

MAT[®]



Industrial &
Commercial
Induction
Lamp

www.mat-lighting.com

HIGH BAY LIGHT

page 24



H01



H03



H04



H05



H06



H07

FLOOD LIGHT

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F01/F07



F02



F03/F04/F06

GARDEN LIGHT

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G01

STREET LIGHT

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R01



R02



R03



R10/R11/R12

CANOPY LIGHT

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L01/L02/L03/L04

BRICK LIGHT

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B01 / B02

AMENITY LIGHT

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A01

OTHERS

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C01



I06/I09



C02



S03



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COMPANY PROFILE

Matsushima Lighting (H.K.) Co. Ltd. is a lighting company headquartered in Hong Kong and with several manufacturing plants in China. We are a leader in the lighting industry by supplying a comprehensive range of induction lamps for both industrial and commercial lighting applications. Our high efficiency induction lamps and continuous innovations are our promise and backbone to build a strong and long term relationship with our people, partners and customers.

More than high quality products, our superior customer service has long been a hallmark of Matsushima Lighting. We optimize induction lamps by communicating and co-operating with our engineers and customers. From product planning, design, production and delivery and more, our people are committed to providing the best service to our customers.

Matsushima Lighting (H.K.) Co. Ltd. is not only a leader in continuous technical advancement but also in customer focus. We provide consultancy, site analysis, illumination measurement, lighting simulation, performance analysis and customized designs for optimized solutions to our customers.

With the corporate slogan “Green Ideas for Life”, our business is expanding worldwide by offering both indoor and outdoor green lighting solutions in order to reduce the environmental footprint.

Work with **MAT**
Become our Partner



MAT TEAM





- A) Hong Kong Lighting Fair
- B) Hong Kong Green Award
- C) Staffs in China Factory
- D) Sales, Marketing and Engineer in Hong Kong



MAT FACILITIES

MAT optimizes techniques and technologies to ensure energy efficiency, precision, reliability and long service life of MAT Induction lamps. We work with quality management systems and high quality standards that comply with the latest local and international guidelines. Every product is strenuously tested to prove its suitability and endurance prior to delivery.



EVERY SMALL PIECE
MEANS SOMETHING





MAT GLOBAL DISTRIBUTION CHANNEL



MAT CLIENTELE



The
University
Of
Sheffield.



MAT distribution channel
locates across:



UK, Belgium, Spain, France,
Australia, Chile, Singapore,
Vietnam and Venezuela etc.

**WE DO
BELIEVE OUR
DISTRIBUTORS
UNDERSTAND
LOCAL MARKET
MORE THAN
US.**



MAT DISTINCTIONS

MECHANICAL STRUCTURE

THERMAL MANAGEMENT

OPTIC MANAGEMENT

ELECTRONIC MANAGEMENT

CUSTOMER SERVICES

MAT Mechanical Structure

Housing

Rugged, die-cast single-piece vacuum coating aluminum housing.

Diffuser

5mm intensity tempered glass; Transmittance rate of 93%; Impacting resistant of 1.24KJ/M²; Hardness 5.14Gpa.

3.2mm Polycarbonate cover; Transmittance rate of 88%; Rockwell Hardness of R115; Ignition temperature of 467°C.

Stainless Steel Clamps

Polishing and oxidation stainless steel for corrosion resistance and durability.

Silicone Gasket

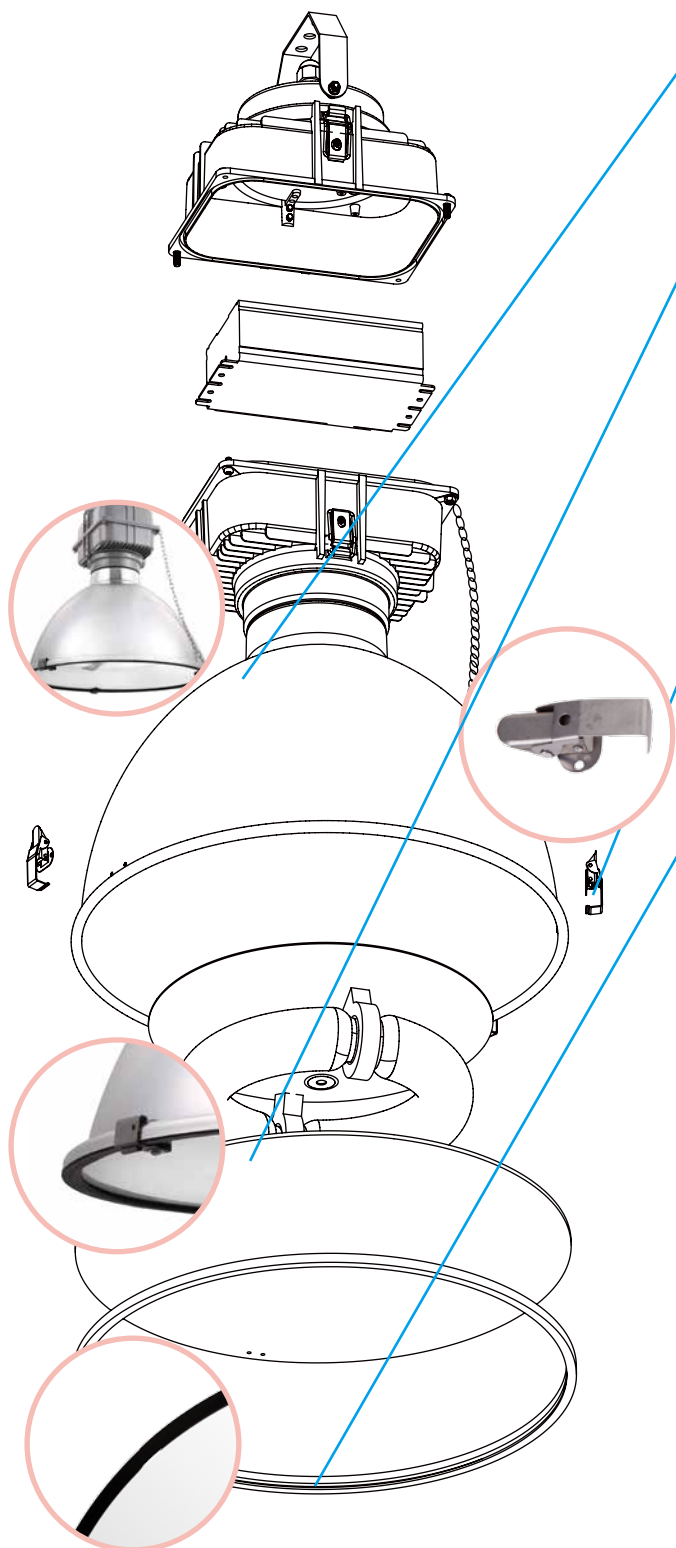
High temperature resistance is up to 120°C, anti-aging and UV resisting. The special pit shape is highly efficient to avoid any water ingress.

Protective Ring

Pressure resistance polycarbonate rings are used to protect the glass from crashing which could be caused by accidental excessive force.

Spring Washer

All screws of flood light fixtures come with the spring washers which are tightened by spring tension that will resist any loosening from shocks and vibrations. This design will ensure that the front cover is firmly enclosed with the main fixture body thereby maintaining the IP integrity.



MAT Thermal Management

We understand long-term performance of induction lighting systems is highly dependent upon thermal management, so MAT induction lamps are strictly fulfilling the following specific thermal criterias so as to ensure optimum performance.

Amalgam Tip Temperature Maintains at 85°C

The amalgam tip temperature must lie between 50°C –125°C in order to obtain at least 90% of maximum light output, because the mercury vapor pressure is affected by the amalgam tip temperature.

Moreover, if the amalgam tip temperature remains at 85°C, the lamp will be attached to the fixture only by the mounting feet so as to minimize any cool spots because the mercury can be condensed by the direct contact between lamp and fixture.

Ballast Temperature Maintains at 70°C

Induction lamp systems have an allowable ballast casing temperature of maximum 70°C. To maximize the system's lifespan, ambient temperature of the ballast should be kept as low as possible by maintaining effective heat dissipation of the lighting fixture and the enclosed ballast

There is an isolated compartment in between MAT ballast and MAT lamp, so the heat rising from the lamp tube won't affect the ballast operating temperature. The ballast is mounted on a metal plate for better heat dissipation as well.

Lamp Temperature Maintains at 110°C

In order to minimize the lighting depreciation rate and reach the accurate color temperature, it is critical to control the temperature of lamp tube remaining at 110°C.



MAT Optic Management

MAT applies different reflector materials and has optimized the reflector's design, thereby achieving a high light output.

Reflector Materials

Anodized Aluminum Reflector

- Smooth bright dip clear inner surface that boosts the reflection rate up by 80%
- The light efficacy is 15-20% higher than traditional shell

Sand Blast Reflector

- Less glare prevents less eye strain

Nano Coated Reflector

- Enhances the light efficiency up to 95% of total reflectance
- Improve the light uniformity up to 94% of diffuse reflectance

Reflector Design

Cone Reflector

- Minimizes wasted up-light and increase down lights at work stations
- Minimizes shadows and increase reflection by 10-15%

Distance Between Lamp, Reflector and Cover

- Lamp and shell are 70mm and 40mm apart from the cover



Electronic Component

EMI Filter

MAT ballast is made out of four parts. The first one is an EMI filter, which reduces harmonics from supplying alternating currents that accord with the CE standard of EN55015. The next part is a bridge rectifier that converts AC to DC power. The third part is the PFC circuit which boosts the DC voltage to a constant 400 V value and increases the power factor to 0.95. The last part is an inverter which converts the DC power to a high frequency AC.



EN55015

Self-Driven Protection Mechanism

MAT's ballast contains an integrated circuit (IC) chip, which is pre-programmed to automatically detect and protect the faults caused by the opening and closing of the circuit. The ballast is well protected when protection mechanisms are triggered in the event where a lamp is not properly connected with the ballast. Furthermore, the ballast is encoded with a surge protection and in-rush protection that resists up to 4kV.

Dimming Optional

MAT Dimmable ballast is a value-added option to optimize the energy saving by linear dimming control, where the wattage is dimmable from 50% to 100% by 0-10V input. The dimming function can be executed either by a switch (e.g. Dali convertor) or a 2-way communications Protocol (e.g. Dali master connected with computer).

Epoxy Filling Ballast Optional

Epoxy ballast applies a mixture of silica sand resin on the surface of electronic components, which forms a solid mass that completely encloses the electronic components. It is designed to resist dust, insects, and humidity and protects the delicate electronic components. It also significantly reduces the vibration caused during the transportation, and enhances electrical insulation and heat dissipation.

Sensor Capable

MAT induction lamp is available equipped with PIR motion sensors and CDS Photocell sensors to optimize energy savings.

MAT Customer Services



Consultation

From initial ideas through to detailed plans we are able to supply consultancy as part of our package.



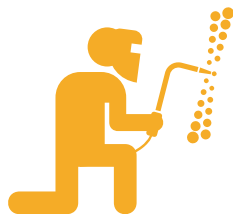
Design

In-house experts provides both lighting and structural engineering designs.



Manufacture

Our China manufacturing plants ensure that we achieve the most exacting standards.



Installation

Experienced on-site MAT teams ensure safe and reliable installations, on time, everytime.



Maintenance

Safeguarding your investment and ensuring longterm brilliant performance.

