

# SPECIFICATION FOR APPROVAL

Customer : \_\_\_\_\_

Customer P/N : \_\_\_\_\_

Product Type : \_\_\_\_\_

Product No. : **Aurora 315w fixture**

Issue Date : **2019.04.01**

Prepared By			
Checked By	R&D	DQE	QC
Approved By			

Web: [www.lumatek-lighting.com](http://www.lumatek-lighting.com)



## Contents

<b>1. Description</b> .....	1
<b>2. Function and parameters</b> .....	2
2.1 Knob control .....	2
2.2 Recommended Matching Lamps .....	4
2.3 Remote Wire Communication Function .....	5
2.4 Protection .....	6
<b>3. Environment</b> .....	7
<b>4. Safety</b> .....	7
4.1 Surface Temperature Rise.....	7
4.2 Leakage Current.....	7
4.3 Insulation Resistance .....	7
4.4 Dielectric Withstand Voltage (HI-POT) .....	7
4.5 Grounded Resistance .....	7
4.6 Regulatory Standards .....	7
<b>5. EMC</b> .....	8
5.1 EMI .....	8
5.2 EMS.....	8
<b>6. Physical Dimension</b> .....	9
<b>7. Input</b> .....	10
<b>8. Output</b> .....	11
<b>9. Packing</b> .....	12
<b>10.Mark</b> .....	13

## 1. Description

This is a 315W integert lamp with 3.5mm headphone jack interface that can be connected to external controller. Input voltage is 220-240V, 50/60Hz. It will delay 0-6s ignition randomly. Knob dimming range can be 50%-60%-70%- 80%-90%-100% and remote wire communication function.It can match well with 315W CMH lamps.

Date	Prepared	Checked	Item No	Aurora 315w

## 2. Function and parameters

### 2.1 Knob Control

#### 2.1.1 Input Characteristics

Parameter	Conditions	Min	Type	Max	Units
<b>Mains Performance</b>	Operational Performance	198	220-240	264	V
	Operational Safety	187	220-240	276	
<b>Mains Frequency</b> $f_{\text{mains}}$	Operational Performance	48	50/60	63	Hz
	Operational Safety	45	50/60	66	
<b>Mains Power</b> $P_{\text{mains}}$	P=100%	331	342	353	W
	P=90%	297	308	319	
	P=80%	263	274	285	
	P=70%	230	241	252	
	P=60%	196	208	219	
	P=50%	163	174	185	
<b>Mains Current</b> $I_{\text{mains}}$	$V_{\text{mains}} = 240\text{V}$	1.4	1.5	1.6	A
	$V_{\text{mains}} = 220\text{V}$	1.5	1.6	1.7	
<b>Power Factor</b>	P=315W	0.97	0.98	--	--
<b>THD</b>	P=315W	--	--	10%	--
<b>Inrush Current</b>	$V_{\text{mains}} = 240\text{V}$	--	--	30	A
<b>Pulse Duration</b>	$T_a = 25^\circ\text{C}$ , cold start	--	--	0.8	ms

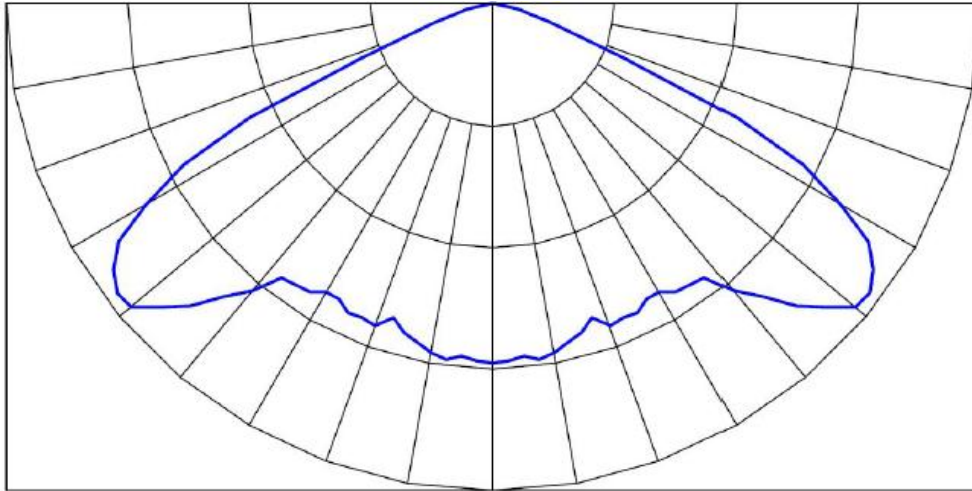
Date	Prepared	Checked	Item No	Aurora 315w

