of white polycarbonate to reduce glare, also impact resistant and resilient against high temperature and ultra-violet rays.

Temperature resistant wiring is required.

Anti-corrosion treated and electrostatic powder painted (black).

Lamps and ballasts:

100W Round tubular induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.

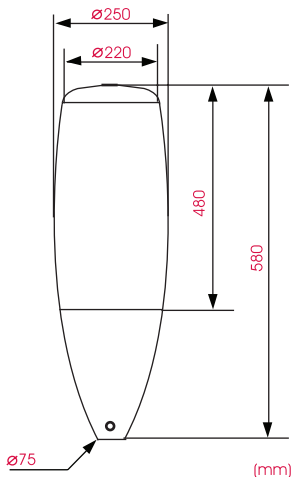
Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

Applications:

Suitable for parks, plazas, and parking lots.



Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF7-903	100W Round Tubular	50/60	120/220/277	0.93~0.42	65



Features:

Luminaire casing is constructed of pressure injection die-casted aluminum; locking bolt diameter is 75mm also made of die-casted aluminum. Cylindrical lamp cover is made of white polycarbonate to reduce glare, also impact resistant and resilient against high temperature and ultra-violet rays. Temperature resistant wiring is required. Anti-corrosion treated and electrostatic powder painted (black).

Lamps and ballasts:

85W Spherical induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year. Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

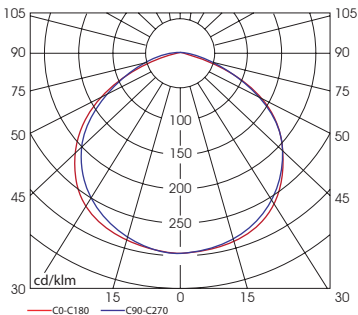
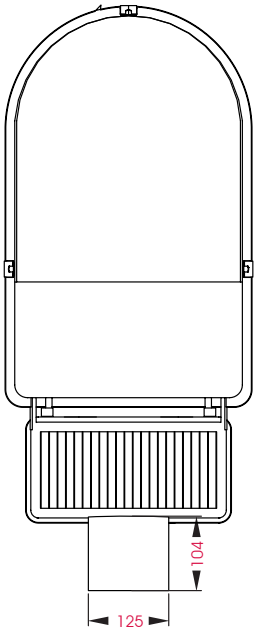
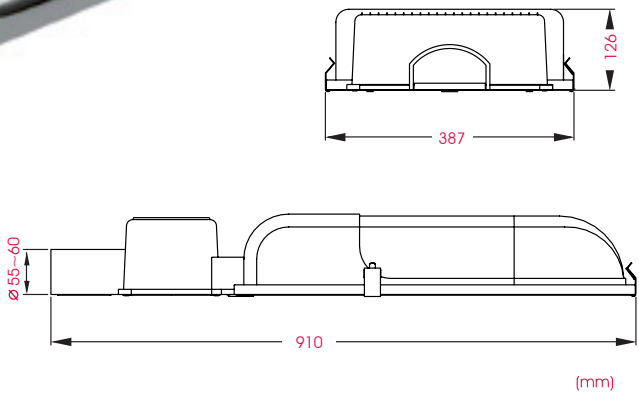
Applications:

Suitable for parks, walk paths, plazas, and parking lots.

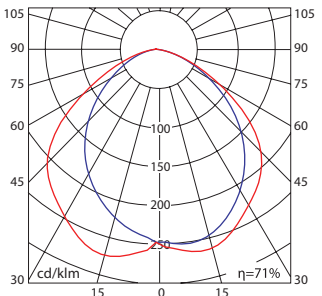
AF7-904



Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF7-904	85W Spherical	50/60	120/220/277	0.76~0.34	65

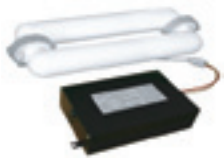


AF8-420



AF8-421

AF8-420
AF8-421
AF8-423



Fixture Efficiency: >80%

Features:

High pressure die-casted aluminum alloy housing for corrosion-resistance.
Anodized aluminum reflector and clear tempered glass cover are designed to optimize light distribution.

Lamps and ballasts:

100W/120W/150W Square tubular induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.

Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

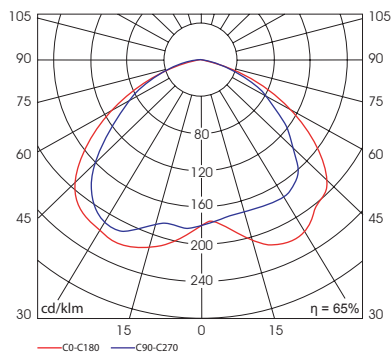
Ambient temperature for lighting fixture:

-20°C ~ 40°C

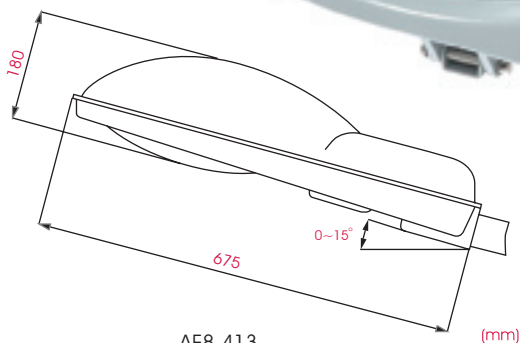
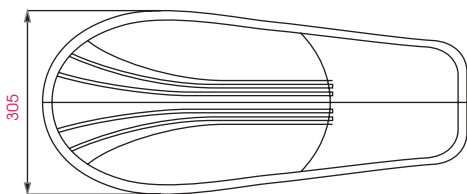
Applications:

Freeway, highway, parking lots, public entrances, off-street areas.

Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF8-420	100W Square Tubular	50/60	120~277	0.93~0.42	65
AF8-421	150W Square Tubular			1.35~0.61	
AF8-423	120W Square Tubular			1.05~0.46	



AF9-414



AF8-413



- Features:**
- High pressure die-casted aluminum alloy housing for corrosion-resistance.
 - Anodized aluminum reflector and clear tempered glass cover are designed to optimize light distribution.
- Lamps and ballasts:**
- 35/55W Spherical, 40/70/80W Round tubular induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.
 - Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.
- Ambient temperature for lighting fixture:**
- 20°C ~ 40°C

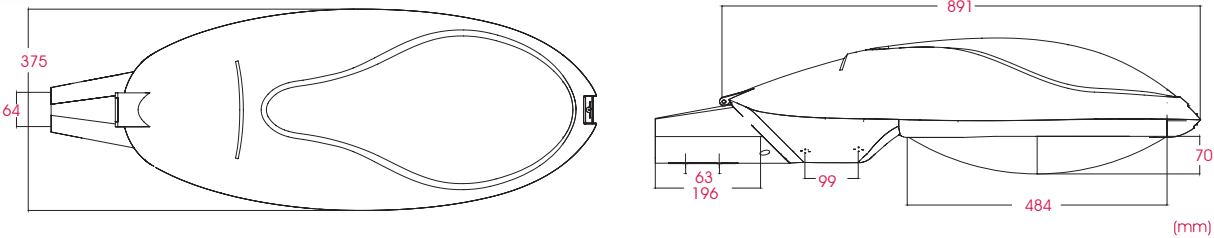
Applications:

Freeway, highway, parking lots, public entrances, off-street areas.

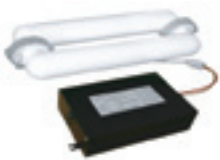
Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF8-412	55W Spherical	50/60	120~277	0.56~0.25	54
AF8-411	35W Spherical			0.31~0.14	
AF8-413	80W Round tubular			0.70~0.32	
AF9-414	40W Round tubular			0.35~0.16	
AF9-415	70W Round tubular			0.62~0.27	

AF8-412
AF8-411
AF8-413
AF9-414
AF9-415





AF9-422
AF9-427
AF9-430



Fixture Efficiency: >90%

Features:

High pressure die-casted aluminum alloy housing for corrosion-resistance.
Aluminum reflector with clear tempered glass cover are designed to optimize light distribution.

