

**1. General Information**

1.1	Ballast identification	YZ-218EAA T8/TC-L 220-240 L290D-B2
1.2	Designed for lamp	T8/TC-L 18W*2 conform to IEC60081/IEC60901
1.3	Number of lamps	2 pieces
1.4	Operation with one lamp removed	Another lamp still work, but working time should not be too long. The defective lamp should be changed promptly to protect the ballast.
1.5	Suitable for luminaries	Luminaries of class I

**2. Input (Mains) Specifications**

2.1	Nominal voltage	230V
2.2	Nominal frequency	50/60Hz
2.3	Min. AC voltage for starting	0°C~50°C, 190V start-up; -10°C~50°C, 220-240V start-up
2.4	AC operation on	198~253V
2.5	Rated input power	≤39W , 230V
2.6	Power factor	≥0.97 , 230V

**3. Application environment temperature&humidity**

3.1	Lowest application environment temperature (Inside the luminaries)	-10°C
3.2	Highest application environment temperature (Inside the luminaries)	50°C
3.3	Highest temperature of ballast case when working normally	70°C
3.4	Lowest application environment humidity (Inside the luminaries)	15%
3.5	Highest application environment humidity (Inside the luminaries)	70%

**4. Safety Requirements**

4.1	Marking	IEC/EN 61347-1、GB19510.1
4.2	Protection against contact with live parts	IEC/EN 61347-1、GB19510.1
4.3	Terminals	IEC/EN 61347-1、GB19510.1
4.4	Provisions for earthing	IEC/EN 61347-1、GB19510.1
4.5	Moisture resistance and insulation	IEC/EN 61347-1、GB19510.1
4.6	Dielectric strength	IEC/EN 61347-1、GB19510.1
4.7	Fault conditions	IEC/EN 61347-1、GB19510.1
4.8	Protection of associated components	IEC/EN 61347-2-3、GB19510.4
4.9	Abnormal conditions	IEC/EN 61347-2-3、GB19510.4
4.10	Creepage distances and clearances	IEC/EN 61347-1、GB19510.1
4.11	Screws, current-carrying parts and connections	IEC/EN 61347-1、GB19510.1
4.12	Resistance to heat, fire and tracking	IEC/EN 61347-1、GB19510.1
4.13	Resistance to corrosion	IEC/EN 61347-1、GB19510.1

**5. Electromagnetic Compatibility (EMC)**

5.1	Limits for harmonic current emissions	IEC/EN 61000-3-2、GB17625.1
5.2	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment	IEC/EN 55015、GB17743
5.3	Equipment for general lighting purpose-EMC Immunity requirements	IEC/EN61547、GB/T18595

**6. Installation and Wiring**

6.1	Terminals	Push-in type
6.2	Cross section of wires (mm <sup>2</sup> ) (any lead)	0.5~1.0mm <sup>2</sup>
6.3	Max. allowed lamp cable length (m)	1.5m

6.4 Min distance ballast to ballast (cm) 5cm

## 7. Ballast Case

7.1 Case material and identification Metal、L290D-B2  
7.2 Approx. dimensions (mm) MaxL<sub>1</sub>290×W30×H30mm  
7.3 Mounting hole distance (mm) L<sub>2</sub>280mm  
7.4 Mounting screws M4 max.  
7.5 Ground connection via Functional connection by push-in wire

## 8. Certifications

8.1 Certifications



(All the certificate is belong to Shenzhen Hengyao Lighting Technology,.Co. only)

## 9. Other Requirements

9.1 Dimmable Operation Not applicable for Dimmable Device  
9.2 Switch Not applicable for Frequent switch on and off conditions  
9.3 Emergency application Not applicable for emergency equipment

## 10. Warrantee

10.1 When meeting following condition, the average life span should be less than 30000 hrs, warrantee period should be 24 months since delivery date.

10.1.1 Make sure the voltage range should be 198V-253V when working

10.1.2 The temperature inside the luminaries should be  $-15^{\circ}\text{C}\sim +60^{\circ}\text{C}$

10.1.3 The humidity inside the luminaries should be  $15\%\sim 75\%$

10.1.4 The matched lamp should be conformed to IEC60081 or certificated to CE

10.1.5 All using wire, lamp holder and accessories should be certificated to CQC、UL、VDE or CE

10.1.6 In the lighting construction site, the fixture power wire could not be with the same wire with the construction equipment such as welding machine or high power equipment

10.1.7 Make sure the light pin, connecting wire and lamp holder will be of good connection, not loose

10.1.8 Make sure the connecting wire should be connect to the lamps according to the wiring diagram correctly.

10.1.9 Every day switch on/off should be less than 10 times

10.1.10 The distance between lamps should be more than 7cm. The ballast could not working with single lamp, it must be work with 2 lamps.