## 2.1.2 Output Characteristics

Parameter	Conditions	Min	Type	Max	Units
Lamp Frequency $f_{lamp}$	P=100%	110	120	130	Hz
Efficiency(%)	P=315W	90	92	--	--
Lamp Power $P_{lamp}$	P=100%	306	315	324	W
	P=90%	274	284	293	
	P=80%	243	252	261	
	P=70%	211	221	230	
	P=60%	180	189	198	
	P=50%	148	158	167	
Lamp Voltage	315 CMH	90	100	115	V
Ignition Voltage	$C_{load} < 100pF$	3000	4000	5000	V
Ignition Interval	--	0.5-0.5-0.5-5-5-5-5-10			Min

Date	Prepared	Checked	Item No	Aurora 315w

## 2.1.2 distribution curve flux



Vertical Plane Through Horizontal Angles (0 - 180): 135DEG

## 2.2 Recommended Matching Lamps

<b>Lamp</b>	Lumatek CMH-315/942
	Lumatek CMH-315/930
	PHILIPS CDM-TM MW 315W/942/U/O C182/O
	PHILIPS CDM-TP 315W/930/U/O
	USHIO CMH-315/930/ARGO
	USHIO CMH-315/942/ARGO

<b>Date</b>	<b>Prepared</b>	<b>Checked</b>	<b>Item No</b>	<b>Aurora 315w</b>

## 2.3 Remote Wire Communication Function

### 2.3.1 Remote Dimming

All output specifications are reported as a percentage of the full ballast rating,

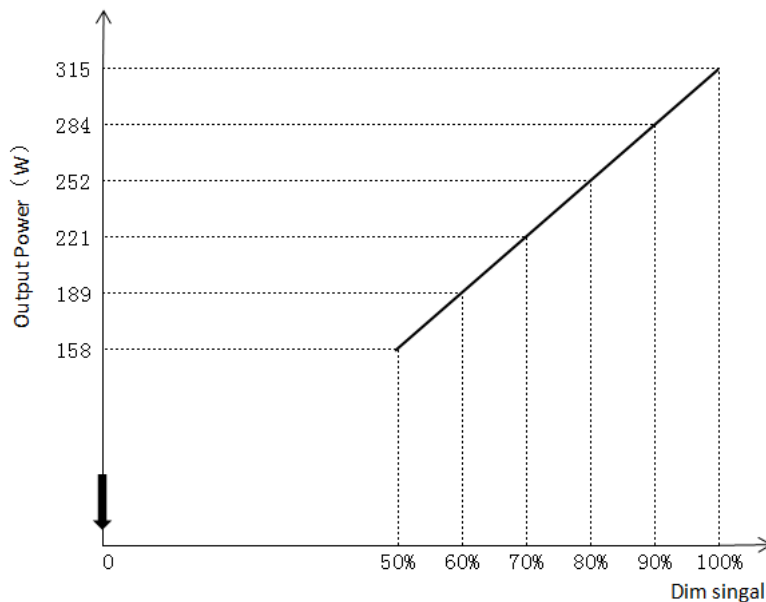
EXP: 80% of 315W ballast = 252W.

Output Mapping Equation (W): (Dimming ratio ) \*ballast rating=Output.

Note: 1.Dimming accuracy is 5%(as per the output power of  $V_{mains} = 220V$ ).

when the dimming ratio is 0%, the ballast will be off ;

user can set the parameters show in the 50%-100%.



### 2.3.2 Remote Control Function

- ✧ It can control remotely the ballast's on/off/dimming rate.
- ✧ Group control mode: it can control the state of a set of products .
- ✧ Single lamp control mode : it can control the state of a single product.
- ✧ Sun rise and set :When the SR/SS set time is 0min, the ballast will power on/off as its own speed, actually, it's exactly same as Power on/off.

Date	Prepared	Checked	Item No	Aurora 315w



## 2.4 Protection

### 2.4.1 Open Circuit Protection

When output is shut off, the ballast will power off for open circuit protection. When errors are removed and the power is re-applied to the product, it can work normally.

### 2.4.2 Short Circuit Protection

When output is shorted, the ballast will power off for short circuit protection. When errors are removed and the power is re-applied to the product, it can work normally.

### 2.4.3 Over Temperature Protection

When  $T_a > 40^\circ\text{C}$ , the ballast will shut off for high temperature protection. When the temperature drops to normal and the power is re-applied to the product, it can work normally.

### 2.4.4 Lamp END of Life/Rectification

The ballast will not be damaged when the rectification appears at the end of the lamp life. When replacing a new lamp and the power is re-applied, it can work normally.

### 2.4.5 Over-voltage/ Low-voltage Detect Protection

Protection happens when input voltage is below 175V or up to 275V (Output power will drop to 90%, when input voltage is 175-195V). When input voltage is back to normal, the ballast can work normally.

Note: Voltage accuracy is 3%.