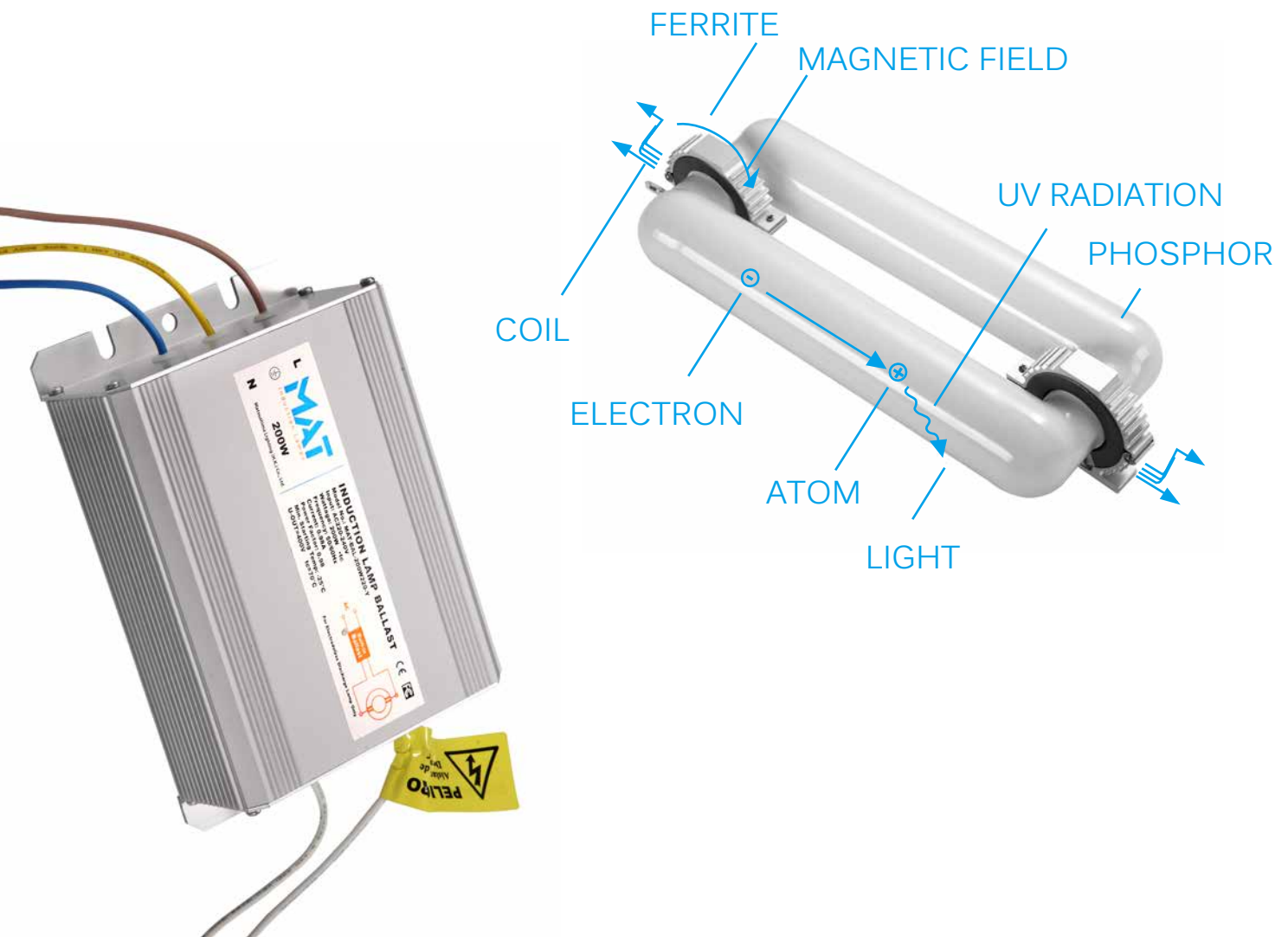
WHAT IS INDUCTION LAMP?

An induction lamp is essentially an electrodeless fluorescent that generates light based on the principles of electromagnetic induction and gas discharge. It comprises of discharge lamp tube, ballast and energizing coils.

HOW DOES INDUCTION LAMP WORK?

Based on these well-known principles, light can be generated via a gas discharge through simple magnetism. Electromagnetic transformers, which consist of rings with Ferrite coil, create an electromagnetic field around a gas-filled glass tube, to generate high frequency current by electronic ballast.

The discharge path, induced by the coils, forms a closed loop causing acceleration of free electrons, which collide with mercury atoms and excite the electrons. As the excited electrons from these atoms fall back from this higher energy state to a lower stable level, they emit ultraviolet radiation. The UV radiation created is converted to visible light as it passes through a phosphor coating on the surface of the tube.



BETTER VISIBLE LIGHT



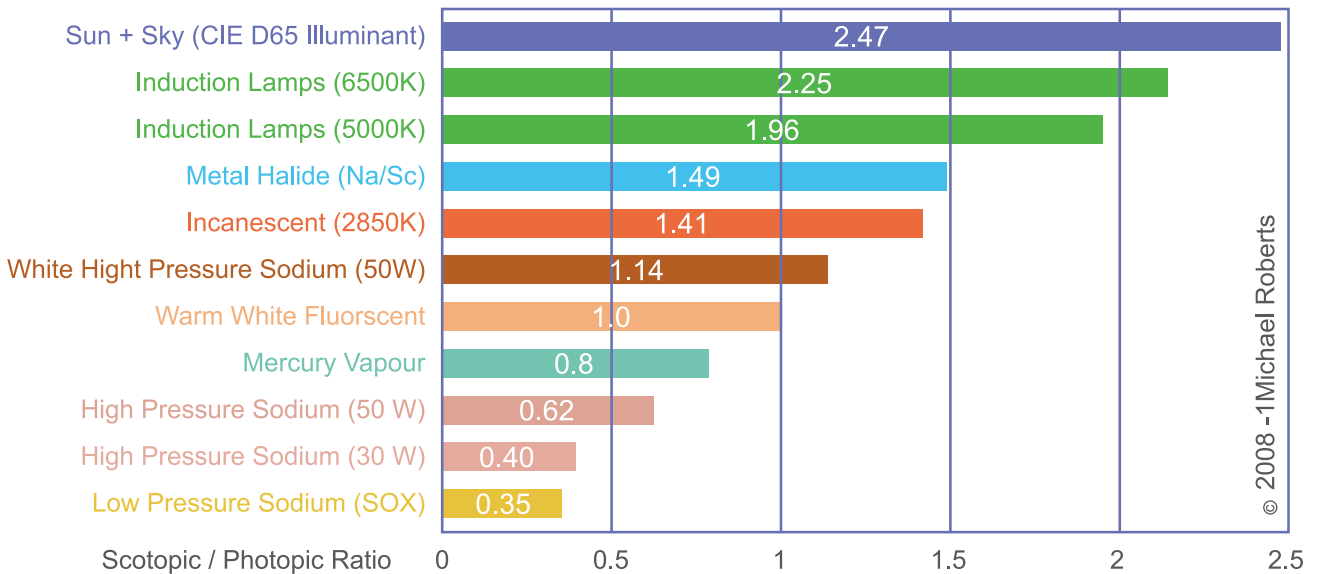
BEFORE (250W HID)



AFTER (120W MAT INDUCTION HIGH BAY LAMP)

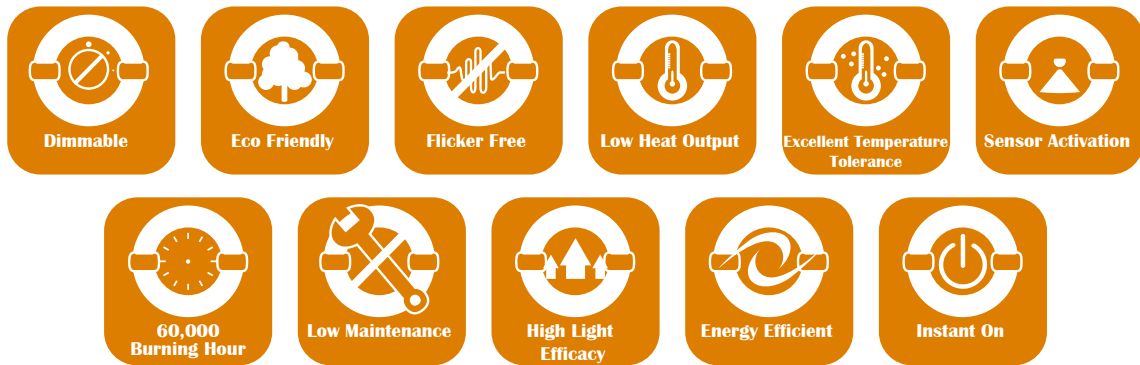
Why Induction Lamp is Better ?

Why MAT 120W induction lamp can replace 250W HID lamp and the visual acuity is highly improved? The answer is found in how the human eye responds to light and how lighting sources affect vision.



Scotopic/Photopic Ratios for Common Industrial Lamps and Induction Lamps
Data Courtesy of Dr. Sam Berman - Lewrence Berkeley National Laboratory

17 BENEFITS OF MAT INDUCTION LAMP



LONG LIFE

- 60,000 Lifespan

INSTANT ON/OFF

- No latency

LOW MAINTENANCE COST

- No filaments to ensure operational life of almost 20 years at 8 hours per day

FULL COLOR TEMPERATURE

- 2700K, 3500K, 5000K, 6500K

ENERGY EFFICIENT

- Reduce power consumption up to 70% and 40% compared to incandescent lamp, and HID lamp

LOW TOTAL HARMONIC DISTORTION (THD)

- <10% certified by class C standard

HIGH LIGHT EFFICACY

- Photopic efficacy : 80 Lm/W
- Scotopic efficacy: 150 pupil lumen/W

ELECTROMAGNETIC COMPATIBILITY (EMC)

- Meets CE standard

LOW LUMEN DEPRECIATION

- $\leq 5\%$ at 20,000 hours, 25% at 60,000 hours

FLICKER FREE

- Reduce eye strain and no glare

DIMMABLE

- Dimmable from 50% to 100%

GOOD TEMPERATURE TOLERANCE

- Reliable ignition even at -40°C

LOW HEAT OUTPUT

- Operating temperature is around 80°C

ENVIRONMENTAL FRIENDLY

- Amalgam content $< 0.25\text{mg}$

HIGH CRI

- $R_a \geq 80$

SENSOR ACTIVATION

- Motion controls and Photo-cell controls

HIGH POWER FACTOR

- $\text{PF} > 0.95$

APPLICATIONS

- In hard-to-reach locations: tall bridge, towers, high security zones
- Installation at high elevations: warehouse, shopping mall, factory, stadium
- Cold environments: supermarket cold room
- High frequency traffic areas: 24 x 7 public places, railway stations, car park, street
- In areas that high lumen output and immediate full illumination are required



STREET



CAR PARK

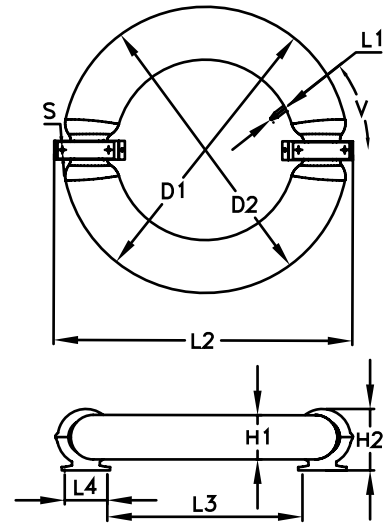


WAREHOUSE



SIGNAGE

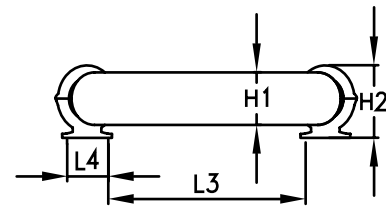
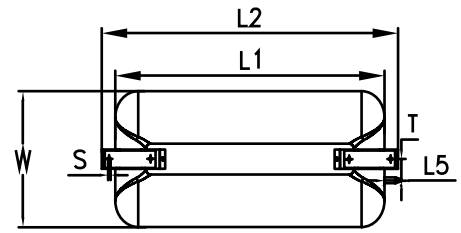
CIRCULAR LAMP TUBE MAT I360 SERIES



CIRCULAR LAMP TUBE DIMENSIONS (MM)									
	Dim.	30W	40W	80W	120W	150W	200W	250W	300W
Outer diameter	D1	110	152	214	274	304	314	348	388
Inner diameter	D2	40	62	106	166	196	198	232	272
Height of glass	H1	35	45	54	54	54	58	58	58
Overall height	H2	60	66	76	76	76	87	87	87
Amalgam tip length	L1	15	26	26	26	26	26	26	26
Overall length	L2	118	180	255	305	330	352	381	424
Mount hole spacing(between cores)	L3	72	70	105	170	200	204	235	278
Mount hole Spacing(each cores)	L4		37	46	46	46	52	52	52
E40 Lamp Adaptor is available		100mm, 160mm, 170mm and up to 284mm							

LAMP SPECIFICATION					
Wattage	Color Temperature (K)	Pupil Luminous Flux (Plm)	Rated Lumens (lm)	CRI	Life Time (Hours)
30W	2700(UW) 3500(W) 5000(D) 6500(UD)	2500-2900	1800	80-85	60,000
40W		3900-4600	2800		
80W		8600-11100	6400		
120W		15500-18000	9600		
150W		19500-22000	12000		
200W		26000-30000	16000		
250W		32500-37500	20000		
300W		45000-48000	24000		

RECTANGULAR LAMP TUBE MAT ISQU SERIES



RECTANGULAR LAMP TUBE DIMENSIONS (MM)