Lamps and ballasts:

100/120W/150W Square tubular induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.
Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

Ambient temperature for lighting fixture:

-20°C ~ 40°C

Applications:

Freeway, highway, parking lots, public entrances, off-street areas.

Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF9-422	100W Square Tubular	50/60	120~277	0.93~0.42	54
AF9-427	150W Square Tubular			1.35~0.61	
AF9-430	120W Square Tubular			0.73~0.31	



Fixture Efficiency: >90%

Features:

- High pressure die-casted aluminum alloy housing for corrosion-resistance.
- Aluminum reflector and clear tempered glass cover are designed to optimize light distribution.

Lamps and ballasts:

- 100/120/150W Square tubular induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.
- Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

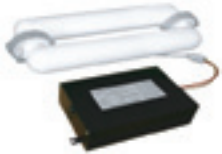
Ambient temperature for lighting fixture:

-20°C ~ 40°C

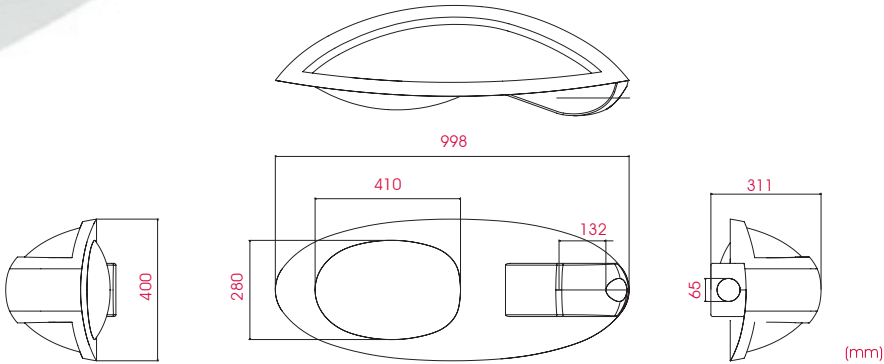
Applications:

Freeway, highway, parking lots, public entrances, off-street areas.

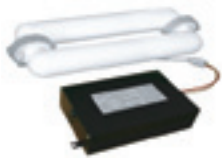
AF9-425
AF9-428
AF9-431



Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF9-425	100W Square Tubular	50/60	120~277	0.93~0.42	54
AF9-428	150W Square Tubular			1.35~0.61	
AF9-431	120W Square Tubular			0.73~0.31	



AF9-426
AF9-429



Fixture Efficiency: >90%

Features:

High pressure die-casted aluminum alloy housing for corrosion-resistance.
Aluminum reflector with clear tempered glass cover are designed to optimize light distribution.

Lamps and ballasts:

70/100W Square tubular induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.
Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

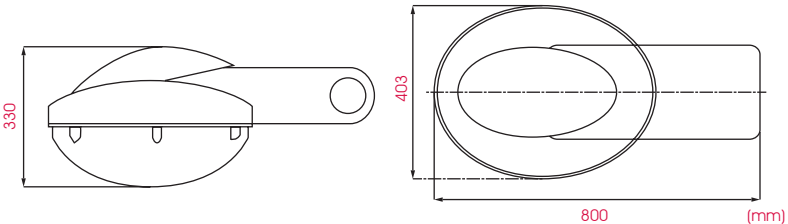
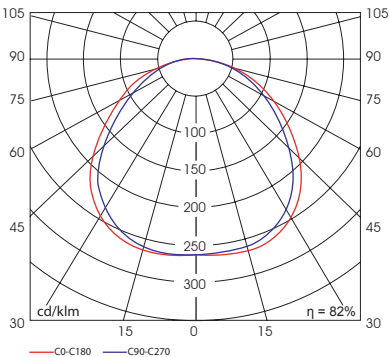
Ambient temperature for lighting fixture:

-20°C ~ 40°C

Applications:

Freeway, highway, parking lots, public entrances, off-street areas.

Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF9-426	70W Square Tubular	50/60	120~277	0.62~0.27	54
AF9-429	100W Square Tubular			0.93~0.42	

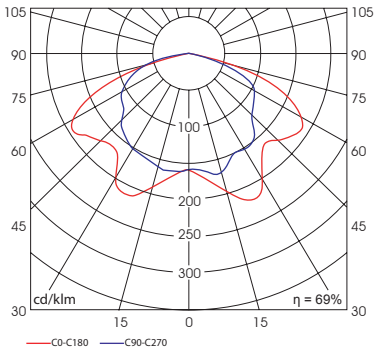


- Features:**
- High pressure die-casted aluminum alloy housing for corrosion-resistance.
 - Anodized aluminum reflector with vacuum coated inner surface.
 - Heat-resistant polycarbonate lens designed to optimize light distribution.
- Lamps and ballasts:**
- 150W Round tubular induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.
 - Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.
- Ambient temperature for lighting fixture:**
- 20°C ~ 40°C
- Applications:**
- Freeway, highway, parking lots, public entrances, off-street areas.

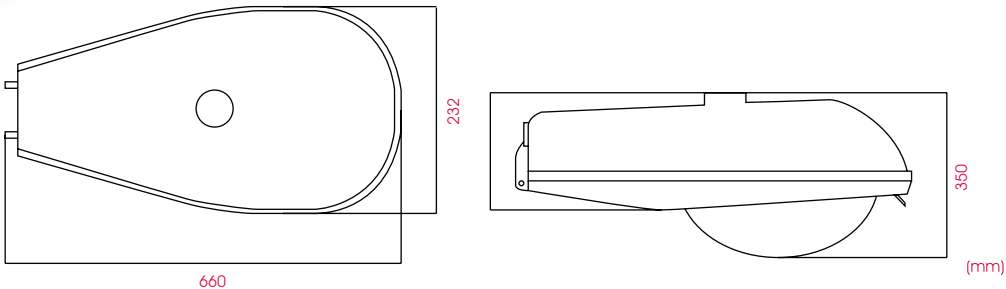
AF7-430



Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF7-430	150W Round Tubular	50/60	120~277	1.35~0.61	54



AF9-417



AF8-416
AF9-417
AF9-418



Features:

- High pressure die-casted aluminum alloy housing for corrosion-resistance.
- Curve lens made of tempered glass.
- Anodized aluminum reflector with vacuum coated inner surface.
- Heat-resistant gas-tight silicone rubber seal.
- Stainless steel screw and clamp used on housing. Ballast mounted on the front frame, easy for installation and maintenance.

Lamps and ballasts:

40/70/80W Round tubular induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.

Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

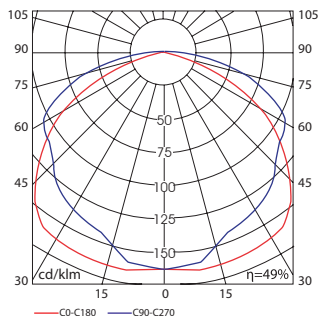
Ambient temperature for lighting fixture:

-20°C ~ 40°C

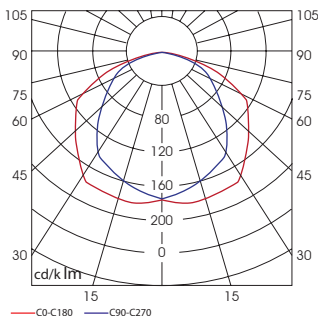
Applications:

Freeway, highway, parking lots, public entrances, off-street areas.

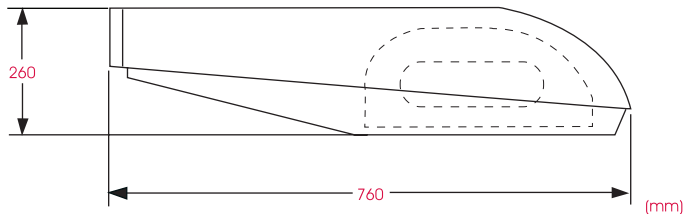
Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF8-416	40W Round Tubular	50/60	120~277	0.35~0.16	65
AF9-417	70W Round Tubular			0.62~0.27	
AF9-418	80W Round Tubular			0.70~0.32	



AF7-411



AF9-413



Features:

- High pressure die-casted aluminum alloy housing for corrosion-resistance.
- Anodized aluminum reflector and clear tempered glass lens are designed to optimize light distribution.
- Optional twist-lock photocell available upon request.