### 2.4.6 LED status

Status	LED
Ballast locked	Flash*1
Output error	Flash*2
Low input voltage	Flash*3
Over temperature	Flash*4
High input voltage	Flash*5

Note: when the controller is controlled, LED flashes 2 times every 2S, When the controller is not contacted, LED is off, if the 3min is still no control signal, LED flash, the product is shut down.

Date	Prepared	Checked	Item No	Aurora 315w

## 3. Environment

Environment \ Conditions	Operating	Shipping and Storage
3.1 Temperature	-20°C--+40°C	-40°C--+70°C
3.2 Humidity	20%--90%, non-condensing	10%--95%, non-condensing
3.3 Vibration	Amplitude:0.035mm	Amplitude:0.15mm
	Frequency: 10-150Hz	
	Test time in any Direction: 30min	
	Sweep velocity: 1oct/min	
Direction: X,Y,Z		
3.4 Waterproof and dustproof	IP20	

## 4. Safety

### 4.1 Surface Temperature Rise

When output power is 315W, ambient temperature is 25°C and input voltage is 220Vac, the surface temperature rise will be less than 40°C.

### 4.2 Leakage Current

0.75mA<sub>max</sub> V<sub>mains</sub>=240V/60Hz.

### 4.3 Insulation Resistance

The insulation resistance shall be no less than 2M ohm after application of 500Vdc for 60s.

### 4.4 Dielectric Withstand Voltage (HI-POT)

L,N-PE:1500Vac 5.5mA<sub>max</sub>/60s.

### 4.5 Grounded Resistance

<0.5 Ω, 30A, 60s.

### 4.6 Regulatory Standards

EN 61347-1:2008

EN 61347-2-12 : 2005

Date	Prepared	Checked	Item No	Aurora 315w

## 5. EMC

### 5.1 EMI

EN55015

Limit value of radio disturbance characteristics of electrical lighting and similar equipment.

### 5.2 EMS

#### 5.2.1 Surge Immunity

IEC 61000-4-5:

L-N:  $\pm 1\text{KV}$ ;

L/N-PE:  $\pm 2\text{KV}$ .

#### 5.2.2 Electrical Fast Transient

IEC 61000-4-4:

L-N-PE :  $\pm 1\text{KV}$ .

#### 5.2.3 Voltage Dips and Interruptions Immunity

IEC 61000-4-11:

Drop: 30% ;cycles: 10;

Drop: 100% ;cycles: 0.5.