10.1.11 The lamps will be changed timely or only when the flux fall to 50% or the black end  $\geq 2\text{cm}$ .

10.2 No warrantee when working as below

10.2.1 The working voltage range is not in 198V-253V

10.2.2 The application temperature inside the luminaries is lower than  $-15^{\circ}\text{C}$  or higher than  $70^{\circ}\text{C}$

10.2.3 The application humidity inside the luminaries is higher than  $80^{\circ}\text{C}$

10.2.4 The connection is not according to the wiring diagram

10.2.5 Not using the accessories which certificated to CQC、UL、VDE or CE.

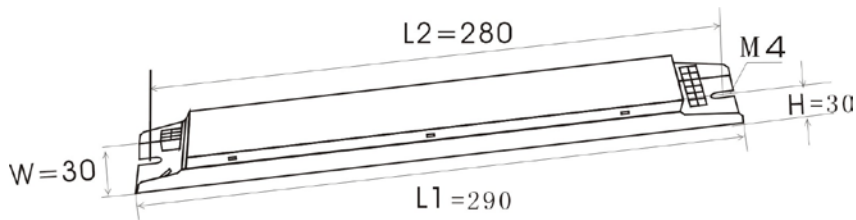
10.2.6 Woking with single lamps only.

## 11. Dimension, Drawing Diagram and Label

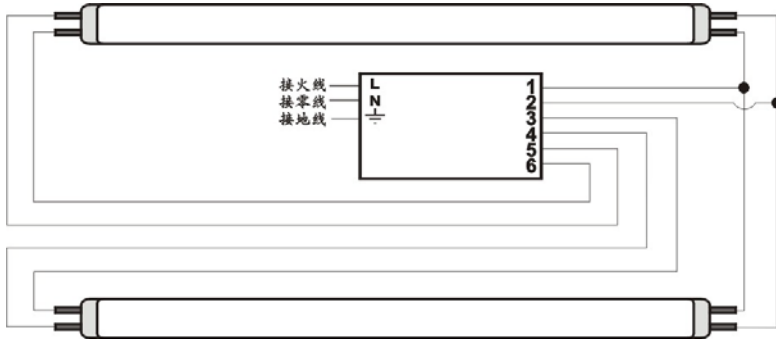
### Dimension

Unit: mm

Tolerance:  $\pm 1\text{mm}$



Drawing Diagram



Label

10 L 20 N 30 PE ~ 220-240V	<b>3AAA</b> REGISTERED IN GERMANY	<b>AC ELECTRONIC BALLAST FOR FLUORESCENT LAMP</b>	<b>YZ-218EAA T8/TC-L</b> PPFC	<b>EEL=A2</b>	U- OUT =400V																				
		<table border="1"> <thead> <tr> <th>Lamp</th> <th>Un(V)</th> <th>fn(Hz)</th> <th>In(A)</th> <th><math>\lambda</math></th> <th>ta(°c)</th> </tr> </thead> <tbody> <tr> <td>T8/TC-L 18Wx2</td> <td>220-240</td> <td>50-60</td> <td>0.160</td> <td>0.98</td> <td>-10-</td> </tr> <tr> <td>T8 15Wx2</td> <td></td> <td></td> <td>0.133</td> <td></td> <td>+50</td> </tr> </tbody> </table>	Lamp	Un(V)	fn(Hz)	In(A)	$\lambda$	ta(°c)	T8/TC-L 18Wx2	220-240	50-60	0.160	0.98	-10-	T8 15Wx2			0.133		+50	<table border="1"> <tr> <td>7-9mm</td> <td>0.5-10</td> <td>tc:70°C max</td> </tr> </table>	7-9mm	0.5-10	tc:70°C max	<p>Leads max.1.5m</p>
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## 12. Cautions when installing the electronic ballast

- 12.1 Please choose appropriate wires which is with Safety Mark Approval and in the range of dimension stated on the label to connect with the input and out put terminals of the ballast.
- 12.2 Please choose the lamp(s) according to the types
- 12.3 Please correctly connect the wire to the ballast according to the label stated and double confirm the connection is correct before lamp start working.
- 12.4 Norminal Voltage is stated on the label. Please double confirm before usage.
- 12.5 Electronic ballast must be grounded for safety reason.
- 12.6 Must connect the output terminal before the input terminal when endurance test preventing short circuit which cause ballast damaged.
- 12.7 It is forbidden for lamp fixture to share the same cable with the high power equipments during installing which may cause ballast broken because of high surge current.
- 12.8 Please make sure ballast is working under stated environmental conditions especially ambient temperature and tc.max.

## 13. FAQ and solutions to failures

Electronic ballast is the ECG in the lamp fixture. Must off the power before testing the fixture or replacing the lamp.

**13.1 When shadow rolling in the lamp**

Solution: It is because of low ambient temperature. It will disappear when the lamp working for a while.

**13.2 Dark in the middle of the lamp**

Solution: It is because of low ambient temperature. It will disappear when the lamp working for a while.