Lamps and ballasts:

- 40/70/80/100W Round tubular induction lamp with high lighting efficacy (75~90 lm/W) and lumen maintenance at 70% at 60,000 hours and rated life (IESNA) of 100,000 hours at 65%, about 12 years on burning 8000 hours per year.
- Electronic ballasts features high power factor (>0.95), flickering free, and constant output wattage, safety protection and meets FCC non-consumer requirements with low and extremely low EMI designs.

Ambient temperature for lighting fixture:

-20°C ~ 40°C

Applications:

Parking lots, public entrances, off-street areas.

AF7-410
AF7-411
AF9-412
AF9-413



Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF7-410	70W Round Tubular	50/60	120/220/277	0.63~0.29	55
AF7-411	100W Round Tubular			0.93~0.42	
AF9-412	80W Round Tubular			0.70~0.32	
AF9-413	40W Round Tubular			0.35~0.16	

Explosion-Proof Luminaire

Amko designs and manufactures high performance lighting and luminaires for specialized environments. Our specialized luminaires for hazardous atmospheres and explosion proof enclosures are designed and built to the most exacting standards, for high illumination with integrity.

Hazardous environments such as mining sites, nuclear facilities, marine outdoor locations, offshore drilling platforms, construction sites, and areas with deposits of readily combustible chemicals require lighting equipment paired with explosion proof enclosures to ensure the safety and stability of the facility.

Amko’s SOLARA induction lamps are proposed with our explosion proof fixtures for SOLARA’s energy saving and low maintenance characteristics. Induction lamp, with its long life span 60,000 hours and excellent lumen maintenance, virtually eliminates any lamp replacement for the duration of the luminaire’s service life. In addition, SOLARA induction lamp outperforms similar solutions paired with fluorescent and compact fluorescent lamps in total lumens output and efficiency.

SOLARA Lumens/Watts	>	80 lm/w, from 40W to 400W, 60,000 hours
T8 Fluorescent Lumens/Watts	>	80 lm/w, from 25W to 40W, 15,000 hours
Compact Fluorescent Lumens/Watts	<	60 lm/w, from 13W to 80W, 12,000 hours
Based on simple calculation, approx. 16% energy was saved in this new lighting system:		
Connected load for T8	=	58W/fitting x 200pcs = 11,600 watts
Connected load for SOLARA	=	100W/fitting x 100pcs = 10,000 watts

Energy saving = 1,600 watts (16%)
Lamp replacement downtime = 10 → 1 (reduced to just one major retrofitting required every 5 years)

With the optional dimmable feature, we can realize another 50% in energy consumption when the light output is lowered during vacancy, non-production hours or when the facility takes advantage of sunlight.

Dimmed load for SOLARA	=	50W/fitting x 100pcs = 5,000 watts
------------------------	---	------------------------------------

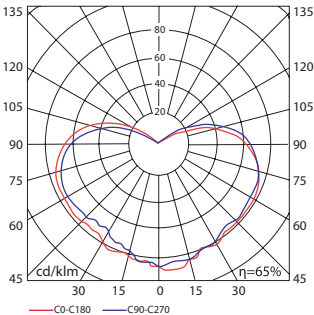
Energy saving = 5,000 watts (50%)
3 hours per day, 360 days = 5,400 kilowatt hours saved

The design of the luminaires takes into consideration illumination performance of the fixture, as well as the fixture’s effectiveness in keeping the elements away from the light source. Ruggedness and anti-corrosiveness are emphasized to ensure that the luminaires perform under the harshest conditions. Constructed of corrosion-resistant aluminum alloy, the enclosures are moisture proof as well as explosion proof. Further provided with a sealed connection, these sturdy light ports are dust and water jet resistant, even during external wash downs, providing safe, explosion-proof illumination for all around purposes.

Our specialized fixtures are designed with features such as anti-static, ultra-violet protected, streamline exteriors, structural rigidity and quality, component fit and seamlessness, and ease of installation.

SOLARA Induction Lighting Systems also comes with several dimming/controlling options and features a lifespan of 60,000 hours.





AF7-801



AF7-801



AF7-802

Features:

- Constructed of corrosion-resistant aluminum alloy
- Internal annular lips are connected integral in a reinforcing structure to allow connection of water and vapor tight conduit fittings
- Tempered heat strengthened glass cover is suitable for high temperature and explosion proof operation
- All internal plastic components are flame-resistant and retardant, certifiable to IEC695-2-2 and IEC60598-1

Specifications:

- SOLARA Induction Lighting with optional dimmable electronic ballast
- May be installed vertically or horizontally on wall and ceiling
- Available in 110V, 220V or 277V, 50/60Hz
- Dimensions (WxDxH) : 300mm x 330mm x 620mm (AF7-801)
- Dimensions (WxDxH) : 300mm x 530mm x 670mm (AF7-802)
- Explosion proof classification: D2G4/Class 1 Div. 1 Ex D II T3
- Powder painted or anodized aluminum finish
- Reflective back cover is constructed in powder painted steel
- Tempered glass cover with powder painted aluminum alloy guard
- Options include electronic dimmable ballast, fuse and holder, RF filter, individual lamp reflectors, deep V reflectors, infrared sensor controller
- EN55015, EN61547, EN61000-3-2
- Compliant to ENEC/CE/IEC regulations
- Operating temperature: -20°C ~50°C

AF7-801
AF7-802



Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF7-801	85W Spherical	50/60	110V/220V/277V	0.76~0.34	66/67
AF7-802					



AF7-803
AF7-804
AF7-805
AF7-806



Features:

- Constructed of corrosion-resistant aluminum alloy.
- Gasketed access plate with knockouts allow connection of vapor tight conduit fittings.
- Sloped surfaces on wire way cover and socket tracks allow maximum air flow
- Door frame is extruded aluminum.
- Tempered heat strengthened glass cover is suitable for high temperature and explosion proof operation.
- All internal plastic components are flame-resistant and retardant, certifiable to IEC695-2-2 and IEC60598-1.

Specifications:

- SOLARA Induction Lighting with optional dimmable electronic ballast
- Ceiling recessed installation.
- Dimensions (WxDxH) : 740mm x 540mm x 220mm (figure 1)
- Explosion proof classification: D2G4/Class 1 Div. 1
- Powder painted or anodized aluminum finish
- Tempered glass cover
- Options include emergency battery pack, electronic dimmable ballast, fuse and holder, RF filter, individual lamp reflectors, deep V reflectors, infrared sensor controller.
- EN55015, EN61547, EN61000-3-2
- Compliant to ENEC/CE/IEC regulations.
- Operating temperature: -20°C ~50°C

Type	Light Source	Supply Frequency(Hz)	Voltage(V)	Current(A)	IP
AF7-803	100W Square Tubular	50/60	120V/220V/277V	0.93~0.42	66/ 67
AF7-804	100W Round Tubular			0.93~0.42	
AF7-805	150W Square Tubular			1.35~0.61	
AF7-806	150W Round Tubular			1.35~0.61	

Cleanroom Luminaire

Amko designs and manufactures high performance lighting and luminaires for specialized environments. Our specialized luminaires for the pharmaceutical, medical and electronics markets are designed and built to the most exacting standards, for high illumination with integrity.

Cleanrooms are defined spaces in which the concentration of airborne particles is controlled to meet specific cleanliness classes. This is normally handled through positive air pressure ventilation. Thus specialized cleanroom fittings and luminaires are required to ensure no impurities could enter the laboratories and manufacturing areas and contaminate various products such as LCD panels, medicines, and semiconductors.

AMKO’s SOLARA induction lamps are proposed with our clean room fixtures for energy saving and low maintenance purposes. Induction lamp, with its long life span up to 60,000 hours and excellent lumen maintenance, reduces production downtimes which were scheduled twice a year for a full replacement of the lesser lifespan T8 fluorescent lamps.