#### 5.2.4 Electrostatic Discharge Immunity

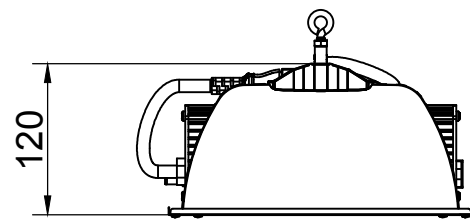
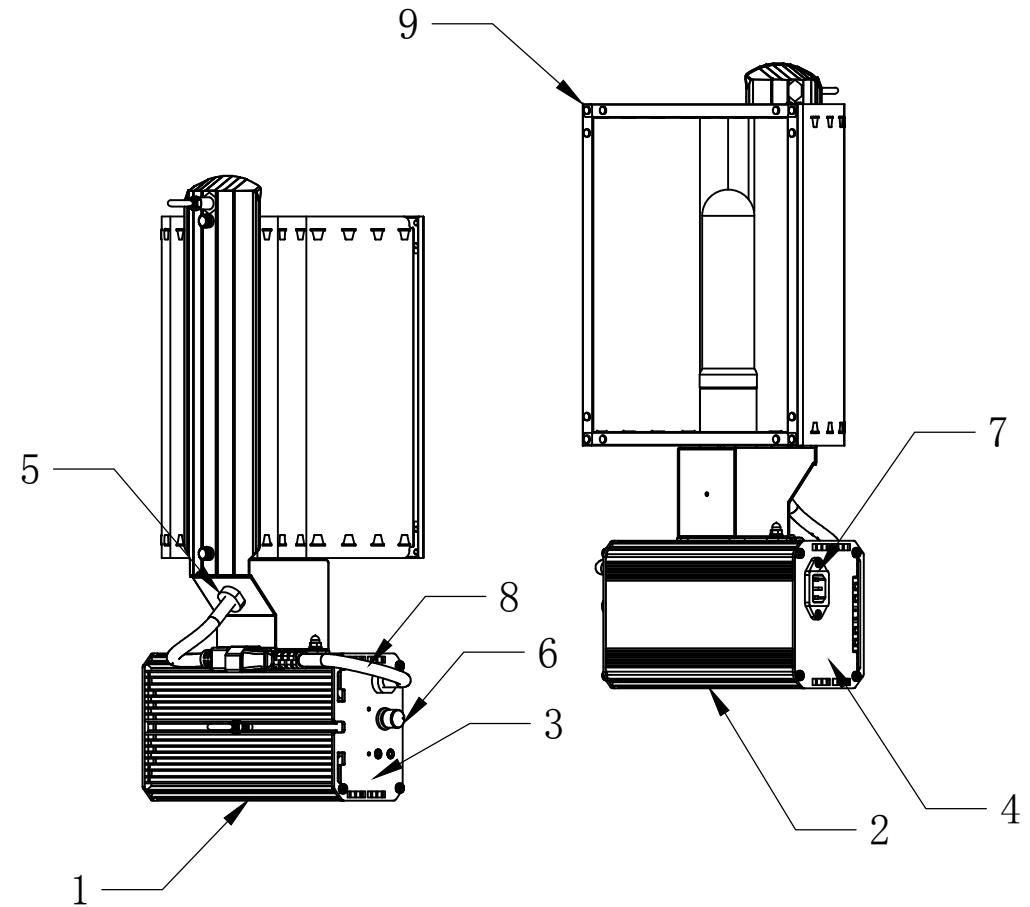
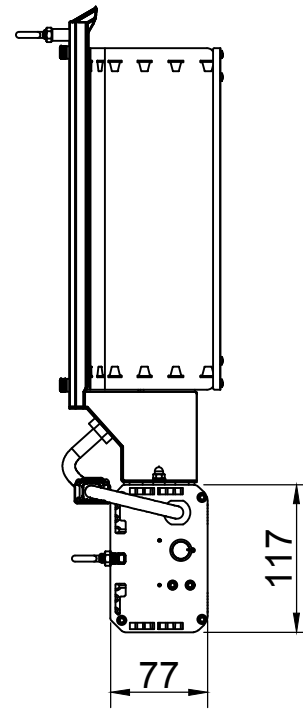
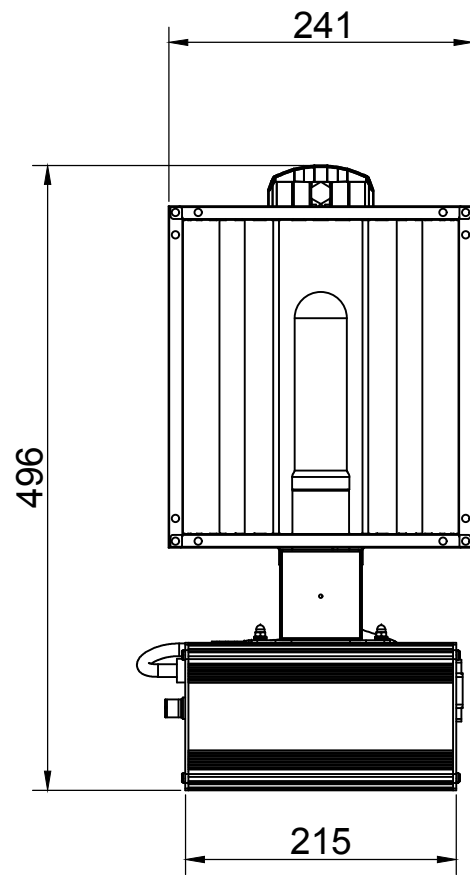
IEC 61000-4-2:

Contact discharge:  $\pm 4\text{KV}$ ;

Air discharge:  $\pm 8\text{KV}$ .

Date	Prepared	Checked	Item No	Aurora 315w

# 6 Physical Dimension



Item	Part Name	Q'ty	Remark
1	Cover	1	Purple
2	Cover	1	Purple
3	Plate	1	Purple
4	Plate	1	Purple
5	Strain Relief Bushing	2	Black
6	Knob	1	Silver White
7	Socket	1	Black
8	Output Line	1	Black
9	Lampshade	1	White

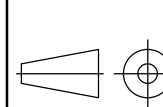
Physical Dimension	
Material	Aluminium
Dimension	241×120×496
Weight	TBDKg

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Dimensional Tolerances (V)	Holes: ±0.05 (I)	Angles: ±0.5° (J)
<30 :±0.25 >30~100 :±0.35 >100~300 :±0.5 Above300 :±0.6	Decimals .X :±0.3 .XX :±0.2 X.XX :±0.1	Up~100 :±0.2 100~150 :±0.25 150~200 :±0.3 200~250 :±0.35