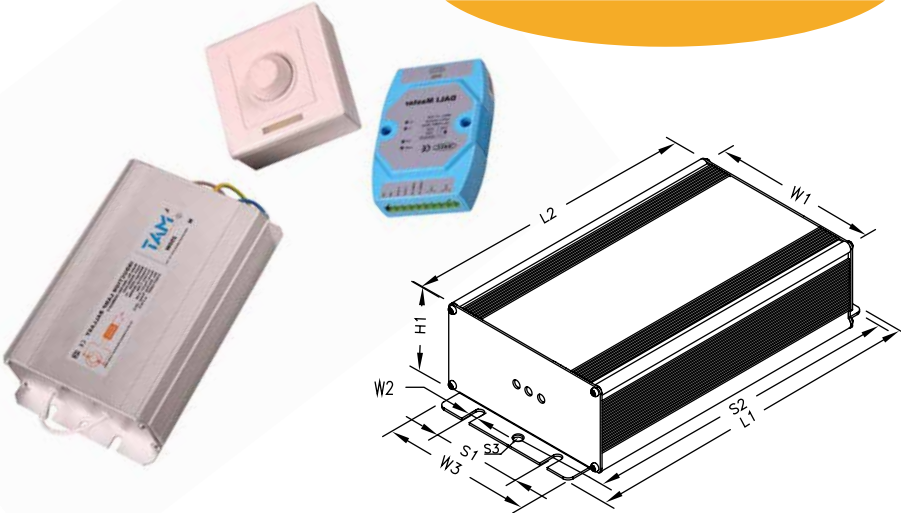
	Dim.	40W	80W	120W	150W	200W	250W	300W
Height of glass	H1	45	54	54	54	58	58	58
Overall height	H2	66	76	76	76	87	87	87
Length of main body	L1	150	250	320	350	400	450	500
Overall length	L2	195	295	365	395	445	495	545
Mount hole spacing(between cores)	L3	82	165	235	265	300	350	400
Mount hole Spacing(each cores)	L4	37	46	46	46	52	52	52

LAMP SPECIFICATION

Wattage	Color Temperature (K)	Pupil Luminous Flux (Plm)	Rated Lumens (lm)	CRI	Life Time (Hours)
40W	2700(UW) 3500(W) 5000(D) 6500(UD)	3900-4600	2800	80-85	60,000
80W		8600-11100	6400		
120W		15500-18000	9600		
150W		19500-22000	12000		
200W		26000-30000	16000		
250W		32500-37500	20000		
300W		45000-48000	24000		

DIMMING BALLAST OPTIONAL

MAT dimming ballast works with Digital Addressable Lighting Interface (Dali) System and Analog dimming control signal. Dimming induction lamp ballast often uses 0-10V control signals to control dimming functions.



DIMMING BALLAST SPECIFICATION		
Dim Input	Lumen Dimming Level	Wattage Dimming Level
(DCV)	%	%
10	100%	100%
8	89%	90%
6.5	72%	75%
5.3	64%	68%
4.3	48%	54%
3.6	45%	53%
3	52%	52%
2.6	43%	51%
2.2	43%	51%
1.8	42%	50%
1.5	42%	50%
1	42%	50%
0	0%	0%

DIMMING BALLAST DIMENSION (MM)						
	Dim	80W	120W	150W	200W	250W
Case height	H1	35	49	49	49	49
Overall length	L1	175	205	205	205	205
Case length	L2	156	178.5	178.5	178.5	178.5
Mount slot(Ctr. To Ctr.)	S1	47	50	50	50	50
Mount slot(Ctr. To Ctr.)	S2	165	190	190	190	190
Mount slot(Ctr. To Ctr.)	S3	5	6	6	6	6
Case width	W1	70.2	100.2	100.2	100.2	100.2
Slot width	W2	5	6	6	6	6
Edge width	W3	75	110	110	110	110

EPOXY FILLING BALLAST OPTIONAL

Epoxy ballast applies a mixture of silica sand resin on the surface of electronic components, which forming a solid mass completely encloses. It is designed to resist dust, insect, humidity and protect the fragile electronic components. It significantly reduces the vibration caused during transportation, the penetration of moist and insects, enhances the electrical insulation reliability and heat dissipation.



MAT - H01 HIGH BAY LIGHT

Light Source:

- I360 (R) Circular Lamp Tube

Features:

- Die-Cast aluminum ballast casing with powder coated finish
- High purify aluminum reflector with vacuum coated inner surface
- Aluminum belt shape latches to ensure diffuser and reflector stay intact
- 5mm tempered glass diffuser inhibits the entrance of external contaminants



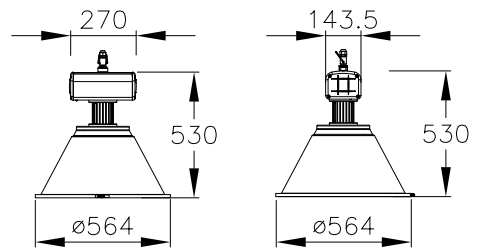
Optional:

- Diffuser: Frost Glass (F)/ Clear Polycarbonate (P), Frost Polycarbonate(Q)

Mounting:

- Chain mounting, Hook mounting

Overall Dimensions (mm)

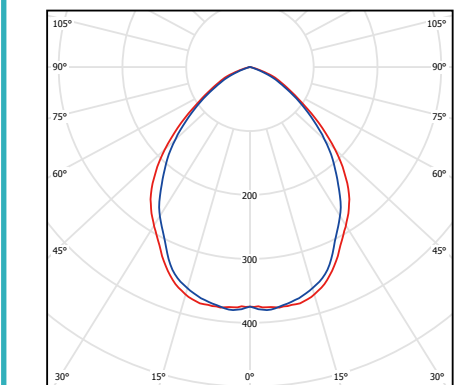


Weight 7.5 kg

MAIN SPECIFICATION

Fixture Code	Lamp Wattage (W)	Color Temp. (K)	Operating Voltage (V)	Ambient Temp. (°C)
MAT-H01	40	2700(UW)/ 3500(W)/ 5000(D)/ 6500(UD)	110-277 /220	-25 to 40
	80			
	120			
	150			
	200			
	250			

Photometric Curve (cd/klm)



180.00 — .0
270.00 — 90.0

Ordering Code: (Fixture ■ / Lamp Wattage ■ / Color tem. ■ / Optional ■)

- MAT-H01 R40/80/120/150/200/250W-UW/W/D/UD-F/P/Q



IP54

MAT - H03 HIGH BAY LIGHT

Light Source:

- I360 (R) Circular Lamp Tube

Features:

- Die-Cast aluminum ballast casing with powder coated finish
- High purify aluminum reflector with vacuum coated inner surface
- Water and dirt proof swivel clips for easy installation and maintenance
- External stainless steel chain for extra protection
- UV anti-aging silicon gasket
- 5mm tempered glass diffuser inhibits the entrance of external contaminants

Optional:

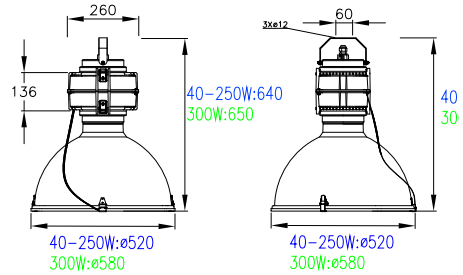
- Reflector: Aluminum <Out layer> with Nano <Inlayer> (N), Sandblasted <out & inlayer> (S), Sandblasted <out layer> with Nano <Inlayer> (K)
- Diffuser: Frost Glass (F) / Clear Polycarbonate (P), Frost Polycarbonate (Q)
- IP grade: IP65 (X)

Mounting:

- Chain mounting, Ceiling mounting

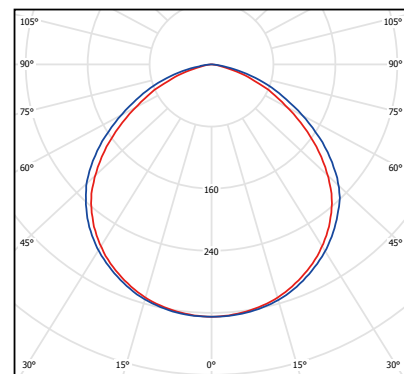


Overall Dimensions (mm)



Weight 8.45 kg

Photometric Curve (cd/klm)



180.00 — .0
270.0 — 90.0

MAIN SPECIFICATION				
Fixture Code	Lamp Wattage (W)	Color Temp. (K)	Operating Voltage (V)	Ambient Temp. (°C)
MAT-H03	40	2700(UW)/ 3500(W)/ 5000(D)/ 6500(UD)	110-277 /220	-25 to 40
	80			
	120			
	150			
	200			
	250			
	300			

Ordering Code: (Fixture ■ / Lamp Wattage ■ / Color tem. ■ / Optional ■)

- MAT-H03 X R40/80/120/150/200/250/300W-UW/W/D/UD-N/S/K-F/P/Q



IP54 IP65

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MAT - H04A/04B/04C

HIGH BAY LIGHT

Light Source:

- I360 (R) Circular Lamp Tube

Features:

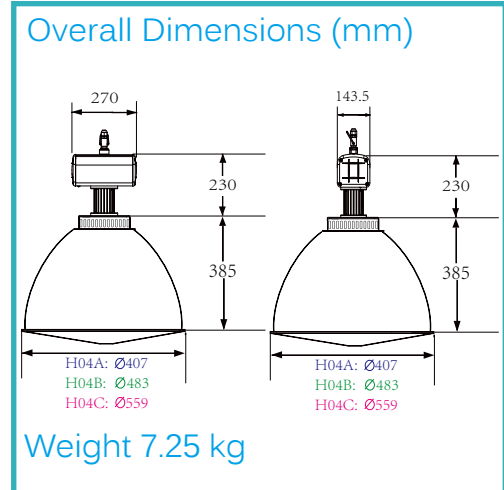
- Die-Cast aluminum ballast casing with powder coated finish
- Polycarbonate construction with prismatic diffuser for good light transmission
- Reflector is available in 16" 19" and 22"
- E40 lamp adaptor for ease of lamp replacement

Optional:

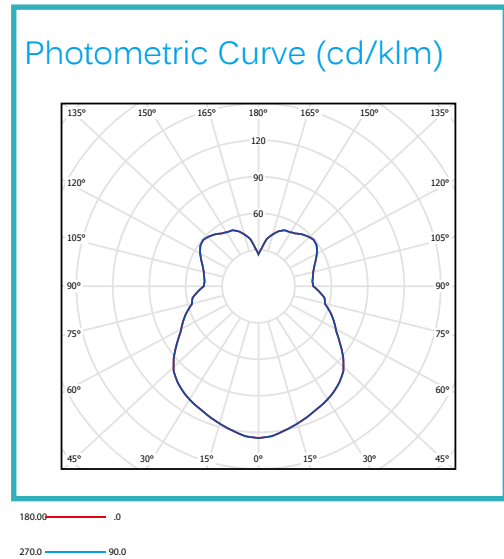
- Nil

Mounting:

- Chain mounting, Hook mounting



MAIN SPECIFICATION				
Fixture Code	Lamp Wattage (W)	Color Temp. (K)	Operating Voltage (V)	Ambient Temp. (°C)
MAT-H04A	40	2700(UW)/ 3500(W)/ 5000(D)/ 6500(UD)	110-277 /220	-25 to 40
	80			
MAT-H04B	120			
	150			
MAT-H04C	200			
	250			



Ordering Code: (Fixture ■ / Lamp Wattage ■ / Color tem. ■ / Optional ■)

- MAT-H04A R(40/80)/H04B R(120/150)/ H04C R(200/250)W-UW/W/D/UD

MAT - H05 HIGH BAY LIGHT

Light Source:

- I360 (R) Circular Lamp Tube

Features:

- Die-Cast aluminum ballast casing with powder coated finish
- Hinged diffuser cover for ease access to lamp and control gear
- High temperature-resistance polycarbonate diffuser
- E40 lamp adaptor for ease of lamp replacement

Optional:

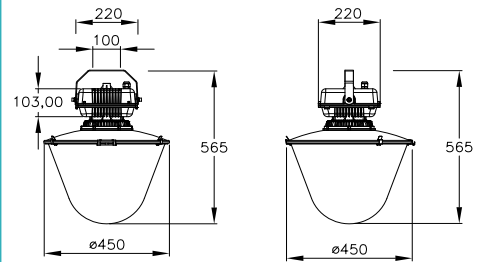
- Nil

Mounting:

Chain mounting, Ceiling mounting



Overall Dimensions (mm)

