

## LUMATEK CONTROL PANEL

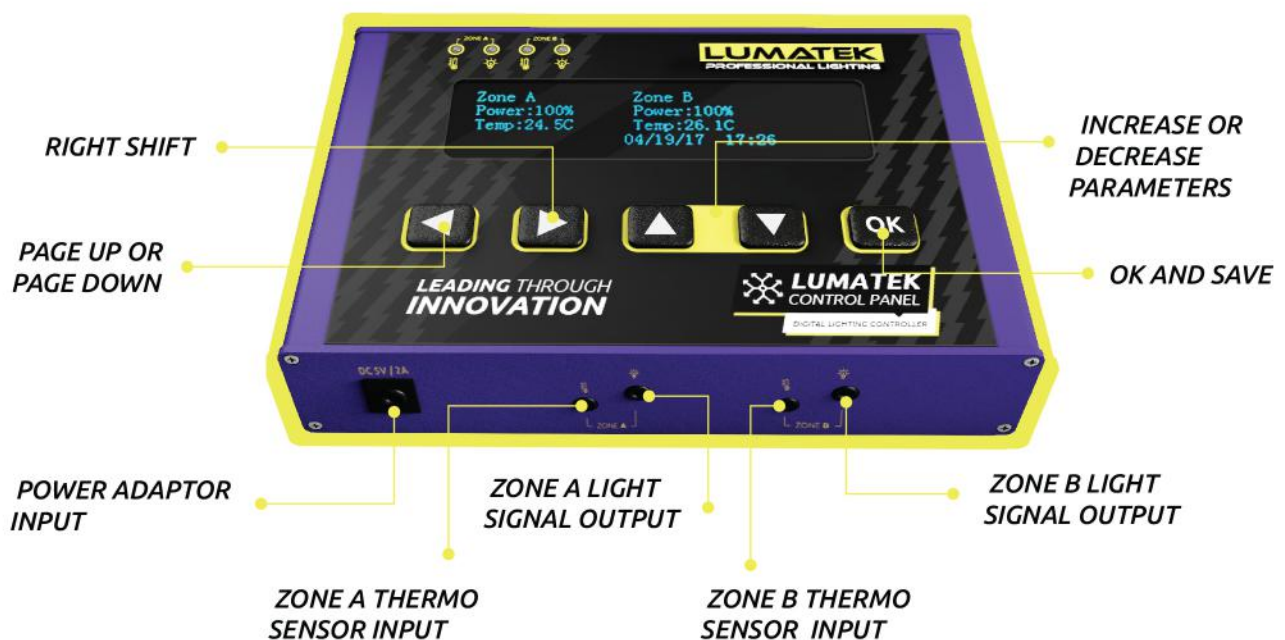


### 1. Lumatek Control Panel introduction

The Lumatek Control Panel is a digital lighting controller that offers outstanding control over your lighting kits. Using highly innovated technology, this controller smartly monitors your room temperatures, light timing, automation, safety control and dimming. Simply connect it to your Lumatek Controllable Ballasts and easily regulate your grow room environment.




#### Technical Specifications:

- Control Panel for up to 400 ballasts
- 2-Channels (Zone A & Zone B)
- Temperature Sensor monitoring and control
- 24 h Light timing
- Digital dimming control (1% increments)
- Specialised Control TRS link cables
- Personalized sunrise & sunset
- Safety and Temperature control mechanisms
- Intelligent room maintenance
- Power = DC5V/2A
- Match Ballasts = 250w, 315w, 400w, 600w, 630w, 750w, 1000w
- Control Command Time Interval = 2S
- Power Dimming Scope = 60% - 110%
- Power Regulation Accuracy = 1%
- Temperature-controlled Adjustable Inspection Scope = 0°C-40°C
- Temperature-controlled Protection Inspection Scope = 10°C-50°C
- Sunrise and Sunset Duration = 0-30 min