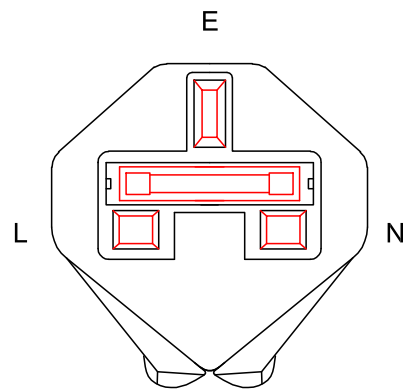
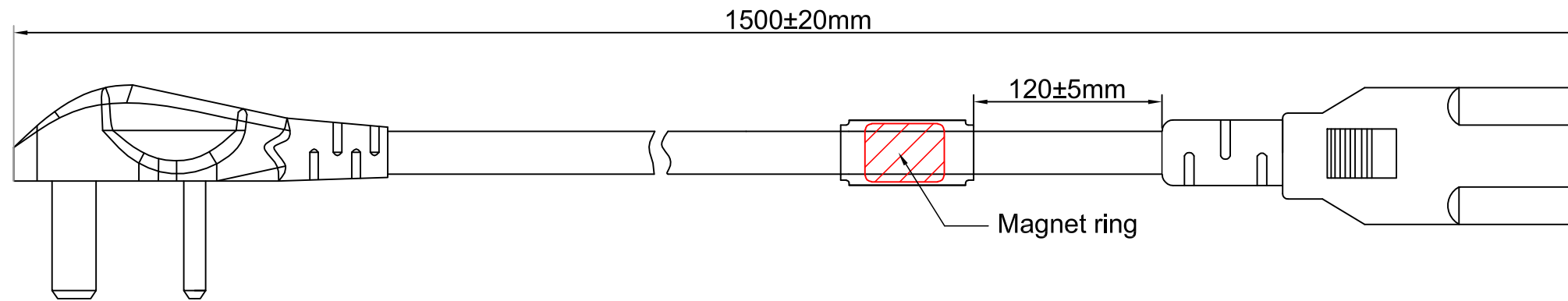


First Angle Projection

Description:		REV
Part No:		P00
Used On:	Aurora 315w	SIZE A3

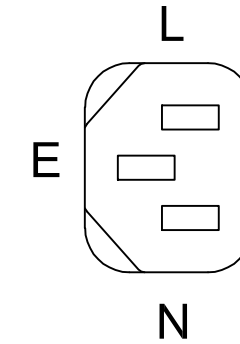
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# 7 Input



Technical requirements :

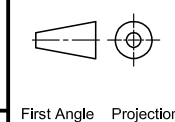
- 1.Emifil: 19×50.8×10.15
- 2.Power cord: Emifil set on the power cord directly, seal
- 3.Specifications:VDE H05VV-F 3×1.5mm<sup>2</sup> 70°C