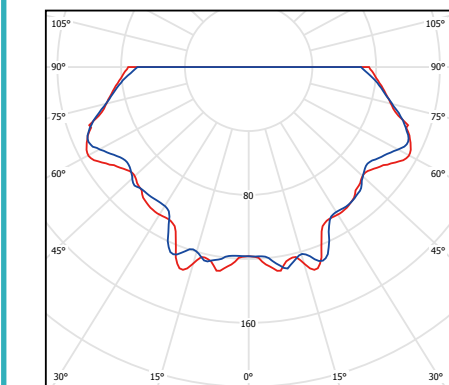


Weight 6.35 kg

MAIN SPECIFICATION

Fixture Code	Lamp Wattage (W)	Color Temp. (K)	Operating Voltage (V)	Ambient Temp. (°C)
MAT-H05	40	2700(UW)/ 3500(W)/ 5000(D)/ 6500(UD)	110-277 /220	-25 to 40
	80			
	120			
	150			

Photometric Curve (cd/klm)



180.00 — 0
270.0 — 90.0

Ordering Code: (Fixture ■ / Lamp Wattage ■ / Color tem. ■ / Optional ■)

- MAT-H05 R40/80/120/150W-UW/W/D/UD



IP54

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MAT - H06 HIGH BAY LIGHT

Light Source:

- I360 (R) Circular Lamp Tube

Features:

- High purify aluminum reflector with vacuum coated inner surface
- Mechanical clamps to ensure IP integrity
- 5mm toughened tempered glass diffuser
- External security steel wire to ensure the diffuser and reflector stay intact

Optional:

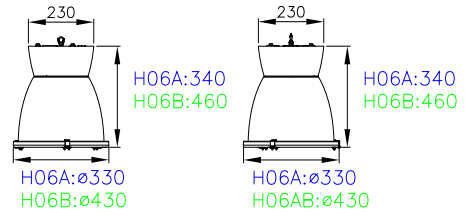
- Reflector: Aluminum <Out layer> with Nano <Inlayer> (N)
- Diffuser: Frost Glass (F) / Clear Polycarbonate (P), Frost Polycarbonate (Q)

Mounting:

- Chain mounting, Ceiling mounting



Overall Dimensions (mm)

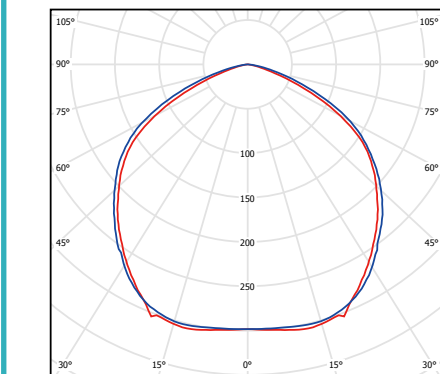


Weight 3.5 kg

MAIN SPECIFICATION

Fixture Code	Lamp Wattage (W)	Color Temp. (K)	Operating Voltage (V)	Ambient Temp. (°C)
MAT-H06A	40	2700(UW)/ 3500(W)/ 5000(D)/ 6500(UD)	110-277 /220	-25 to 40
	80			
MAT-H06B	120			

Photometric Curve (cd/klm)



180.00 — .0
270.00 — 90.0

Ordering Code: (Fixture ■ / Lamp Wattage ■ / Color tem. ■ / Optional ■)

- MAT-H06A R(40/80)/ H06B R(120)W-UW/W/D/UD-N-F/P/Q



IP20

MAT - H07

HIGH BAY LIGHT

Light Source:

- I360 (R) Circular Lamp Tube

Features:

- Die-Cast aluminum round ballast box
- High purify aluminum waved-shaped reflector with vacuum coated inner surface
- Electrostatic spray surface
- Mechanical clamps to ensure IP integrity
- 5mm toughened tempered glass diffuser

Optional:

- Reflector: Aluminum <Out layer> with Nano <Inlayer> (N)
- Diffuser: Frost Glass (F) / Clear Polycarbonate (P), Frost Polycarbonate (Q)

Mounting:

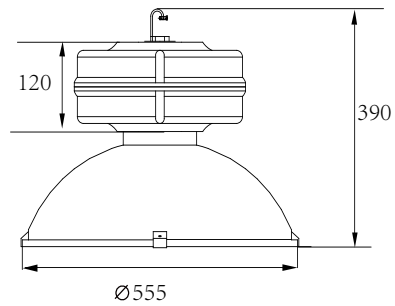
- Chain mounting, Hook mounting



MAIN SPECIFICATION

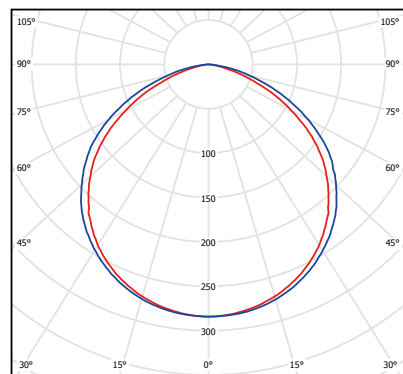
Fixture Code	Lamp Wattage (W)	Color Temp. (K)	Operating Voltage (V)	Ambient Temp. (°C)
MAT-H07	40	2700(UW)/ 3500(W)/ 5000(D)/ 6500(UD)	110-277 /220	-25 to 40
	80			
	120			
	150			
	200			

Overall Dimensions (mm)



Weight 5 kg

Photometric Curve (cd/klm)



180.00 — 0
270.0 — 90.0

Ordering Code: (Fixture ■ / Lamp Wattage ■ / Color tem. ■ / Optional ■)

- MAT-H07 R40/80/120/150/200W-UW/W/D/UD-N-F/P/Q



IP54

MAT - H08

HIGH BAY LIGHT

Light Source:

- I360 (R) Circular Lamp Tube

Features:

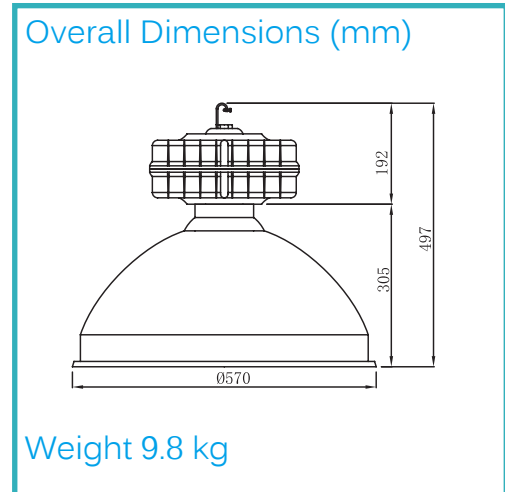
- Die-cast aluminum round ballast box
- High purify aluminum reflector with vacuum coated inner surface
- Electrostatic spray surface
- Mechanical clamps to ensure IP integrity
- 5mm tempered glass diffuser

Optional:

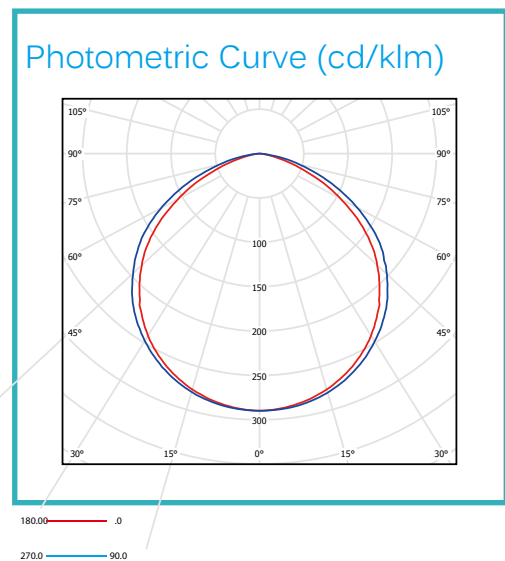
- Reflector: Aluminum <Out layer> with Nano <Inlayer> (N)
- Diffuser: Frost Glass (F) / Clear Polycarbonate (P), Frost Polycarbonate (Q)

Mounting:

- Chain mounting, Hook mounting



MAIN SPECIFICATION				
Fixture Code	Lamp Wattage (W)	Color Temp. (K)	Operating Voltage (V)	Ambient Temp. (°C)
MAT-H08	250	2700(UW)/ 3500(W)/ 5000(D)/ 6500(UD)	110-277 /220	-25 to 40
	300			



Ordering Code: (Fixture ■ / Lamp Wattage ■ / Color tem. ■ / Optional ■)

- MAT-H08 R250/300W - UW/W/D/UD - N-F/P/Q



MAT - F01/F07 FLOOD LIGHT

Light Source:

- ISQU (Q) Rectangular Lamp Tube

Features:

- Die-Cast aluminum housing with epoxy black powder coated finish
- Anodized aluminum reflector with vacuum coated inner surface
- Separated lamp and ballast chamber for excellent heat dissipation
- UV anti-aging gas tight silicon gasket
- Symmetrical beam for great reflection

Optional:

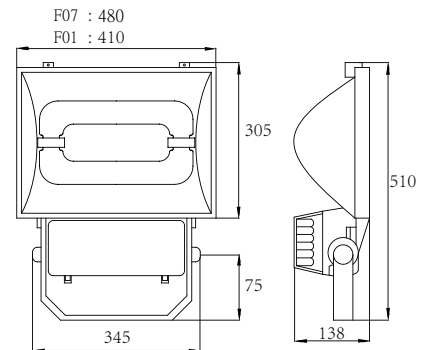
- Reflector: Nano Reflector (N)
- Diffuser: Frost Glass (F)

Mounting:

- Side wall mounting or Seat mounting with anchor fixing



Overall Dimensions (mm)

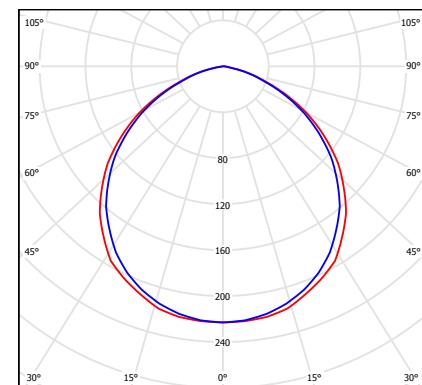


Weight 5.6 / 6.0 kg

MAIN SPECIFICATION

Fixture Code	Lamp Wattage (W)	Color Temp. (K)	Operating Voltage (V)	Ambient Temp. (°C)
MAT-F01	40	2700(UW)/ 3500(W)/ 5000(D)/ 6500(UD)	110-277 /220	-25 to 40
	80			
	120			
MAT-F07	150			

Photometric Curve (cd/klm)



180.00 — .0
270.0 — 90.0

Ordering Code: (Fixture ■ / Lamp Wattage ■ / Color tem. ■ / Optional ■)

- MAT-F01 Q(40/80/120)/F07 Q(150)W-UW/W/D/UD-N-F



MAT - F02 FLOOD LIGHT

Light Source:

- ISQU (Q) Rectangular Lamp Tube

Features:

- Die-Cast aluminum housing with epoxy black powder coated finish
- Anodized aluminum reflector with vacuum coated inner surface
- Hinged front cover fitted with 5mm tempered glass diffuser
- Stainless steel external fasteners for quick easy access without tools
- UV anti-aging gas tight silicon gasket
- Symmetrical beam for great reflection

Optional:

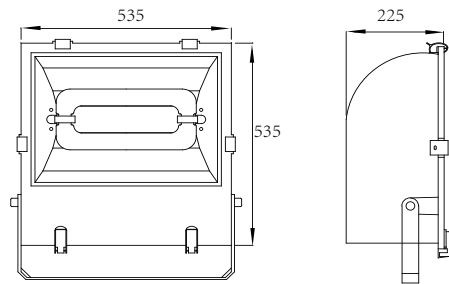
- Reflector: Nano Reflector (N)
- Diffuser: Frost Glass (F)

Mounting:

- Side wall mounting or Seat mounting with anchor fixing

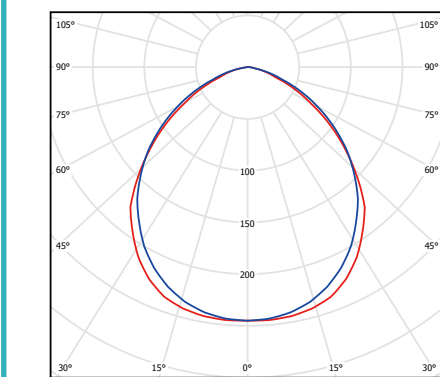


Overall Dimensions (mm)



Weight 13.95 kg

Photometric Curve (cd/klm)



180.00 — .0
270.0 — 90.0

MAIN SPECIFICATION

Fixture Code	Lamp Wattage (W)	Color Temp. (K)	Operating Voltage (V)	Ambient Temp. (°C)
MAT-F02	150	2700(UW)/ 3500(W)/ 5000(D)/ 6500(UD)	110-277 /220	-25 to 40
	200			
	250			