Based on simple calculation, approx. 16% energy was saved in this new lighting system:

Connected load for T8	=	58W/fitting x 200pcs = 11,600 watts
Connected load for SOLARA	=	100W/fitting x 100pcs = 10,000 watts

Energy saving = 1,600 watts (16%)
Lamp replacement downtime = 10 → 1 (reduced to just one major retrofitting required every 5 years)

With the optional dimmable feature, we can realize another 50% in energy consumption when the light output is lowered during non-production hours or when the facility takes advantage of sunlight.

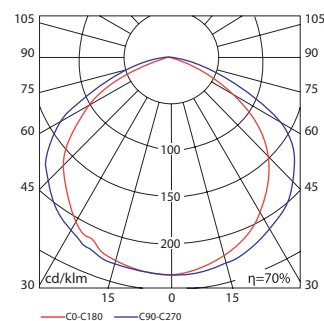
Dimmed load for SOLARA	=	50W/fitting x 100pcs = 5,000 watts
------------------------	---	------------------------------------

Energy saving = 5,000 watts (50%)
3 hours per day, 360 days = 5,400 kilowatt hours saved

The design of the luminaires takes into consideration illumination performance of the fixture, as well as the fixture’s effectiveness in promoting airflow outwards in the pressurized cleanroom. Often the major culprits in allowing outside air into the cleanroom are the lighting fixtures and the HEPA filters. Our specialized fixtures are designed with features such as anti-static, ultra-violet protected, streamline exteriors, structural rigidity and quality, component fit and seamlessness, and ease of installation.

Our recessed fixtures incorporate a lift back that opens upward for easier maintenance in cleanrooms. Paired with SOLARA Induction Lighting Systems, it comes with several dimming/controlling options and features a lifespan of 60,000 hours.

AF7-810
 AF7-811
 AF7-812
 AF7-813
 AF7-814
 AF7-815
 AF7-816
 AF7-820
 AF7-821
 AF7-822
 AF7-823
 AF7-824
 AF7-825
 AF7-826



AF7-814

Features:

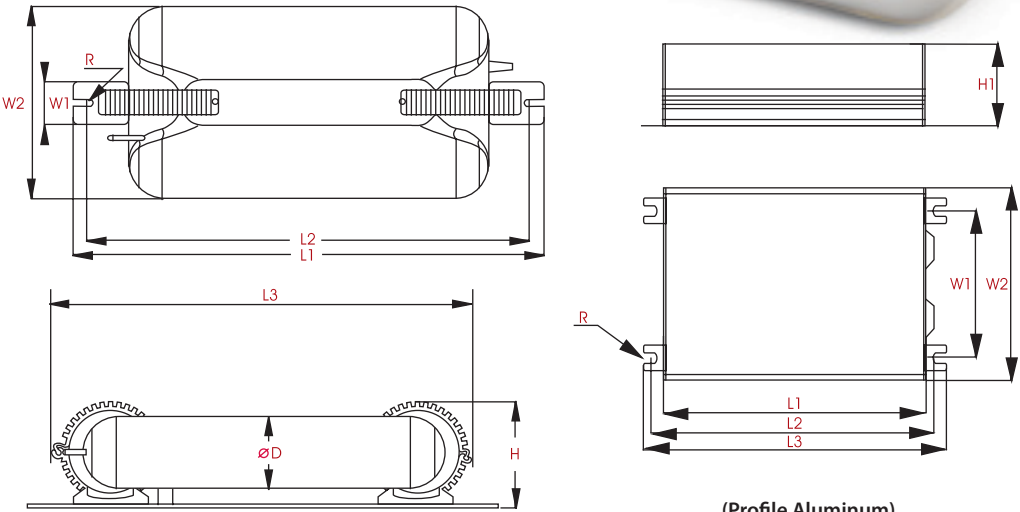
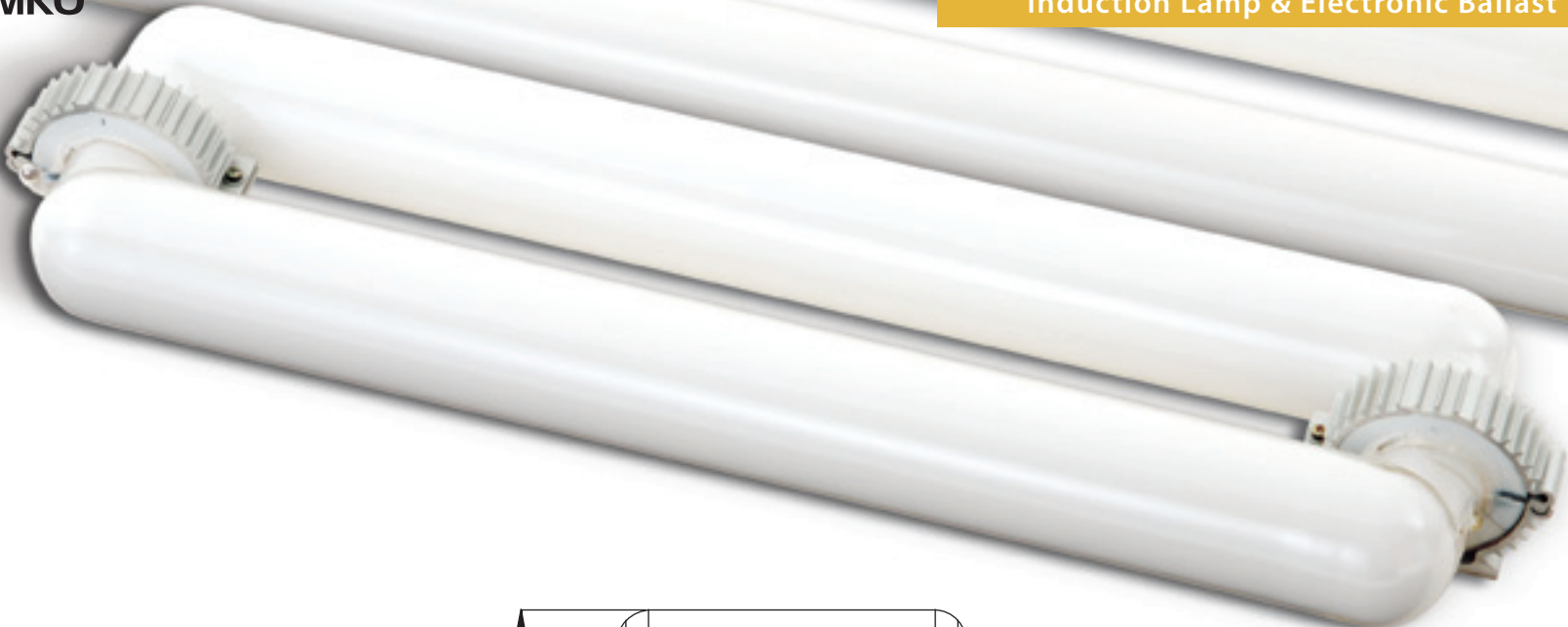
- Suitable for Class 10 (M2.5), 100 (M3.5), 1000 (M4.5), and 10,000 (M5.5)
- Constructed of corrosion-resistant aluminum alloy
- Gasketed access plate with knockouts allow connection of vapor tight conduit fittings
- Sloped surfaces on wire way cover and socket tracks allow maximum air flow
- Door frame is extruded aluminum
- All internal plastic components are flame-resistant and retardant, certifiable to IEC695-2-2 and IEC60598-1

Specifications:

- Cleanroom fluorescent
- Lift back design
- Explosion Proof Classification:D2G4/Class 1 Div. 1
- Powder painted or anodized aluminum finish
- Options include emergency battery pack, electronic dimmable ballast, fuse and holder, RF filter, individual lamp reflectors, deep V reflectors
- EN55015, EN61547, EN61000-3-2
- Compliant to ENEC/CE/IEC regulations
- Dimensions (WxDxH):
- AF7-810/AF7-811/AF7-812/AF7-813/AF7-814/AF7-815 : 702mm×542mm×101mm
- AF7-820/AF7-821/AF7-822/AF7-823/AF7-824/AF7-825 : 742mm×542mm×172mm
- AF7-816 : 1320mm×542mm×101mm
- AF7-826 : 1360mm×542mm×172mm