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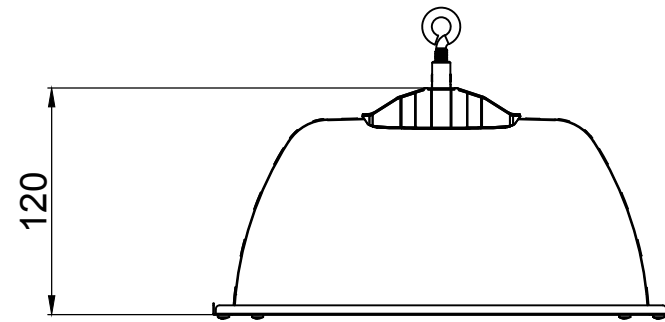
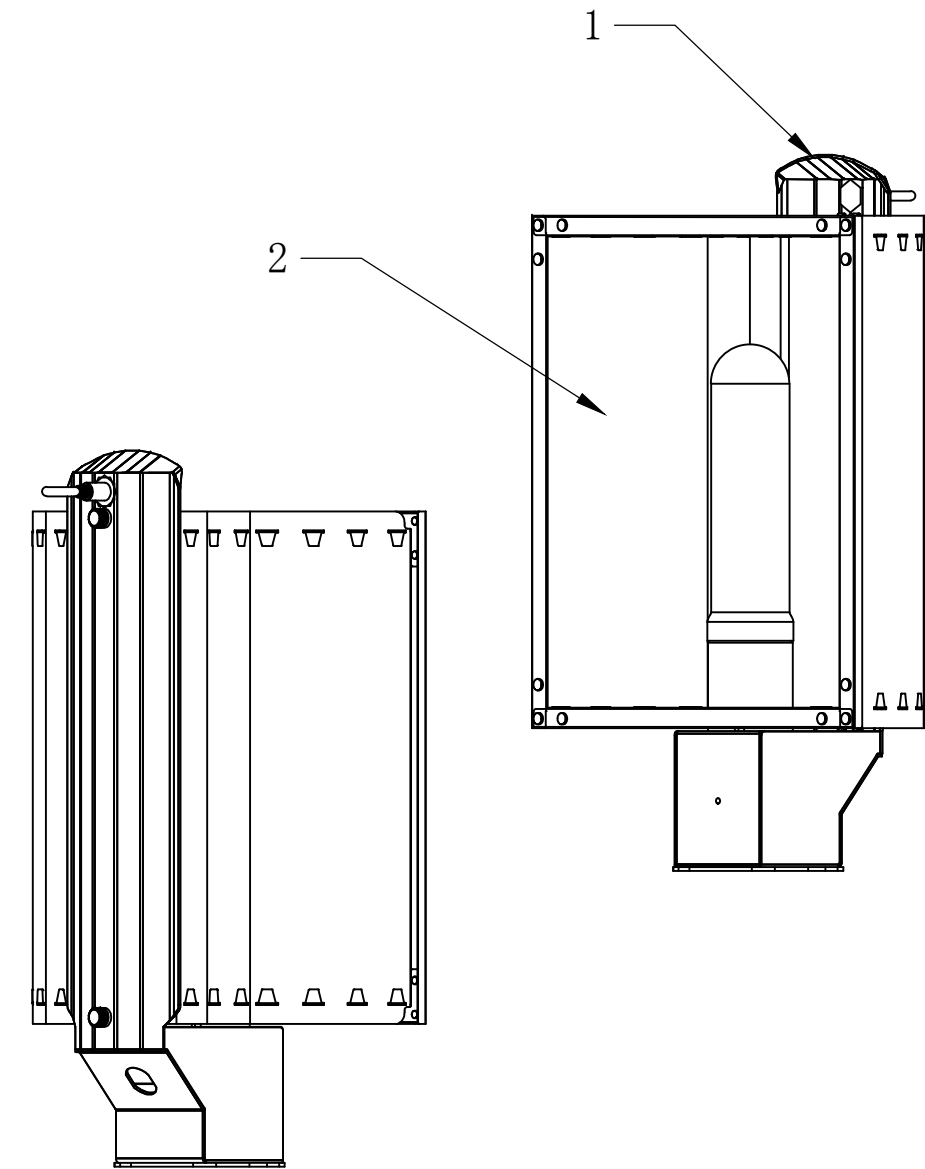
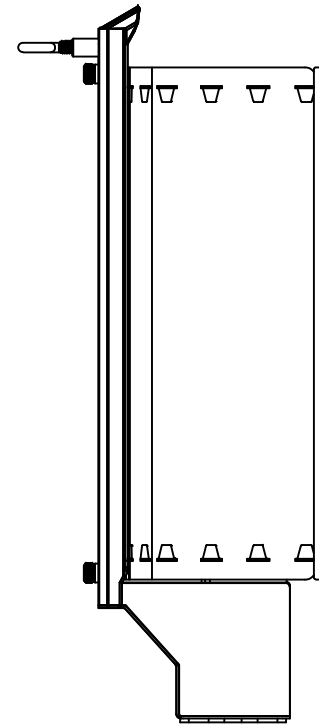
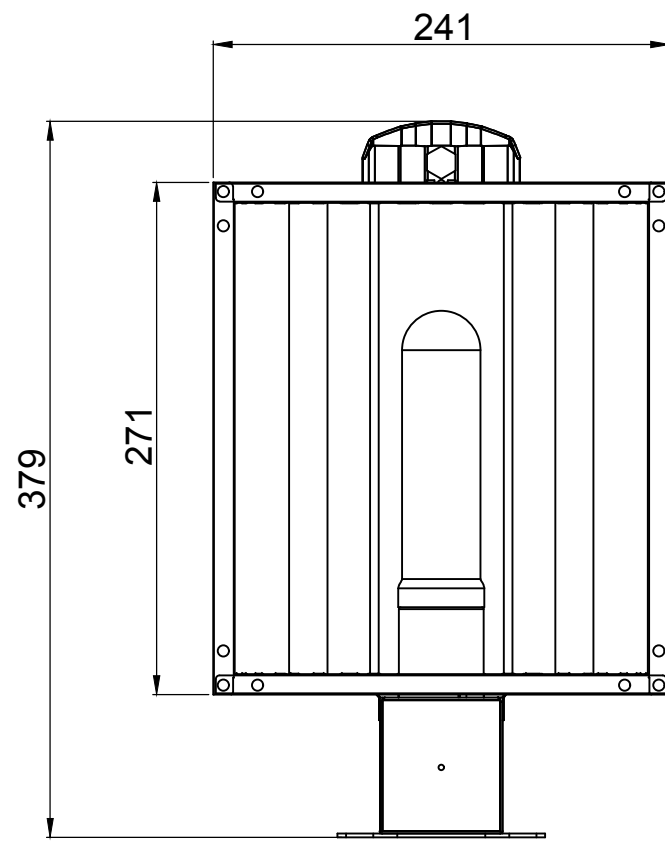


First Angle Projection

<b>Description:</b> Input  <b>Part No:</b> --  <b>Used On</b> LF01423	<b>REV</b>
	P00
	<b>SIZE</b> A3