Ordering Code: (Fixture ■ / Lamp Wattage ■ / Color tem. ■ / Optional ■)

- MAT-F02 Q150/200/250W-UW/W/D/UD-N-F



MAT - F03 / F04 / F06 FLOOD LIGHT

Light Source:

- ISQU (Q) Rectangular Lamp Tube

Features:

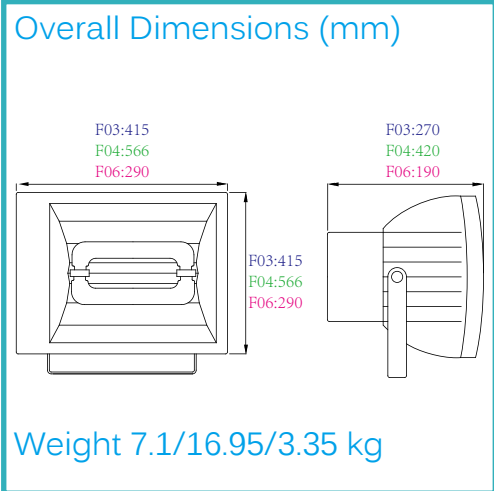
- Die-Cast aluminum housing with epoxy silver powder coated finish
- Anodized aluminum reflector with vacuum coated inner surface
- Heat resistant UV anti-aging silicon gasket
- Symmetrical beam for great reflection
- 5mm tempered glass diffuser

Optional:

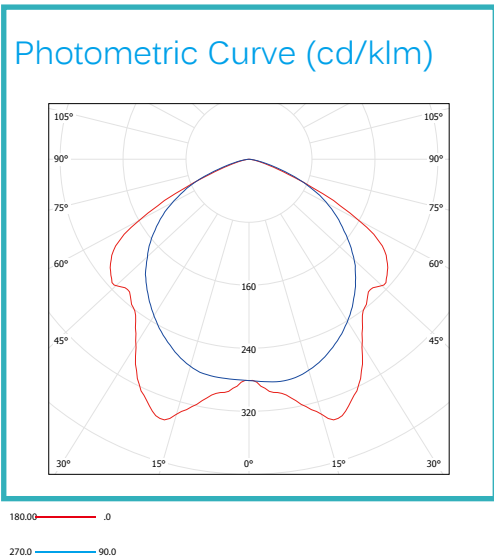
- Reflector: Nano Reflector (N)
- Diffuser: Frost Glass (F)

Mounting:

- Side wall mounting or Seat mounting with anchor fixing



MAIN SPECIFICATION				
Fixture Code	Lamp Wattage (W)	Color Temp. (K)	Operating Voltage (V)	Ambient Temp. (°C)
MAT- F03	80	2700(UW)/ 3500(W)/ 5000(D)/ 6500(UD)	110-277 /220	-25 to 40
	120			
MAT- F04	150			
	200			
MAT- F06	40			



Ordering Code: (Fixture ■ / Lamp Wattage ■ / Color tem. ■ / Optional ■)

- MAT-F03 Q(80/120)/F04 Q(150/200)/ F06 Q(40)W-UW/W/D/UD-N-F

MAT - F08

FLOOD LIGHT

Light Source:

- ISQU (Q) Rectangular Lamp Tube

Features:

- Die-cast aluminum housing with epoxy black powder coated finish
- Anodized aluminum reflector with vacuum coated inner surface
- Separated lamp and ballast compartments for excellent heat dissipation
- Symmetrical beam for great reflection
- 5mm tempered glass diffuser

Optional:

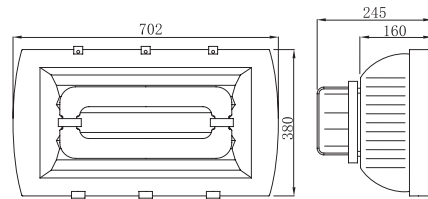
- Reflector: Nano Reflector (N)
- Diffuser: Frost Glass (F)

Mounting:

- Side wall mounting or Seat mounting with anchor fixing



Overall Dimensions (mm)

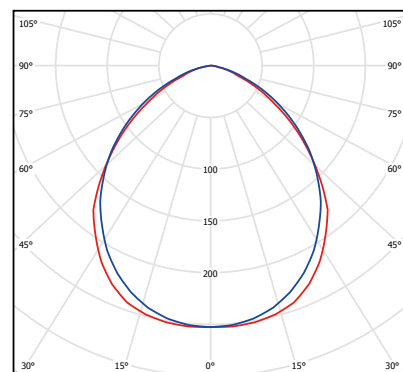


Weight 8.4 kg

MAIN SPECIFICATION

Fixture Code	Lamp Wattage (W)	Color Temp. (K)	Operating Voltage (V)	Ambient Temp. (°C)
MAT-F08	300	2700(UW)/ 3500(W)/ 5000(D)/ 6500(UD)	110-277 /220	-25 to 40

Photometric Curve (cd/klm)



180.00 — .0
270.0 — 90.0

Ordering Code: (Fixture ■ / Lamp Wattage ■ / Color tem. ■ / Optional ■)

- MAT-F08 Q300W-UW/W/D/UD-N-F



MAT - G01

GARDEN LIGHT

Light Source:

- I360(R) Circular Lamp Tube

Features:

- Cold-rolled steel housing with powder-coated finish
- High purify mirror aluminum reflector for high lumen output
- Acrylic lens with good transparency
- Light weight and compact structure for easy maintenance
- High quality heat resistant with gas-tight silicone rubber sealing

Optional:

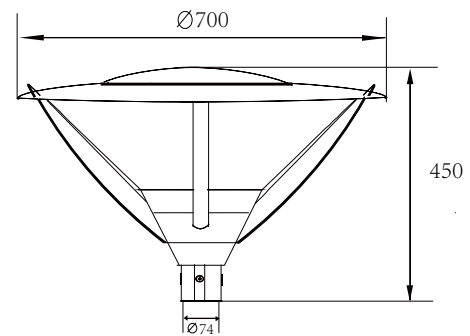
- Reflector: Nano Reflector (N)

Mounting:

- Pole mounting



Overall Dimensions (mm)

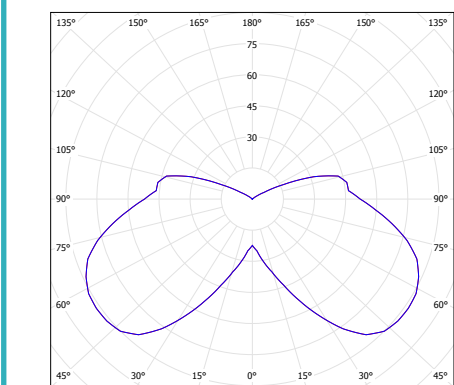


Weight 5.3 kg

MAIN SPECIFICATION

Fixture Code	Lamp Wattage (W)	Color Temp. (K)	Operating Voltage (V)	Ambient Temp. (°C)
MAT- G01	40	2700(UW)/ 3500(W)/ 5000(D)/ 6500(UD)	110-277 /220	-25 to 40
	80			

Photometric Curve (cd/klm)



180.00 — 0
270.0 — 90.0

Ordering Code: (Fixture ■ / Lamp Wattage ■ / Color tem. ■ / Optional ■)

- MAT-G01 R40/80W-UW/W/D/UD-N



IP 65

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MAT - R01 STREET LIGHT

Light Source:

- ISQU (Q) Rectangular Lamp Tube

Features:

- Rugged die-cast aluminum control housing
- Electrostatic powder-coated surface for corrosion resistance
- High purity aluminum reflector provides optimum light distribution
- High temperature resistant tempered glass
- Adjustable pole angle at 5°, 10°, 15°

Optional:

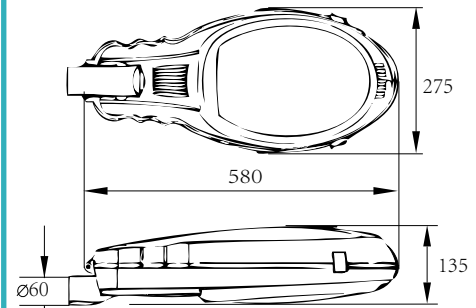
- Reflector: Nano Reflector (N)

Mounting:

- Pole mounting



Overall Dimensions (mm)

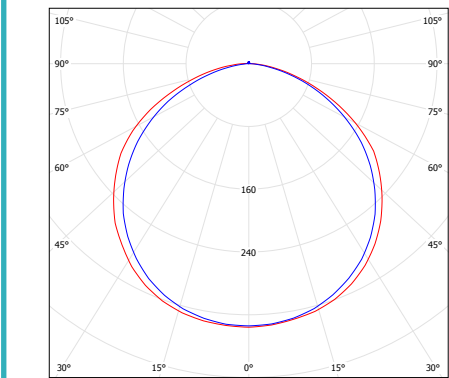


Weight 3.9 kg

MAIN SPECIFICATION

Fixture Code	Lamp Wattage (W)	Color Temp. (K)	Operating Voltage (V)	Ambient Temp. (°C)
MAT-R01	40	2700(UW)/ 3500(W)/ 5000(D)/ 6500(UD)	110-277 /220	-25 to 40

Photometric Curve (cd/klm)



180.00 — .0
270.0 — 90.0

Ordering Code: (Fixture ■ / Lamp Wattage ■ / Color tem. ■ / Optional ■)

- MAT-R01 Q40W-UW/W/D/UD-N

MAT - R02 STREET LIGHT

Light Source:

- ISQU (Q) Rectangular Lamp Tube

Features:

- High pressure die-cast aluminum alloy housing for corrosion and shock resistance
- High purity aluminum reflector provides optimum light distribution
- Gas-tight silicon rubber seal
- High temperature resistant tempered glass
- Adjustable pole angle at 5°, 10°, 15°

Optional:

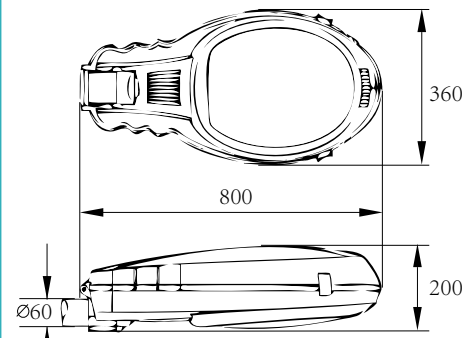
- Reflector: Nano Reflector (N)

Mounting:

- Pole mounting



Overall Dimensions (mm)

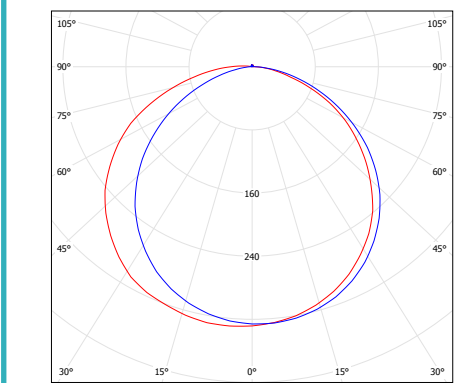


Weight 7.2 kg

MAIN SPECIFICATION

Fixture Code	Lamp Wattage (W)	Color Temp. (K)	Operating Voltage (V)	Ambient Temp. (°C)
MAT-R02	40	2700(UW)/ 3500(W)/ 5000(D)/ 6500(UD)	110-277 /220	-25 to 40
	80			

Photometric Curve (cd/klm)



180.00 — 0
270.0 — 90.0

Ordering Code: (Fixture ■ / Lamp Wattage ■ / Color tem. ■ / Optional ■)

- MAT-R02 Q40/80W-UW/W/D/UD-N



IP 65

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MAT - R03 STREET LIGHT

Light Source:

- ISQU (Q) Rectangular Lamp Tube

Features:

- Die-cast aluminum housing with separate lamp and ballast chamber for excellent heat dissipation.
- Powder coated finish for corrosion-resistance
- High purify anodized aluminum reflector provides optimum light distribution
- High temperature resistant flat transparent tempered glass

Optional:

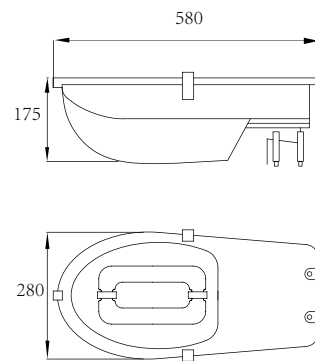
- Reflector: Nano Reflector (N)

Mounting:

- Pole mounting



Overall Dimensions (mm)