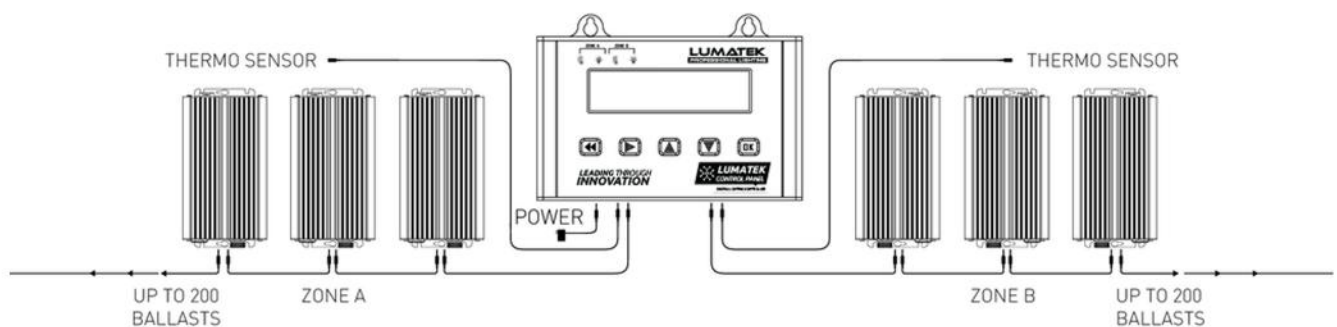
## 2. Lumatek Control Panel accessories

- 1 x Power cable
- 2 x Temperature Sensor cable
- 2 x Control 'Link' cable

Name	Qty	Photos	Note
POWER CABLE	1		/
CONTROL "LINK" CABLE	2		For connection between ballast and controller, with magnetic ring on the cable
TEMPERATURE SENSOR CABLE	2		/

## 3. Connection between ballasts and controller

Linkable 400 lighting kits – 200 ballasts per Chanel



Each Zone must utilise the same fixtures in-line; e.g. Zone 'A' must be all 600w, and Zone 'B' all 630w fixtures.

## 4. Function Introduction

### ●Keypad illustration



Key Name	Function
◀	Page up or Page Down
▶	Right shift
▲	Increase parameters
▼	Reduce parameters
OK	Confirm/save

### ●Interface Specification

Interface specification	Function
1	Power adapter interface
2	ZONE A Temperature probe socket
3	ZONE A Signal output socket
4	ZONE B Temperature probe socket
5	ZONE B Signal output socket



### ●Indicator light



Note	Function
1	<p><b>LED ON:</b> Normal status (Temperature probe is working normally)</p> <p><b>LED OFF:</b> Temperature Control Line not connect well or temperature control fail.</p> <p><b>LED SLOW FLASH:</b> High temperature warning (approach to pre-set value) ,ballast is dimming down now to decrease temperature</p> <p><b>LED FAST FLASH:</b> High temperature, exceed pre-set value, ballast turn off.</p>
2	<p><b>LED Light ON:</b> Lamp on</p> <p><b>LED Light OFF:</b> Lamp off</p>
3	Same as 1
4	Same as 2



## 5. Operation Method

Please preset controller time to your real time:

### ● Real time setting



- A. Press “◀or▶”, enter into “SYSTEM SETTING” setting.
- B. Press “◀or▶”, to the parameter you want to set (Time for example: (Hour:Minutes)).
- C. Press “▲”, “Hour” value will increase, press “▼”, “Hour” will decrease.
- D. Press “OK”, “Hour:minutes” setting finished.
- E. Same way as above, you can set “date” “month” “year” “temperature” “Power % or W” and save the value you set.
- F. After all value setted, press “OK” to save.

### ● ZONE parameter setting (ZONE A: 600W, for example)



- A. Press “OK”, enter into “HOME”.
- B. Press “◀or▶”, enter into the zone you want setting (“ZONE A” for example)  
Type: Power Type option 250W、400W、600W、1000W (here 600w for example)  
Power: Dimming 0% (OFF)、60%~110% (ON), (here 600w can be 40%~110%) (ON)  
R/S: Sunrise/Sunset: duration time (0~30min)  
Dim: Temperature-controlled scope (0~40℃), power decline to 60%.  
Stop: Temperature-controlled protection scope (10~50℃)  
Delay: Protection delay time (0~30min)

● **Timer dimming Setting**



- A. Press“NEXT”then enter into“Zone A”。
- B. Press“◀or▶”, choose“□” choose time and power percent, press“▲or▼”,to“☑”。
- C. Then press“◀or▶”, to choose the time and power percent and press “▲or▼”to increase or decrease the time and power percent value .
- D. After all value setting finished, please press“OK”to save and enter into home page.