<b>Scale</b>	--	<b>Unit</b>	mm	<b>Sheet</b> 1 <b>Of</b> 1	<b>Issue Date:</b>	<b>Drawn:</b>	<b>Design:</b>
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# 8 Output



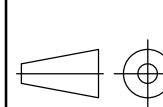
Physical Dimension					
Material	Aluminium	Item	Part Name	Q'ty	Remark
Dimension	241×120×379	1	Bracket	1	White
		2	Lampshades	1	Aluminum bright colors

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Dimensional Tolerances (V)		Holes: ±0.05 ( )		Angles: ±0.5° ( )	
<30	:±0.25	Up~100	:±0.2	250~300	:±0.4
>30~100	:±0.35	100~150	:±0.25	300~350	:±0.45
>100~300	:±0.5	150~200	:±0.3	350~400	:±0.5
Above300	:±0.6	200~250	:±0.35	900~Over	:±3.1

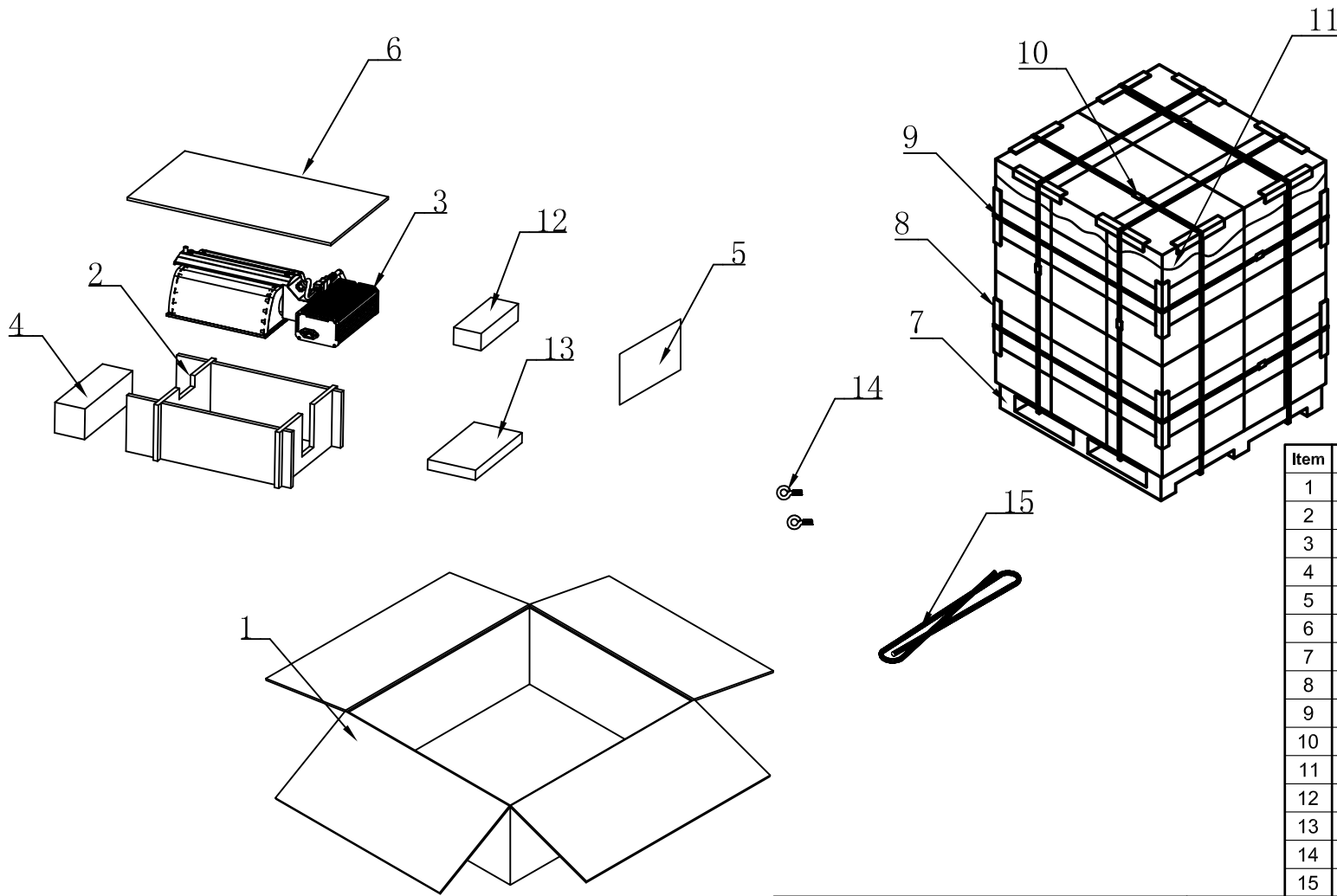


First Angle Projection

Description:		REV
Part No:		P00
Used On:	Aurora 315w	SIZE A3

Scale	---	Unit	mm	Sheet 1 Of 1	Issue Date:	Drawn:	Design:
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# 9 Packing