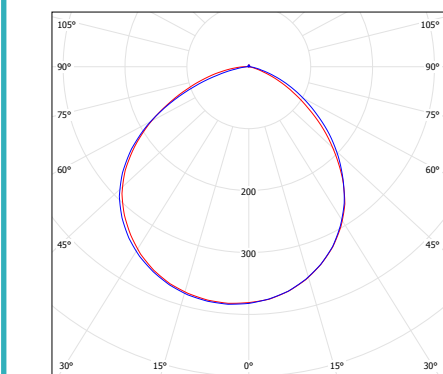


Weight 4.7 kg

MAIN SPECIFICATION

Fixture Code	Lamp Wattage (W)	Color Temp. (K)	Operating Voltage (V)	Ambient Temp. (°C)
MAT-R03	40	2700(UW)/ 3500(W)/ 5000(D)/ 6500(UD)	110-277 /220	-25 to 40

Photometric Curve (cd/klm)



180.00 — .0
270.0 — 90.0

Ordering Code: (Fixture ■ / Lamp Wattage ■ / Color tem. ■ / Optional ■)

- MAT-R03 Q40W-UW/W/D/UD-N



IP65

MAT - R10/R11/R12 STREET LIGHT

Light Source:

- ISQU (Q) Rectangular Lamp Tube

Features:

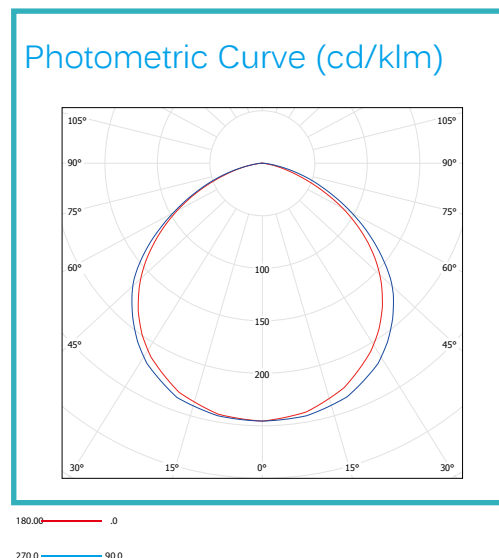
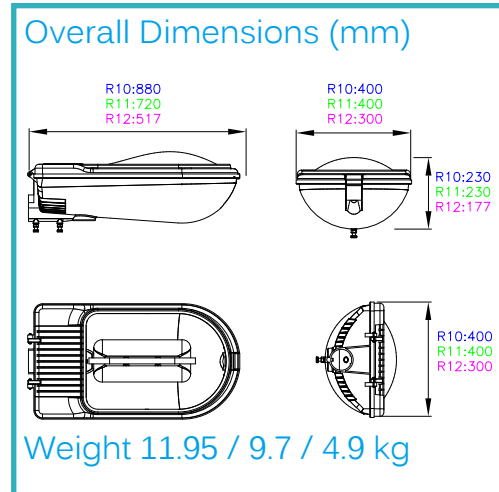
- Die-cast aluminum alloy housing with powder coated grey finish
- High purity aluminum reflector with vacuum coating
- Construction of separated ballast and lamp compartment
- High temperature resistant UV anti-aging silicon gasket
- 5mm toughened tempered glass diffuser

Optional:

- Reflector: Nano Reflector (N)
- Photocell sensor

Mounting:

- Suits for 60mm spigot.
- Luminaires are secured to spigot by means of stainless steel fasteners.



MAIN SPECIFICATION				
Fixture Code	Lamp Wattage (W)	Color Temp. (K)	Operating Voltage (V)	Ambient Temp. (°C)
MAT- R10	150	2700(UW)/ 3500(W)/ 5000(D)/ 6500(UD)	110-277 /220	-25 to 40
	200			
	250			
MAT- R11	80			
	120			
MAT-R12	40			

Ordering Code: (Fixture ■ / Lamp Wattage ■ / Color tem. ■ / Optional ■)

- MAT-R10 Q(150/200/250)/R11 Q(80/120)/R12 Q(40) W-UW/W/D/UD-N



MAT - R13

STREET LIGHT

Light Source:

- ISQU (Q) Rectangular Lamp Tube

Features:

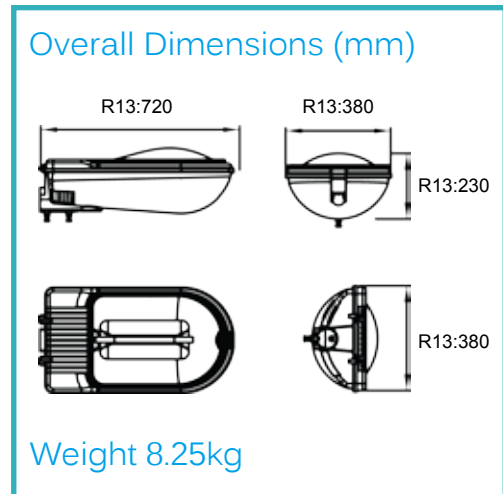
- Die-cast aluminum alloy housing with powder coated grey finish
- High purity aluminum reflector with vacuum coating
- Construction of separated ballast and lamp compartment
- High temperature resistant UV anti-aging silicon gasket
- 5mm toughened tempered glass diffuser

Optional:

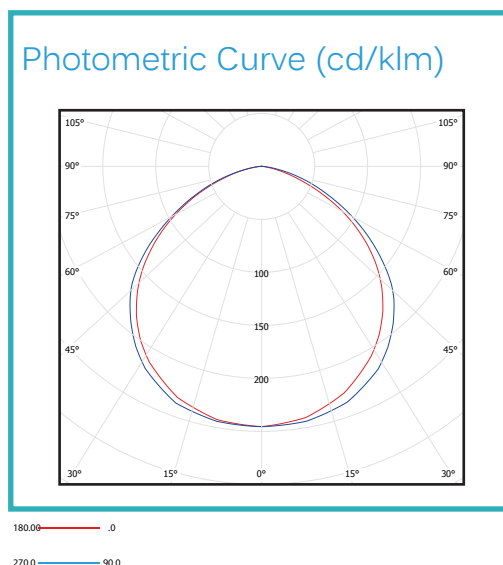
- Reflector: Nano Reflector (N)
- Photocell sensor (S)

Mounting:

- Suits for 60mm spigot
- Luminaires are secured to spigot by means of stainless steel fasteners



MAIN SPECIFICATION				
Fixture Code	Lamp Wattage (W)	Color Temp. (K)	Operating Voltage (V)	Ambient Temp. (°C)
MAT-R13	40	2700(UW)/ 3500(W)/ 5000(D)/ 6500(UD)	110-277 /220	-25 to 40
	80			
	120			



Ordering Code: (Fixture ■ / Lamp Wattage ■ / Color tem. ■ / Optional ■)

- MAT-R13Q(40/80/120)W-UW/W/D/UD-N-F



MAT - R14

STREET LIGHT

Light Source:

- ISQU (Q) Rectangular Lamp Tube

Features:

- Die-cast aluminum alloy housing with separated lamp and ballast chamber
- Powder coated finish for corrosion-resistance
- High purify anodized aluminum reflector provides optimum light distribution
- High temperature resistant UV anti-aging silicon gasket
- High temperature resistant tempered glass

Optional:

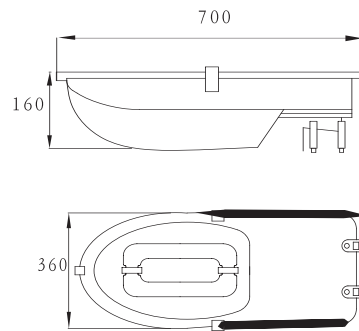
- Reflector: Nano Reflector (N)
- Photocell sensor (S)

Mounting:

- Suits for 60mm spigot
- Pole Mounting



Overall Dimensions (mm)

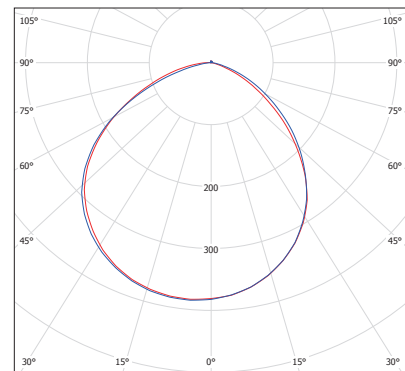


Weight 6.75kg

MAIN SPECIFICATION

Fixture Code	Lamp Wattage (W)	Color Temp. (K)	Operating Voltage (V)	Ambient Temp. (°C)
MAT-R14	40	2700(UW)/ 3500(W)/ 5000(D)/ 6500(UD)	110-277 /220	-25 to 40
	80			

Photometric Curve (cd/klm)



180.00 — .0
270.0 — 90.0

Ordering Code: (Fixture ■ / Lamp Wattage ■ / Color tem. ■ / Optional ■)

- MAT-R14 Q(40/80)W-UW/W/D/UD-N-F



MAT - L01 / L03 / L04 CANOPY LIGHT

Light Source:

- ISQU (Q) Rectangular Lamp Tube

Features:

- Rugged, cold-rolled steel plate with heavy grade epoxy powder coated
- High purity aluminum reflector
- Diffuser is fully gasket with one-piece tubular silicone
- 5mm toughened tempered glass diffuser
- Designed for canopy applications and cold/freezer room

Optional:

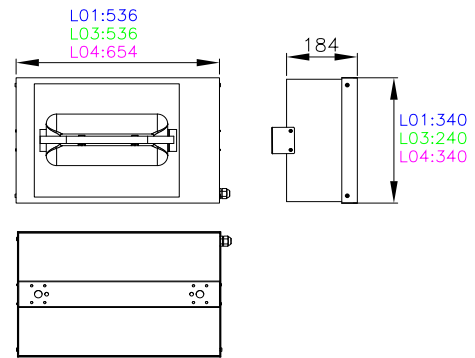
- Reflector: Nano Reflector (N)
- Diffuser: Frost Glass (F), Clear Polycarbonate (P), Frost Polycarbonate (Q)
- Housing: SUS 304 Stainless Steel (S304)

Mounting:

- Ceiling mounting, Recessed mounting



Overall Dimensions (mm)

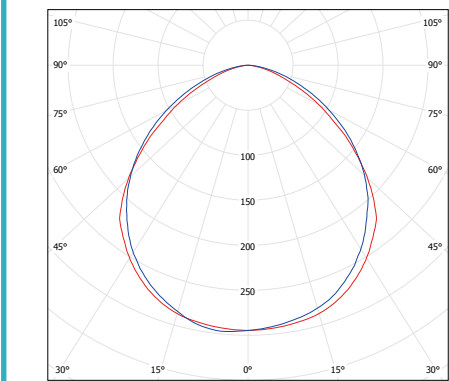


Weight 10.5 / 12.5 kg

MAIN SPECIFICATION

Fixture Code	Lamp Wattage (W)	Color Temp. (K)	Operating Voltage (V)	Ambient Temp. (°C)
MAT- L01	40	2700(UW)/ 3500(W)/ 5000(D)/ 6500(UD)	110-277 /220	-25 to 40
	80			
	120			
MAT- L03	80			
MAT- L04	150			
	200			

Photometric Curve (cd/klm)



180.00 — 0
270.0 — 90.0

Ordering Code: (Fixture ■ / Lamp Wattage ■ / Color tem. ■ / Optional ■)

- MAT-L01 Q(40/80/120)/L03 Q(80)/L04 Q(150/200) W-UW/W/D/UD-N-F/P/Q



IP54

MAT - L02

CANOPY LIGHT FOR CLEAN ROOM

Light Source:

- ISQU (Q) Rectangular Lamp Tube

Features:

- Rugged, cold-rolled steel plate with heavy grade epoxy powder coated
- High purity aluminum reflector
- Diffuser is fully gasket with one-piece tubular silicone
- 5mm toughened tempered glass diffuser
- Flat mounting bracket for clean room application with direct ceiling mounting



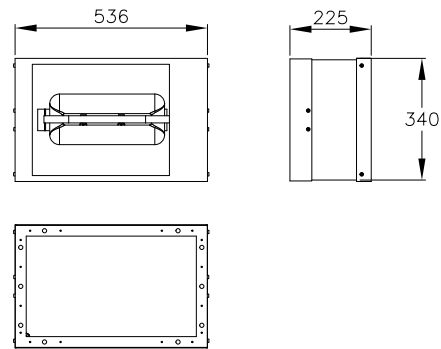
Optional:

- Reflector: Nano Reflector (N)
- Diffuser: Frost Glass (F), Clear Polycarbonate (P), Frost Polycarbonate (Q)
- Housing: SUS 304 Stainless Steel (S304)

Mounting:

- Ceiling mounting

Overall Dimensions (mm)