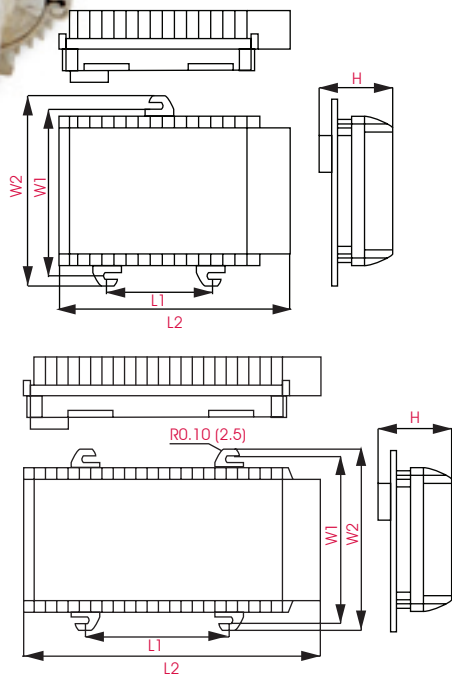
Type	Light Source	Supply Frequency(Hz)	Voltage (V)	Current (A)	IP
AF7-810/ AF7-820	100W Square Tubular	50/60	120V/220V/277V	0.93~0.42	66/67
AF7-811/ AF7-821	100W Round Tubular			0.93~0.42	
AF7-812/ AF7-822	150W Square Tubular			1.35~0.61	
AF7-813/ AF7-823	150W Round Tubular			1.35~0.61	
AF7-814/ AF7-824	200W Square Tubular			1.77~0.80	
AF7-815/ AF7-825	200W Round Tubular			1.77~0.80	
AF7-816/ AF7-826	400W Square Tubular			3.54~1.60	



(Profile Aluminum)

SQUARE TUBULAR

Item	Wattage (W)	Lamp input Operating Frequency (KHz)	Luminance (Lm)	Efficacy (Lm/W)	CRI (Ra)	Color Temperature (K)	Voltage (VAC)	Current (A)	Frequency (Hz)	Power Factor	THD	Input Power (W)	Case Temperature (°C)
Square Tubular	70	250	4900-5250	70-75	≤ 80	3000 4000 5000	120 220 277	0.62~0.27	50/60	>0.95	≤ 10%	74	<65
	80		6000-6400	70-75				0.70~0.32				84	
	100		7500-8000	75-80				0.93~0.40				105	
	120		9000-9600	75-80				1.05~0.46				126	
	150		11250-12000	75-80				1.36~0.59				158	
	200		16000-17000	80-85				1.79~0.77				210	
	250		21250-22500	85-90				2.19~1.05				263	
	300		25500-27000	85-90				2.63~1.20				315	
	400		34000-36000	85-90				3.50~1.52				420	



(Die-casted Aluminum)

Electronic Ballast Dimensions (Die-casted Aluminum)

Unit:in.(mm)

Wattage (W)	L1	L2	W1	W2	H1
70	4.17(106)	9.21(234)	6.67(169.5)	7.46(189.5)	2.97(75.5)
80	4.17(106)	9.21(234)	6.67(169.5)	7.46(189.5)	2.97(75.5)
100	4.17(106)	9.21(234)	6.67(169.5)	7.46(189.5)	2.97(75.5)
120	4.17(106)	9.21(234)	6.67(169.5)	7.46(189.5)	2.97(75.5)
150	4.17(106)	9.21(234)	6.67(169.5)	7.46(189.5)	2.97(75.5)
200	4.17(106)	9.21(234)	6.67(169.5)	7.46(189.5)	2.97(75.5)
200	5.91(150)	12.56(319)	6.67(169.5)	7.46(189.5)	2.97(75.5)
250	5.91(150)	12.56(319)	6.67(169.5)	7.46(189.5)	2.97(75.5)
300	5.91(150)	12.56(319)	6.67(169.5)	7.46(189.5)	2.97(75.5)
400	5.91(150)	12.56(319)	6.67(169.5)	7.46(189.5)	2.97(75.5)

Electronic Ballast Dimensions (Profile Aluminum)

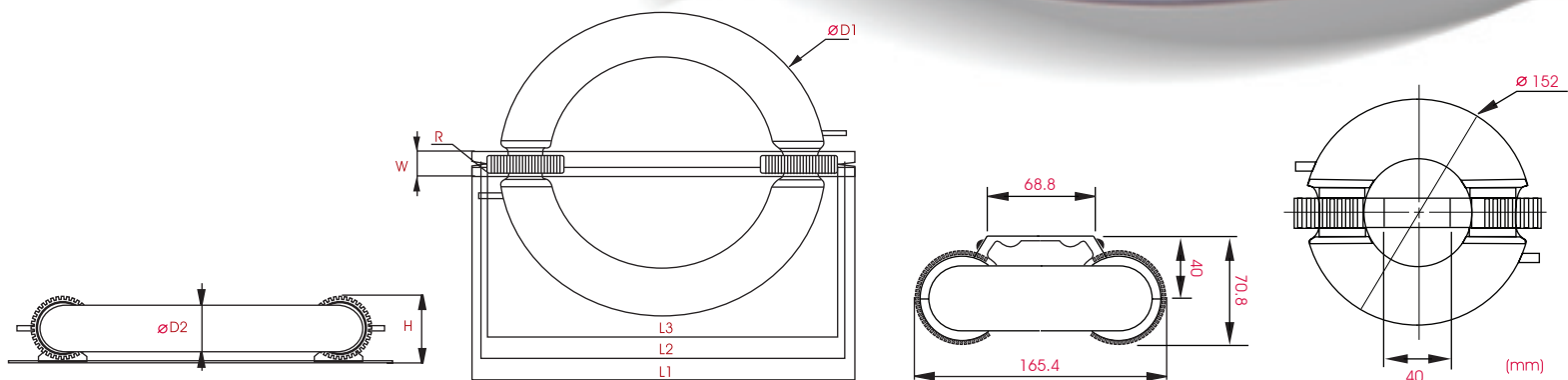
Unit:in.(mm)

Wattage (W)	L1	L2	L3	W1	W2	R	H1
70	6.19(157.3)	6.63(168.3)	6.98(177.3)	2.38(60.5)	4.11(104.5)	0.10(25)	1.89(48)
80	6.19(157.3)	6.63(168.3)	6.98(177.3)	2.38(60.5)	4.11(104.5)	0.10(25)	1.89(48)
100	6.19(157.3)	6.63(168.3)	6.98(177.3)	2.38(60.5)	4.11(104.5)	0.10(25)	1.89(48)
120	7.44(189)	7.91(201)	8.39(213)	2.76(70)	4.72(120)	0.10(25)	2.09(53)
150	7.44(189)	7.91(201)	8.39(213)	2.76(70)	4.72(120)	0.10(25)	2.09(53)
200	7.44(189)	7.91(201)	8.39(213)	2.76(70)	4.72(120)	0.10(25)	2.09(53)

Induction Lamp Dimensions

Unit:in.(mm)

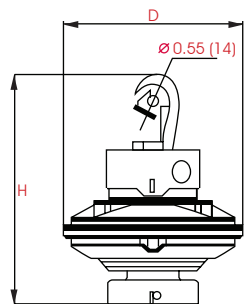
	Dim	70W	100W	120W	150W	200W	250W	300W	400W
Tube Diameter	D	2.13(54)	2.13(54)	2.13(54)	2.13(54)	2.13(54)	2.13(54)	2.13(54)	2.13(54)
Lamp Width	W	5.51(140)	5.51(140)	5.51(140)	5.51(140)	5.51(140)	6.22(158)	6.22(158)	6.22(158)
Lamp Length	L	9.84(250)	11.81(300)	13.39(340)	15.35(390)	21.65(550)	26.77(680)	31.50(800)	41.30(1049)
Mounting Holes Spacing	S	4.69(119)	6.65(169)	8.23(209)	10.28(261)	16.50(419)	21.61(549)	26.34(669)	36.18(919)