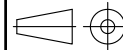


Item	Part Name	Outside Dim(mm)	Q'ty
1	Carton	574×324×188	1
2	Liner	451×310×153	1
3	Digital Ballast	495×251×133	1
4	Light bulb	\	1
5	Instruction	\	1
6	Liner	551×310×7	1
7	Pallet	\	1/n
8	Angle Paper	\	\
9	Plastic Strip	\	\
10	Staple Wire	\	1
11	PE Film	t=0.02	1
12	EPE	200×75×46	1
13	EPE	250×131×27	1
14	Hook up	\	2
15	Cable	\	1

**Notes:**

1. Units:mm
2. All the packing material should meet Lumatek specification.

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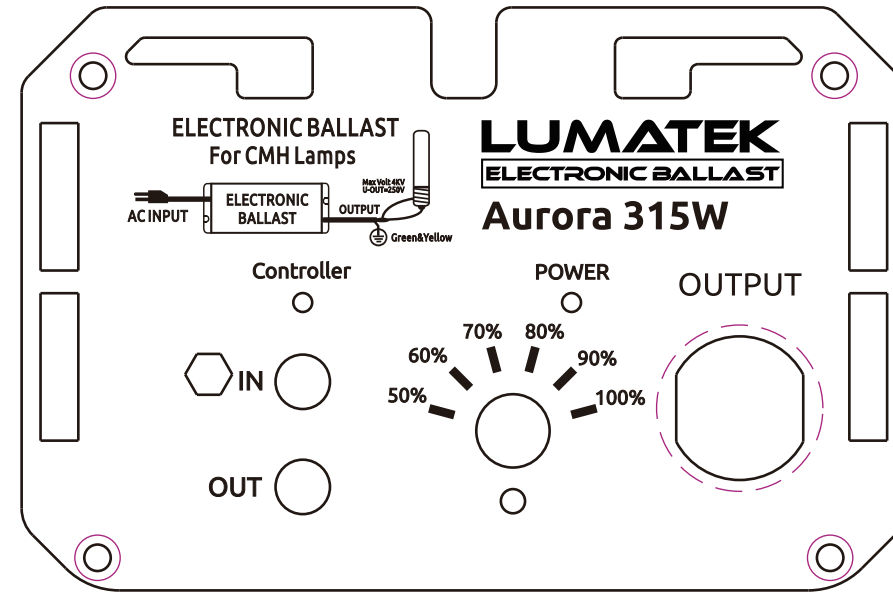
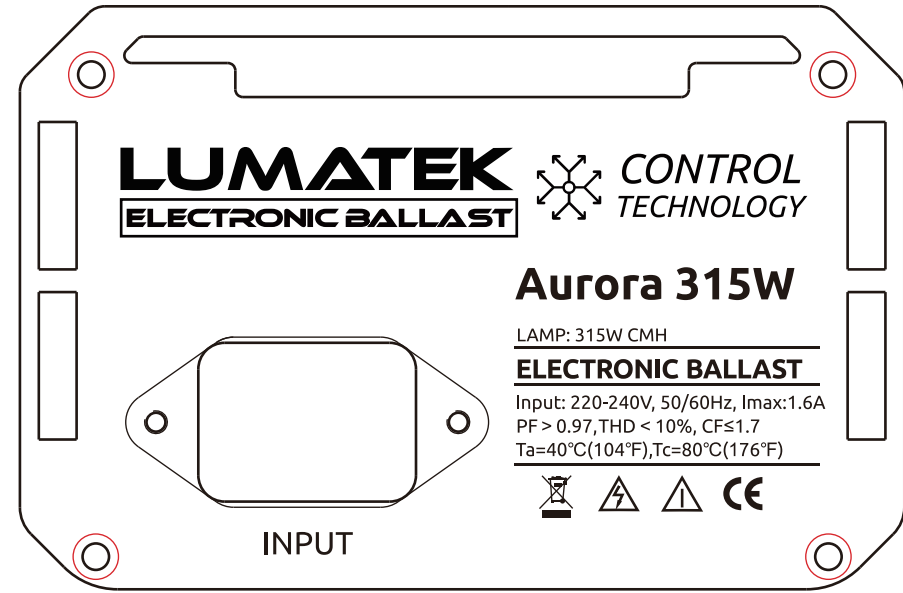


First Angle Projection

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Part No:	-	SIZE A3
Used On:	LF01423	

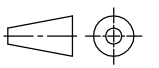
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# 10 Mark



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 First Angle Projection	Description:	Mark	REV P00
	Part No:	--	
	Used On	Aurora 315w	

Scale	--	Unit	mm	Sheet 1 Of 1	Issue Date:	Drawn:	Design:
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