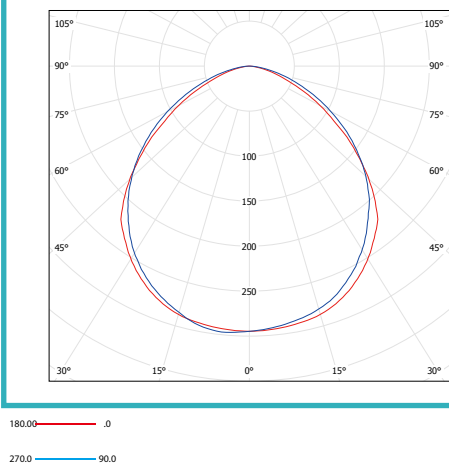


Weight 10.5 kg

MAIN SPECIFICATION

Fixture Code	Lamp Wattage (W)	Color Temp. (K)	Operating Voltage (V)	Ambient Temp. (°C)
MAT- L02	40	2700(UW)/ 3500(W)/ 5000(D)/ 6500(UD)	110-277 /220	-25 to 40
	80			
	120			

Photometric Curve (cd/klm)



Ordering Code: (Fixture ■ / Lamp Wattage ■ / Color tem. ■ / Optional ■)

- MAT-L02 Q40/80/120W -UW/W/D/UD-N-F/P/Q



IP54

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MAT - B01 / B02

BRICK LIGHT

Light Source:

- ISQU (Q) Rectangular Lamp Tube

Features:

- Rugged, die-cast aluminum back housing and hinged door frame
- Castings are sealed with one-piece UV anti-aging silicon gasket
- Die-formed anodized aluminum reflector
- Prismatic borosilicate glass diffuser



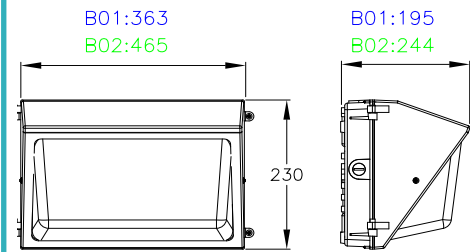
Optional:

- Reflector: Nano Reflector (N)

Mounting:

- Wall mounting with 20mm knockouts

Overall Dimensions (mm)

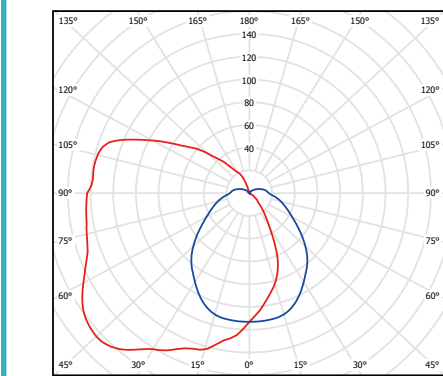


Weight 6.05 / 4.15 kg

MAIN SPECIFICATION

Fixture Code	Lamp Wattage (W)	Color Temp. (K)	Operating Voltage (V)	Ambient Temp. (°C)
MAT- B01	40	2700(UW)/ 3500(W)/ 5000(D)/ 6500(UD)	110-277 /220	-25 to 40
MAT- B02	80			
	120			
	150			

Photometric Curve (cd/klm)



180.00 — 0
270.0 — 90.0

Ordering Code: (Fixture ■ / Lamp Wattage ■ / Color tem. ■ / Optional ■)

- MAT-B01 Q(40)/B02 Q(80/120/150) W-UW/W/D/UD-N



IP65

MAT - A01 AMENITY LIGHT

Light Source:

- I360 (R) Circular Lamp Tube

Features:

- Die-Cast aluminum back plate for maximum heat dissipation
- Injection-molded, one piece, UV stabilized polycarbonate front cover
- Anti-aging silicon gasket between front cover and back plate to inhibits the entrance of external contaminants
- Anodized aluminum reflector with vacuum coated inner surface

Optional:

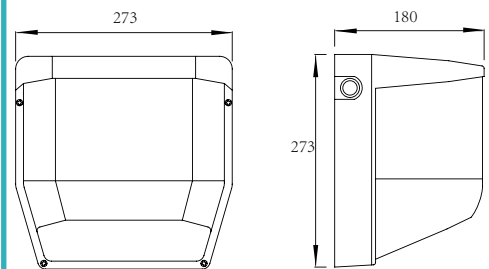
- Reflector: Nano Reflector (N)

Mounting:

- Wall mounting , Recessing mounting to junction box sides



Overall Dimensions (mm)

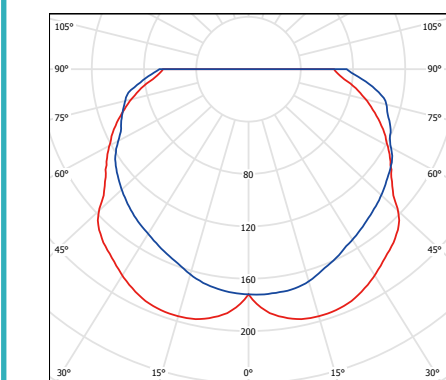


Weight 2.5 kg

MAIN SPECIFICATION

Fixture Code	Lamp Wattage (W)	Color Temp. (K)	Operating Voltage (V)	Ambient Temp. (°C)
MAT-A01	40	2700(UW)/ 3500(W)/ 5000(D)/ 6500(UD)	110-277 /220	-25 to 40

Photometric Curve (cd/klm)



180.00 — .0
270.0 — .90.0

Ordering Code: (Fixture ■ / Lamp Wattage ■ / Color tem. ■ / Optional ■)

- MAT-A01 R40W -UW/W/D/UD-N



IP55

MAT - C01 CEILING LIGHT

Light Source:

- I360 (R) Circular Lamp Tube

Features:

- Rugged cast-aluminum top plate control gear to improve heat dispersion
- Anodized aluminum reflector with vacuum coated inner surface
- UV stabilized polycarbonate diffuser
- Heat resistant UV anti-aging silicon gasket

Optional:

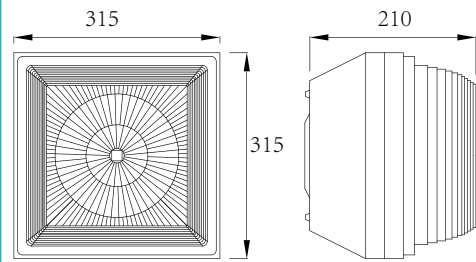
- Reflector: Nano Reflector (N)

Mounting:

- Ceiling mounting



Overall Dimensions (mm)

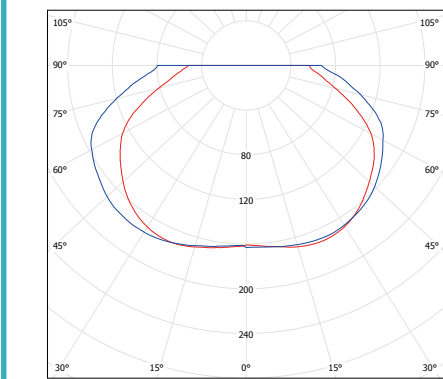


Weight 6.5 kg

MAIN SPECIFICATION

Fixture Code	Lamp Wattage (W)	Color Temp. (K)	Operating Voltage (V)	Ambient Temp. (°C)
MAT-C01	40	2700(UW)/ 3500(W)/ 5000(D)/ 6500(UD)	110-277 /220	-25 to 40
	80			

Photometric Curve (cd/klm)



180.00 — .0
270.0 — 90.0

Ordering Code: (Fixture ■ / Lamp Wattage ■ / Color tem. ■ / Optional ■)

- MAT-C01 R40/80W -UW/W/D/UD-N



IP53

MAT - C02 DOWN LIGHT

Light Source:

- I360 (R) Circular Lamp Tube

Features:

- Die-cast aluminum housing in finished black
- Oxidation and polishing high purity aluminum reflector
- 5mm toughened tempered glass diffuser
- Special designed structure for easy installation and shock resistance

Optional:

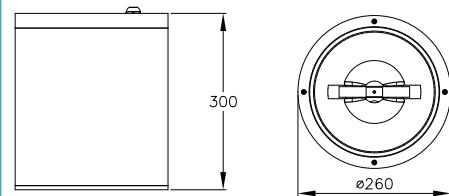
- Reflector: Nano Reflector (N)
- Diffuser: Frost Glass (F)

Mounting:

- Ceiling mounting, Hook mounting



Overall Dimensions (mm)

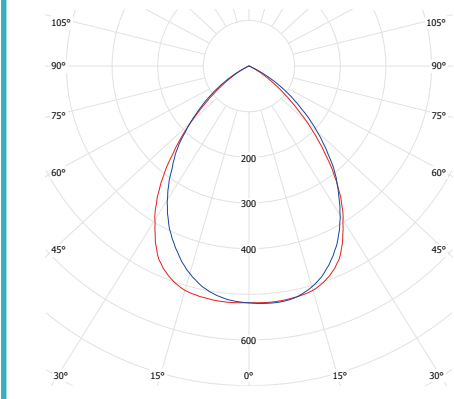


Weight 3.9 kg

MAIN SPECIFICATION

Fixture Code	Lamp Wattage (W)	Color Temp. (K)	Operating Voltage (V)	Ambient Temp. (°C)
MAT-C02	30	2700(UW)/ 3500(W)/ 5000(D)/ 6500(UD)	110-277 /220	-25 to 40

Photometric Curve (cd/klm)



180.00 — .0
270.00 — .90.0

Ordering Code: (Fixture ■ / Lamp Wattage ■ / Color tem. ■ / Optional ■)

- MAT-C02 R30W -UW/W/D/UD-N-F



MAT - I06 / I09

DOWN LIGHT

Light Source:

- I360 (R) Circular Lamp Tube

Features:

- Body made of sheet metal with heavy gauge in white coating
- 5mm toughened tempered glass diffuser
- Stainless steel external adjustable clamp for faster fixing
- Die cut available in 6" and 9"
- Slim ballast case for ease of installation

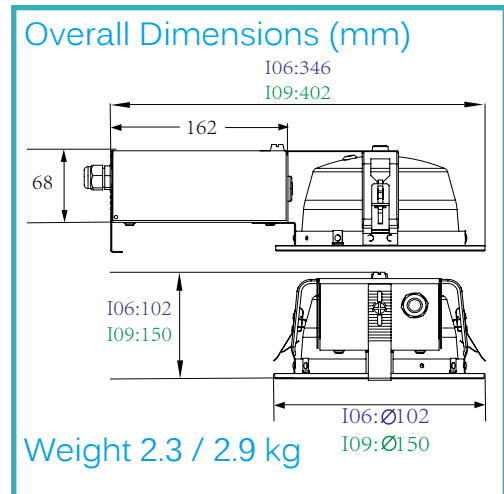


Optional:

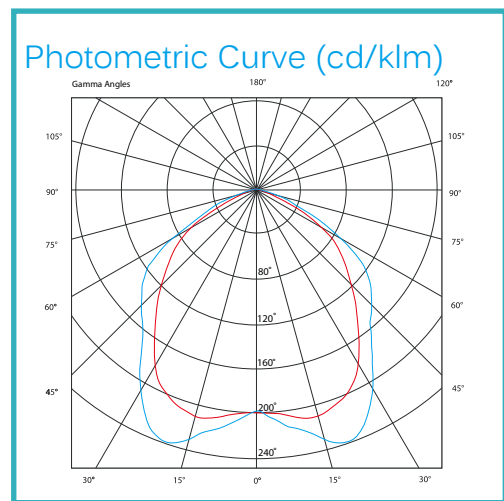
- Reflector: Nano Reflector (N)
- Diffuser: Frost Glass (F)

Mounting:

- Recessed mounting



MAIN SPECIFICATION				
Fixture Code	Lamp Wattage (W)	Color Temp. (K)	Operating Voltage (V)	Ambient Temp. (°C)
MAT-I06	30	2700(UW)/ 3500(W)/ 5000(D)/ 6500(UD)	110-277 /220	-25 to 40
MAT-I09	40			



Ordering Code: (Fixture ■ / Lamp Wattage ■ / Color tem. ■ / Optional ■)

- MAT-I06 R30W / I09 R40W -UW/W/D/UD-N-F



MAT - S03 SPECIAL LIGHT

Light Source:

- I360 (R) Circular Lamp Tube

Features:

- Body made of cold rolled steel plate with electrostatic powder coating
- High quality seal ring of heat resistant silica gel air tight
- 5mm toughened tempered glass
- High purity aluminum reflector
- Remote controlled gearbox