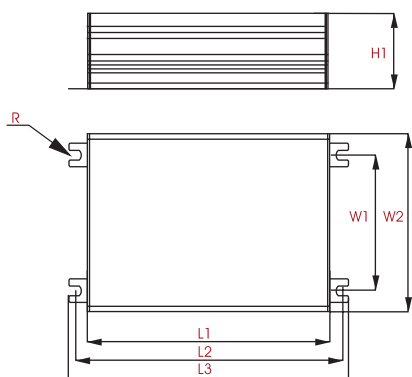
40W ROUND TUBULAR

ROUND TUBULAR

Item	Wattage (W)	Lamp Input Operating Frequency (KHz)	Luminance (Lm)	Efficacy (Lm/W)	CRI (Ra)	Color Temperature (K)	Voltage (VAC)	Current (A)	Frequency (Hz)	Power Factor	THD	Input Power (W)	Case Temperature (°C)
Round Tubular	40	250	2600-2800	65-70	≥ 80	3000 4000 5000	120 220 277	0.35~0.16	50/60	>0.95	≤ 10%	42	<65
	70		4900-5250	70-75				0.62~0.27				74	
	80		5600-6000	70-75				0.70~0.32				84	
	100		7500-8000	75-80				0.88~0.41				105	
	120		9000-9600	75-80				1.05~0.46				126	
	150		11250-12000	75-80				1.36~0.59				158	
	200		16000-17000	80-85				1.79~0.77				210	
	250		21250-22500	85-90				2.19~1.05				263	
	300		25500-27000	85-90				2.63~1.20				315	



(Die-casted Aluminum)



(Profile Aluminum)

Electronic Ballast Dimensions
(Die-casted Aluminum)

Unit:in.(mm)

Wattage(W)	H	D
40	8.11(206)	6.54(166)
55	8.11(206)	6.54(166)
70	8.74(222)	8.07(205)
85	8.74(222)	8.07(205)
80	8.74(222)	8.07(205)
100	8.74(222)	8.07(205)
120	8.74(222)	8.07(205)
150	9.84(250)	9.61(244)
200	9.84(250)	9.61(244)
250	10.24(260)	11.02(280)
300	10.24(260)	11.02(280)

Electronic Ballast Dimensions (Profile Aluminum)

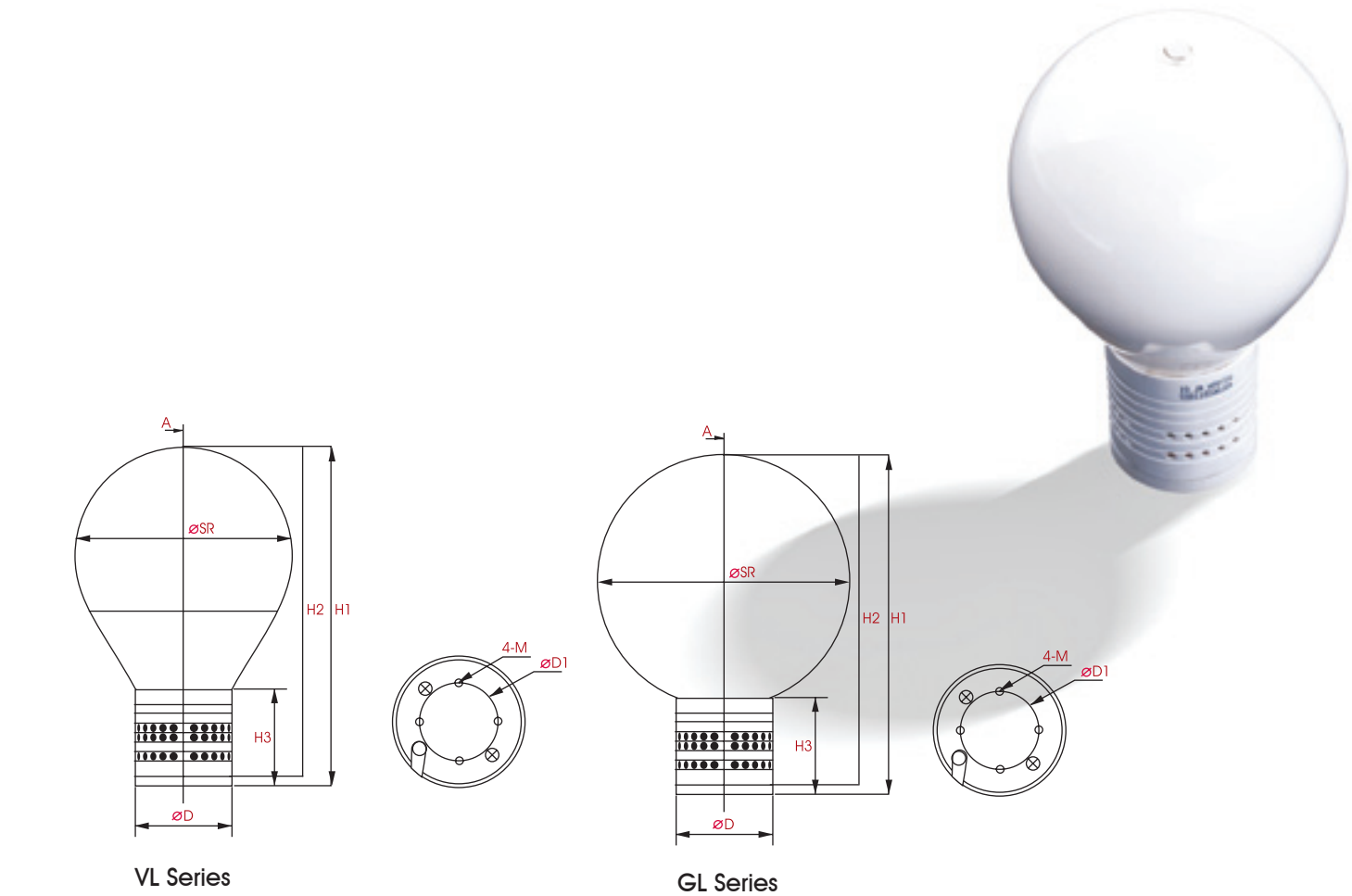
Unit:in.(mm)

Wattage (W)	L1	L2	L3	W1	W2	R	H1
40	4.84(123)	5.28(134)	5.63(143)	2.76(70)	3.66(93)	0.10(25)	1.57(40)
70	6.19(157.3)	6.63(168.3)	6.98(177.3)	2.38(60.5)	4.11(104.5)	0.10(25)	1.89(48)
80	6.19(157.3)	6.63(168.3)	6.98(177.3)	2.38(60.5)	4.11(104.5)	0.10(25)	1.89(48)
100	6.19(157.3)	6.63(168.3)	6.98(177.3)	2.38(60.5)	4.11(104.5)	0.10(25)	1.89(48)
120	7.44(189)	7.91(201)	8.39(213)	2.76(70)	4.72(120)	0.10(25)	2.09(53)
150	7.44(189)	7.91(201)	8.39(213)	2.76(70)	4.72(120)	0.10(25)	2.09(53)
200	7.44(189)	7.91(201)	8.39(213)	2.76(70)	4.72(120)	0.10(25)	2.09(53)

Induction Lamp Dimensions

Unit:in.(mm)

	Dim	70W/80W	100W	120W	150W	200W	250W	300W
Tube Diameter	D1	2.13(54)	2.13(54)	2.13(54)	2.13(54)	2.13(54)	2.28(58)	2.28(58)
Lamp Width	D2	7.09(180)	8.54(217)	9.80(249)	11.57(294)	13.94(354)	14.84(377)	17.36(441)
Lamp Length	L	8.03(204)	9.65(245)	10.87(276)	12.68(322)	15.16(385)	15.94(405)	18.31(465)
Mounting Holes Spacing	S	2.91(74)	4.45(113)	5.75(146)	7.56(192)	9.96(253)	10.75(273)	13.20(335)