**13.3 Glaring in the lamp**

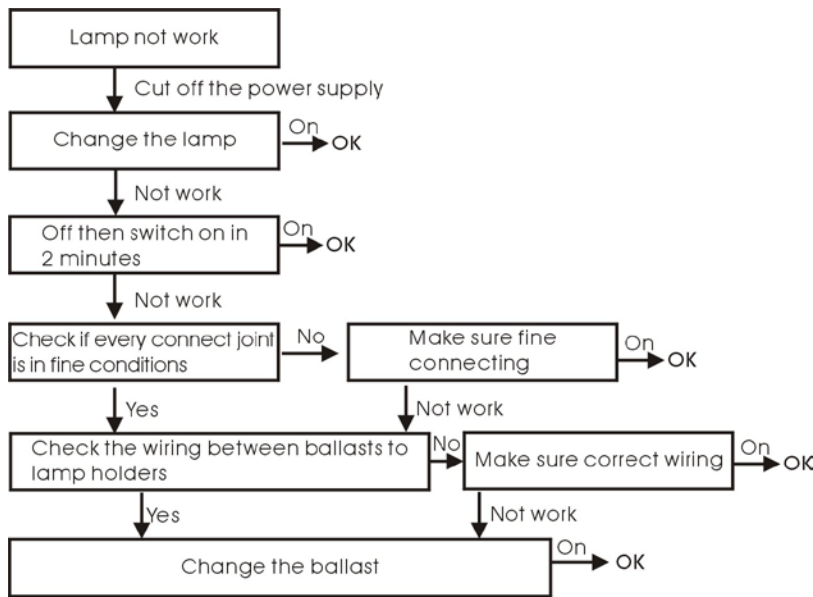
Solution: Because the lamp is not aging enough. Must activate the lamp by switch on/off for several times. If it's still glaring the lamp must be replaced in prevention of ballast damage.

**13.4 Pink Color in the lamp**

Solution: Air leakage with the lamp. Must replace the lamp in prevention of ballast damage.

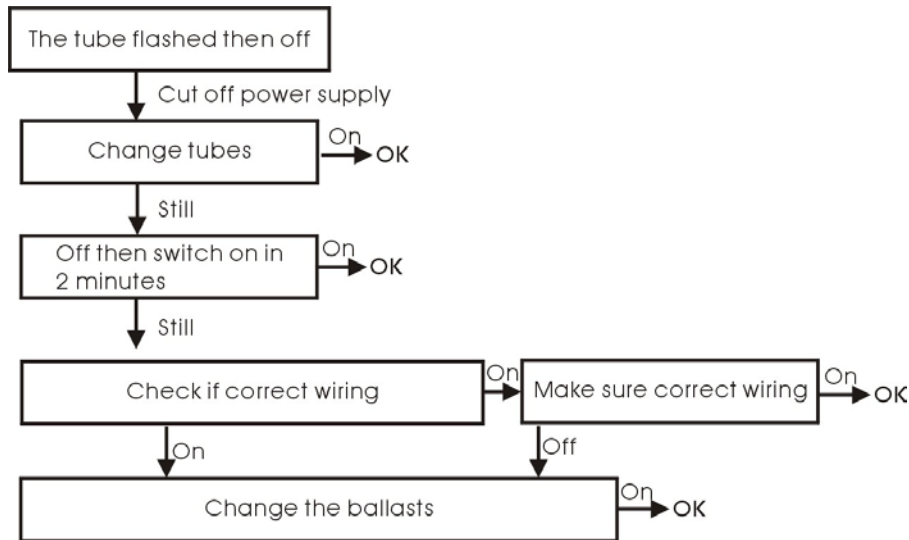
**13.5 Lamp not working**

Solution; Please take the following steps to find out the reason.



**13.6 Lamp flash and off**

Solution; Please take the following steps to find out the reason.



### 13.7 lamps not working mass quantity

Solution: Focus on input power supply checking.

#### 13.7.1 Power Supply Stability

Confirm if the temporarily power supply engine is using of if power supply is loading with high power equipment. If the temporarily power supply is not with surge protector may cause high surge voltage to damage the ballast.

#### 13.7.2 Power Supply Status

Check power supply voltage, check the connection of electric box.

#### 13.7.3 Lamp fixture is grounded properly.

Check the case of ballast to detect if it's with live part.

#### 13.7.4 Ambient temperature and humidity is with range

Check the ambient temperature and humidity.

## 14. Warranty

- 14.1 We provide warranty against ballast to our customer which is begin since delivery date. .
- 14.2 We will only provide warranty assurance to direct purchaser if the failure rate less than 0.5% within warranty period. And warranty is based on properly storage, installation, application and maintainence. Warranty is not included artificial reason.
- 14.3 Damaged by wrong installation or connection is not included in the warranty.
- 14.4 We will repaire, replace or renew the damaged ballast within the warranty.
- 14.5 Seller and buyer must mutually confirm the testing mentord and testing labe if argument of the quality happens.
- 14.6 The warranty is the only suitable assurance to the ballast. Customer can claim based on the warranty.

## 15. Responsibility

We will offer compensation if damaged if cause by ballast quality. But the compensation may not exceed the value of ballast itself.