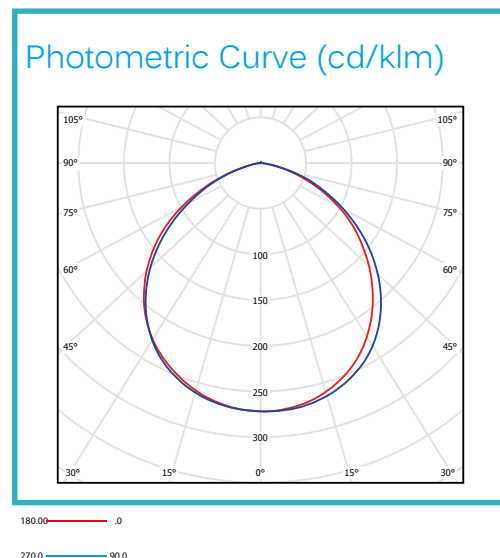
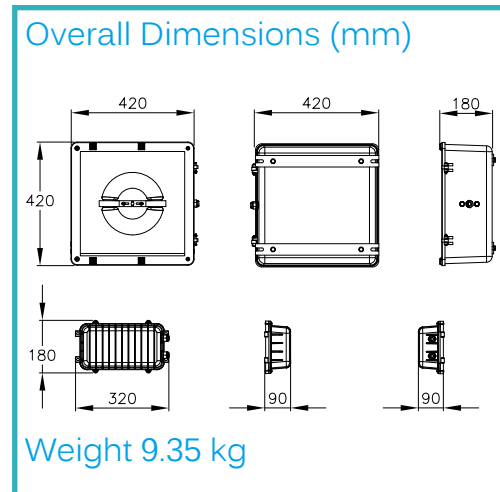
Optional:

- Reflector: Nano Reflector (N)

Mounting:

- Ceiling mounting

MAIN SPECIFICATION				
Fixture Code	Lamp Wattage (W)	Color Temp. (K)	Operating Voltage (V)	Ambient Temp. (°C)
MAT-S03	80	2700(UW)/ 3500(W)/ 5000(D)/ 6500(UD)	110-277 /220	-25 to 40
	120			
	150			



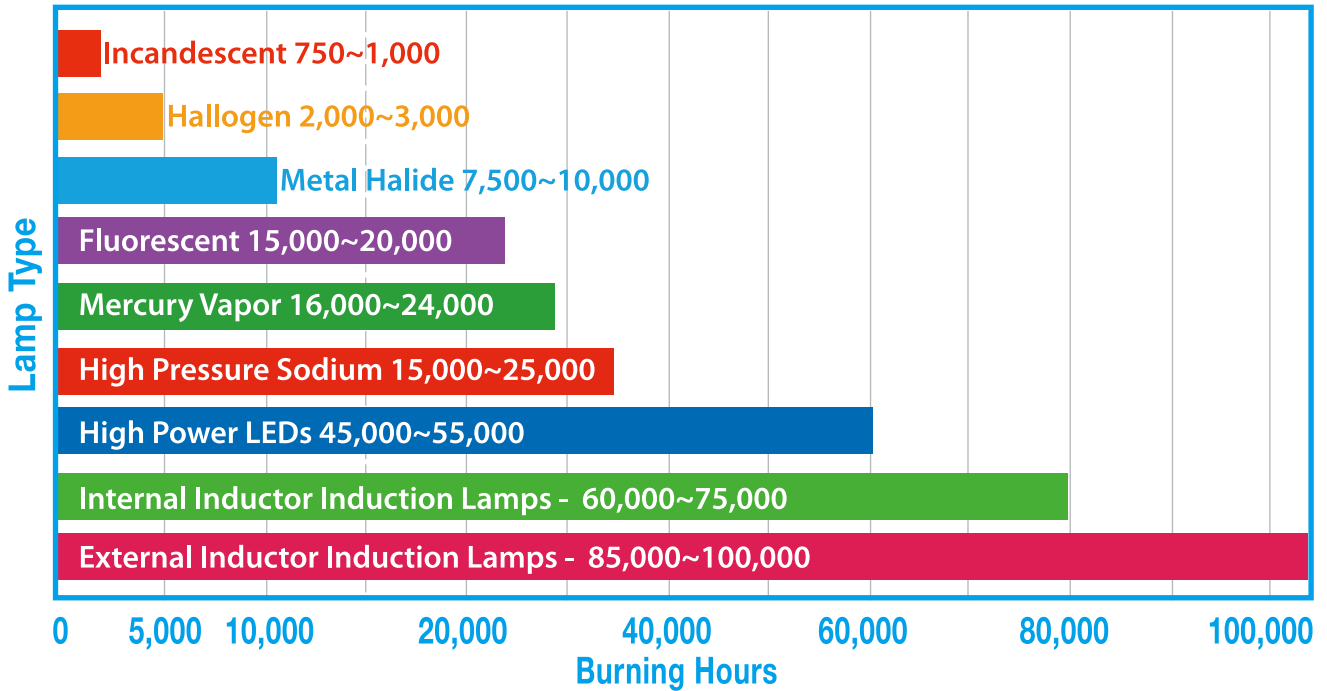
Ordering Code: (Fixture ■ / Lamp Wattage ■ / Color tem. ■ / Optional ■)

- MAT-S03 R80/120/150W -UW/W/D/UD-N



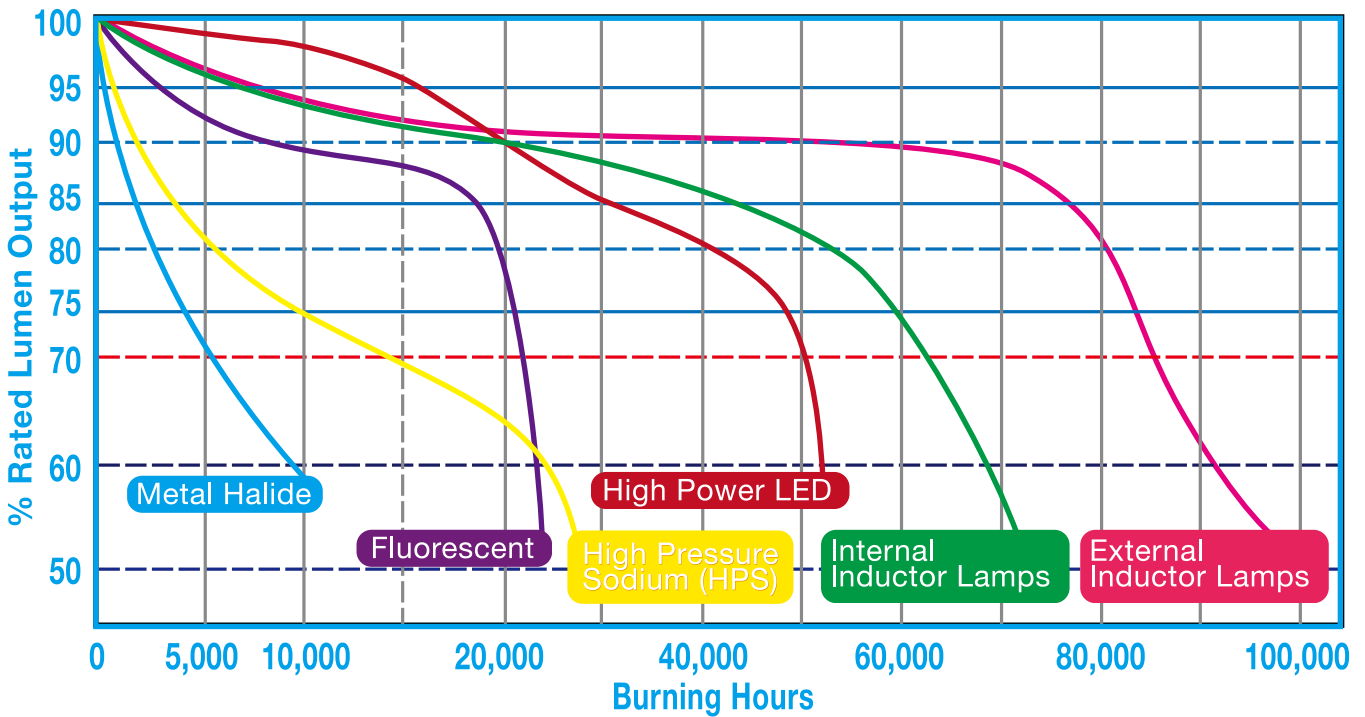
COMPARE WITH OTHER LAMPS

Typical Lamp Lifespan



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Lumen Maintenance



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OVERALL PERFORMANCE

	MAT INDUCTION LAMP	METAL HALIDE	LED
Warranty	5 years	None	2 years
Life Hours	60,000 hrs	6,000 - 20,000hrs	50,000 hrs
Energy Saving Efficiency	Excellent	Energy consuming	Excellent
Lumen Efficacy	Photopic Efficacy: 150 Plm/W (Plm:Pupil Lumen) Traditional Efficacy: 80 Lm/W	Photopic Efficacy: 110 Plm/W (Plm:Pupil Lumen) Traditional Efficacy: 75 Lm/W	Photopic Efficacy: 100 Plm/W (Plm:Pupil Lumen) Traditional Efficacy: 80 Lm/W
Lumen Depreciation	25% at 60,000 hrs	40% at 10,000 hrs	30% at 50,000 hrs
Lamp Operating Temperature	Lower <80°C	Higher >200°C	Higher >100°C
CRI	>80 (Ra)	65 - 80 (Ra)	80 (Ra)
Start & Re-strike	Instant	up to 5 ~ 15 minutes	Instant
Glare Flicker	None	Yes	Yes
Environmental Aspect	Recyclable Amalgam (solid form mercury)	Liquid Mercury	Nil
Mercury consumption per 20,000hr of operation	1.3 mg	37.8 mg	Nil

MAT FREQUENTLY ASKED QUESTIONS

1) **What is MAT induction lamp system and how does induction lighting work?**

The MAT induction lamp system uses a revolutionary light technology that combines the basic principles of induction. The use of induction technology avoids the use of electrodes & this delivers an unprecedented 60,000 hours of life expectancy.

2) **What are the major components of the system?**

The system is comprised of three components; the ballast, the magnetic cores and lamp tube.

3) **Do MAT induction lamps need a dedicated fixture?**

Yes, we offer a range of fixtures designed specifically for our induction lamps. HID fixture should not be used especially because the reflector is not specifically design for induction lamp. But induction lamp fixture is shiny in general to increase the reflectance.

4) **Can running a lamp interfere with computers, telecommunications or any other electronic device?**

No, the system operates at 210 KHz and it is in compliance with FCC and CE (EMC) regulations.

5) **Is the light output of an MAT induction lamp affected by temperature?**

The lamps amalgam fill technology and the heat conduction rod in the centre create stable light output over a wide range of ambient

temperature, maintaining at least 85% of nominal lumen from -34°C to 55°C (for an enclosed fixture with heat sink). MAT induction lamps can start at temperatures as low as -40°C for selected model.

6) **What is the typical lumen maintenance?**

The lumen output of the induction lamp is expected to have depreciated after 60,000 hours to 70% of the initial rated lumens. (or 30% lumen depreciation)

When a fluorescent lamp is new, its light output is at the maximum. As the lamp operates, various processes (plasma, chemical, and thermal) within the lamp causes a gradual reduction of its lumen output. The degree to which the actual light output decreases with operating time is referred to as lumen maintenance.

7) **Does operating position affect luminance output?**

No, the lamp itself can not be burnt in universal position.

8) **Does voltage supply fluctuations effect the performance of the induction system?**

The IC in the ballast guarantees stable current output under voltage fluctuations from 170V - 264V. There is no noticeable effect in the light performance (color temperature, CRI) as a result of voltage fluctuations.

9) **What are the advantages of Nanoflex coating?**

Anti-glare & up to 94% diffuse reflectance. It highly improves the lighting efficiency.

NOTE

A large rectangular area with a blue border and rounded corners, containing 25 horizontal blue lines for writing. The lines are evenly spaced and extend across the width of the box. To the right of this box, there is a decorative graphic consisting of overlapping, curved, semi-transparent shapes in shades of green and blue, resembling a stylized globe or a modern design element.

The logo features the word "MAT" in a bold, blue, sans-serif font. The letter "M" is composed of two vertical bars and a horizontal bar. The letter "A" is composed of two vertical bars and a horizontal bar. The letter "T" is composed of a vertical bar and a horizontal bar. A registered trademark symbol (®) is located to the upper right of the "T". The logo is centered within a large, circular graphic composed of multiple overlapping, semi-transparent bands of color. The colors transition from light blue and purple at the top to green and cyan at the bottom, creating a sense of motion and depth.

MAT®



www.mat-lighting.com

Matsushima Lighting (H.K.) Co.,Ltd

Office: Room 2020-22, No.1 Hung To Road Building,
Kwun Tong, Kowloon, Hong Kong

Tel: (852) 2951 0038

Fax: (852) 2951 0606

Email: enquiry@matsushima.hk