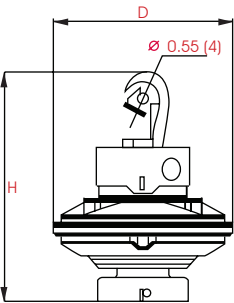


SPHERICAL: GL Series

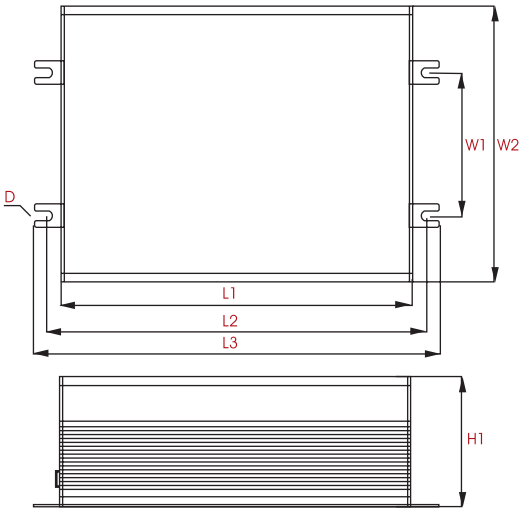
Item	Wattage (W)	Lamp Input Operating Frequency (KHz)	Luminance (Lm)	Efficacy (Lm/W)	CRI (Ra)	Color Temperature (K)	Voltage (VAC)	Current (A)	Frequency (Hz)	Power Factor	THD	Input Power (W)	Case Temperature (°C)
Spherical	165	250	11550-12375	70-75	≤ 80	3000 4000 5000	120 220 277	1.46~0.67	50/60	>0.95	$\leq 10\%$	173	<65
	200		14000-15000					1.76~0.80				210	
	250		17500-18750					2.3~1				263	

SPHERICAL: VL Series

Item	Wattage (W)	Lamp Input Operating Frequency (KHz)	Luminance (Lm)	Efficacy (Lm/W)	CRI (Ra)	Color Temperature (K)	Voltage (VAC)	Current (A)	Frequency (Hz)	Power Factor	THD	Input Power (W)	Case Temperature (°C)
Spherical	165	250	11550-12375	70-75	≤ 80	3000 4000 5000	120 220 277	1.46~0.67	50/60	>0.95	$\leq 10\%$	173	<65
	200		14000-15000					1.76~0.80				210	



(Die-casted Aluminum)



(Profile Aluminum)

Induction Lamp Dimensions

Wattage (W)	D	L
165	Φ5.91(150)	8.58(218)
200	Φ6.30(160)	8.98(228)
250	Φ6.69(170)	9.37(238)

Electronic Ballast Dimensions
(Die-casted Aluminum)

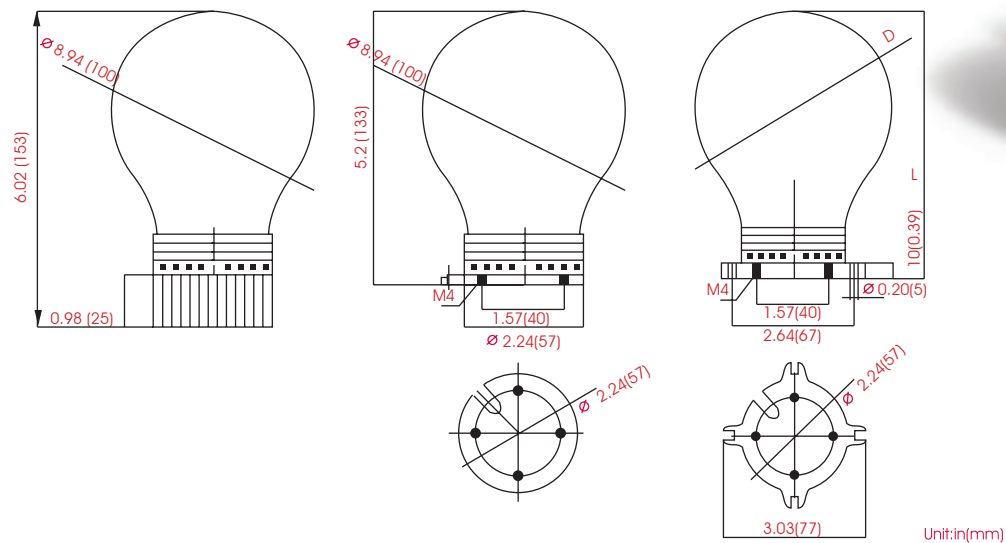
Unit:in.(mm)

Wattage (W)	H	D
165	9.84(250)	9.61(244)
200	9.84(250)	9.61(244)
250	9.84(250)	9.61(244)

Electronic Ballast Dimensions (Profile Aluminum)

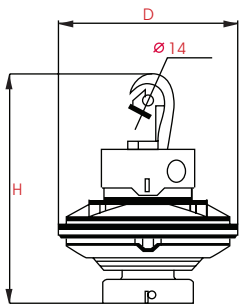
Unit:in.(mm)

Wattage (W)	L1	L2	L3	W1	W2	R	H1
165	7.44(189)	7.92(201)	8.39(213)	2.76(70)	4.73(120)	0.10(2.5)	2.09(53)

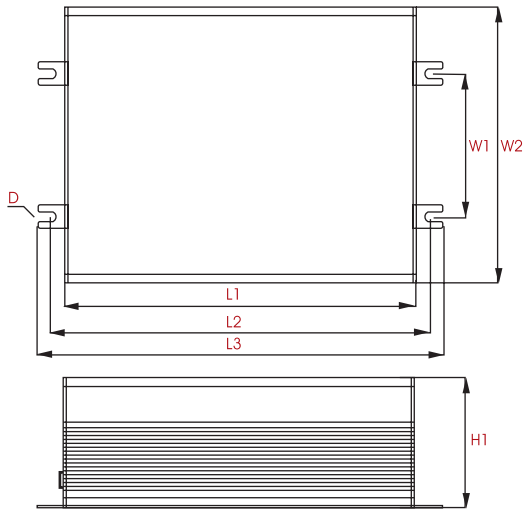


SPHERICAL: CL Series

Item	Wattage (W)	Lamp Input Operating Frequency (KHz)	Luminance (lm)	Efficacy (lm/W)	CRI (Ra)	Color Temperature (K)	Voltage (VAC)	Current (A)	Frequency (Hz)	Power Factor	THD	Input Power (W)	Case Temperature (°C)
Spherical	35	250	2450-2625	70-75	≤ 80	3000 4000 5000	120 220 277	0.31~0.14	50/60	>0.95	≤ 10%	37	<65
	55		4125-4380	75-80				0.49~0.21				58	
	85		6375-6800	75-80				0.73~0.31				89	
	100		7500-8000	75-80				0.88~0.41				105	
	120		9000-9600	75-80				1.11~0.48				126	



(Die-casted Aluminum)



(Profile Aluminum)

Induction Lamp Dimensions

Wattage (W)	D	L
55/85	Φ4.33(110)	6.02(153)
100/120	Φ5.12(130)	7.09(180)

Electronic Ballast Dimensions
(Die-casted Aluminum)

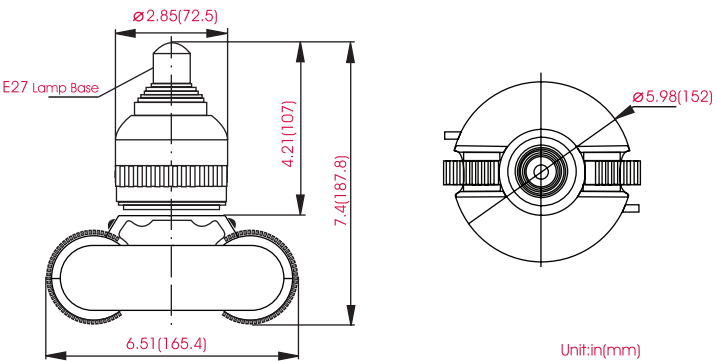
Unit:in.(mm)

Wattage (W)	H	D
35	8.11(206)	6.54(166)
55	8.11(206)	6.54(166)
85	8.74(222)	8.07(205)
100	8.74(222)	8.07(205)
120	8.74(222)	8.07(205)

Electronic Ballast Dimensions (Profile Aluminum)

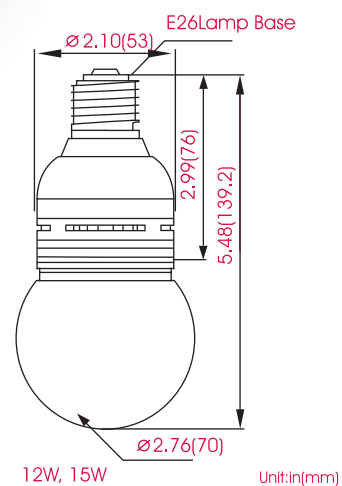
Unit:in.(mm)

Wattage (W)	L1	L2	L3	W1	W2	R	H1
35	4.84(123)	5.28(134)	5.63(143)	2.76(70)	3.66(93)	0.10(2.5)	1.57(40)
55	4.84(123)	5.28(134)	5.63(143)	2.76(70)	3.66(93)	0.10(2.5)	1.57(40)
85	6.19(157.3)	6.63(168.3)	6.98(177.3)	2.38(60.5)	4.11(104.5)	0.10(2.5)	1.89(48)
100	6.19(157.3)	6.63(168.3)	6.98(177.3)	2.38(60.5)	4.11(104.5)	0.10(2.5)	1.89(48)
120	7.44(189)	7.92(201)	8.39(213)	2.76(70)	4.73(120)	0.10(2.5)	2.09(53)



ROUND TUBULAR SELF-BALLASTED

Item	Wattage (W)	Lamp input Operating Frequency (KHz)	Luminance (lm)	Efficacy (lm/W)	CRI (Ra)	Color Temperature (K)	Voltage (VAC)	Current (A)	Frequency (Hz)	Power Factor	THD	Input Power (W)	Case Temperature (°C)
Round Tubular Self-Ballasted	40	250	2400	60 ~ 65	≥ 80	3000 4000 5000	120 220	0.63~0.29	50/60	> 0.6	≤ 10%	55	< 65



SPHERICAL SELF-BALLASTED

Item	Wattage (W)	Lamp input Operating Frequency (KHz)	Luminance (Lm)	Efficacy (Lm/W)	CRI (Ra)	Color Temperature (K)	Voltage (VAC)	Current (A)	Frequency (Hz)	Power Factor	Case Temperature (°C)
ALB712	12	450	720	60	≥ 80	4000 5000	120 220	0.20~0.16	50/60	> 0.5	< 65
ALB715	15		900					0.25~0.18			

Installation

Amko operates a policy of continuous development. Amko reserves the right to make changes and improvements to any of the products described in this document without prior notice.

Under no circumstances shall Amko be responsible for any loss of income or any special incidental, consequential or indirect damages howsoever caused.

The contents of this document are provided "as is." Except as required by applicable law, no warranties of any kind, either express or implied, including but not limited to, the implied warranties of merchantability and fitness for a particular purpose, are made in relation to the accuracy, reliability or contents of this document. Amko reserves the right to revise this document or withdraw it at any time without prior notice.

For your safety

Switch on and off safely - Do not unplug any component of the unit without properly disconnecting the ballast from the power outlet first. Make sure the unit is grounded.

Use only Amko SOLARA components - SOLARA Induction Lighting Systems are designed specifically to work with each component of the system. Please do not use any outside components or enhancements with the system to prevent damage to the unit.

Dimmable ballasts - Our dimmable ballasts and dimmers are designed specifically to work with SOLARA Induction Lighting Systems. Do not use any unapproved or incompatible components or enhancements with the lighting system.

Use sensibly - Use only in the normal circumstances and environments that is clean with good ventilation. Do not use near fuel or chemicals. The key to the long service life of induction lighting systems is proper heat dissipation, and it should be observed when installing the unit. The average surface temperature of the lamp may reach temperatures from 60°C(140°F) up to 75°C(165°F), while the surface temperature of the ballast may reach up to 60°C(140°F). The heat sinks and brackets may be hot spots with higher temperature. Allow the unit to cool down before handling.

Water resistance - Your unit is not water resistant. Keep it dry. Fixtures IP 65 ratings or higher can prevent your unit from getting wet.

Installation Tips

When installing the lamp unit, please check to make sure that the bent mercury reservoir is not pointing upwards. The maximum allowance for an angled installation is 45 degrees. Do not expose the lamp to temperatures greater than 110°C(230°F) and the electro magnets (transformers) to greater than 120°C(248°F). Lamps to be installed in temperatures less than -20°C(-4°F) requires special customization to the unit from the manufacturer, and should be specified before ordering/ purchasing the unit. Handle the lamps with care - the glass is fragile. Use gloves if necessary.

When installing the electronic ballast, please ensure that the placement of the ballast will not expose the ballast to temperatures greater than 65°C(150°F) or it will degrade the service lifespan of the unit. The ballast is designed to accommodate ±10% of voltage irregularity.

Only qualified personnel in your country (certified electrician) may install or repair this product.

If you are installing the unit to a fixture that is not provided by AMKO, please consult with our technical personnel for installation advice and suggestions.

Item	Page	Item	Page	Item	Page	Item	Page
AF6-103	51	AF7-520	42	AF8-420	62	AF9-242	34
AF6-111	38	AF7-521	42	AF8-421	62	AF9-243	37
AF6-112	39	AF7-701	57	AF8-423	62	AF9-310	43
AF6-120	29	AF7-702	57	AF8-703	57	AF9-311	43
AF6-122	30	AF7-730	55	AF8-914	47	AF9-381	46
AF6-124	44	AF7-740	55	AF8-915	47	AF9-382	46
AF6-125	28	AF7-750	58	AF8-918	48	AF9-383	46
AF6-126	29	AF7-801	71	AF9-110	53	AF9-412	69
AF6-127	30	AF7-802	71	AF9-111	53	AF9-413	69
AF6-128	29	AF7-803	72	AF9-112	53	AF9-414	63
AF6-129	30	AF7-804	72	AF9-113	53	AF9-415	63
AF6-130	40	AF7-805	72	AF9-114	53	AF9-417	68
AF6-133	41	AF7-806	72	AF9-126	29	AF9-418	68
AF7-110	53	AF7-810	74	AF9-127	29	AF9-420	54
AF7-111	53	AF7-811	74	AF9-128	29	AF9-421	54
AF7-112	53	AF7-812	74	AF9-129	29	AF9-422	64
AF7-120	52	AF7-813	74	AF9-130	30	AF9-425	65
AF7-133	41	AF7-814	74	AF9-131	30	AF9-426	66
AF7-210	33	AF7-815	74	AF9-132	30	AF9-427	64
AF7-211	32	AF7-816	74	AF9-134	41	AF9-428	65
AF7-212	32	AF7-820	74	AF9-135	41	AF9-429	66
AF7-220	31	AF7-821	74	AF9-136	40	AF9-430	64
AF7-221	31	AF7-822	74	AF9-210	33	AF9-431	65
AF7-222	31	AF7-823	74	AF9-211	33	AF9-450	56
AF7-240	34	AF7-824	74	AF9-212	33	AF9-451	56
AF7-241	34	AF7-825	74	AF9-213	33	AF9-452	56
AF7-242	34	AF7-826	74	AF9-214	33	AF9-453	56
AF7-361	45	AF7-901	59	AF9-215	32	AF9-454	56
AF7-362	45	AF7-902	59	AF9-216	32	AF9-455	56
AF7-370	35	AF7-903	60	AF9-217	32	AF9-901	57
AF7-380	46	AF7-904	61	AF9-218	32	AF9-903	57
AF7-381	46	AF7-913	50	AF9-219	36		
AF7-410	69	AF7-914	50	AF9-220	36	Square Tubular	76
AF7-411	69	AF8-130	40	AF9-221	36	Round Tubular	78
AF7-420	54	AF8-131	40	AF9-222	36	Spherical-GL Series	80
AF7-430	67	AF8-213	36	AF9-223	36	Spherical-VL Series	80
AF7-450	56	AF8-243	37	AF9-224	36	Spherical-CL Series	82
AF7-451	56	AF8-290	49	AF9-227	31	Round Tubular	
AF7-452	56	AF8-411	63	AF9-228	31	Self-Ballasted	84
AF7-453	56	AF8-412	63	AF9-229	31	Spherical	
AF7-510	42	AF8-413	63	AF9-240	34	Self-Ballasted	85
AF7-511	42	AF8-416	68	AF9-241	34		