**Note:** “ZONE B”setting method same as“ZONE A”。

● **Output power setting**



- A. Press“OK”, enter into“HOME”。
- B. Press“◀or▶”, enter into the zone(“ZONE A” power setting for example)
- C. Press“◀or▶”, then choose“Power: ”。
- D. Press“▲”or“▼” to set the output power.
- E. Press“OK” to save the output power you set.

**Note:**

Entering into set mode, if during 10 seconds there is no operation, the controller will go back to the home page automatically.

## 6. Operation Examples

**Example 1:** Zone A controls 600W ballast, output power is 110% , Sunrise time 08:50 (turn on), Sunset time 19:00 (turn off), Sunrise and Sunset duration time is 0 min, If the ambiente temperature.  $29.4^{\circ}\text{C} \leq \text{temperature} \leq 35^{\circ}\text{C}$  , dimming down automatically to decrease power and temperature , if temperature  $> 35^{\circ}\text{C}$  , turn off and enter into protection status.



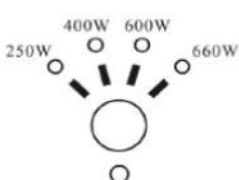
## 7. Lumatek Controller Technical Parameters

Power	DC5V/2A
Match ballasts	250W, 315W, 400W, 600W, 630W, 1000W
Control command time interval	2S
Power Dimming Scope	250W: 60%-110% (150W-275W) 400W: 60%-110% (250W-660W) 600W: 40%-110% (250W-660W) 1000W: 60%-110% (600W-1100W)
Power regulation accuracy	1%
Temperature-controlled adjustable inspection scope	0°C-40°C
Temperature-controlled protection inspection scope	10°C-50°C
Sunrise and sunset duration	0-30min
Turn on delay protection time	0min、5min、10min、15min、20min、25min、30min

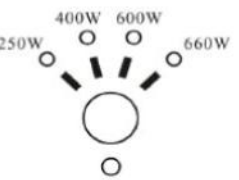


## 8. 1000w Controllable Ballast Parameters

### ●Input Parameters

Item	Condition	Min	Typical value	Max	Unit
Input voltage	Rated voltage Scope	195	220/240	265	V
	Safety voltage Scope	185	240	275	
Input frequency $f_{\text{mains}}$	Rated Frequency	48	50/60	63	Hz
	Safety Frequency	45	50/60	66	
Input power $P_{\text{mains}}$ 	P=660W	669	690	711	W
	P=600W	615	636	657	
	P=400W	403	424	445	
	P=250W	244	265	286	
Input Current $I_{\text{mains}}$	$V_{\text{mains}} = 240\text{V}$	2.8	2.9	3.0	A
	$V_{\text{mains}} = 230\text{V}$	2.9	3.0	3.2	
	$V_{\text{mains}} = 220\text{V}$	3.0	3.2	3.3	
	$V_{\text{mains}} = 195\text{V}$	3.4	3.6	3.7	
Power factor	P=BOOST	0.97	0.98	--	--
Current harmonics	P=BOOST	--	--	10%	--
Surge current	$V_{\text{mains}} 240\text{V}$	--	--	30	A
Pulse duration		--	--	0.8	ms

### ●Output Parameters

Item	Condition	Min	Typical value	Max	Unit
Lamp Frequency	P=660W	37	48	62	KHz
Efficiency	P=660W	94	95	--	--
Lamp Power $P_{\text{lamp}}$ 	P=660W	639	660	681	W
	P=600W	579	600	621	
	P=400W	379	400	421	
	P=250W	229	250	271	
Lamp voltage	600W HPS/MH	86	110	134	V
Ignition pulse	$C_{\text{load}} < 100\text{pF}$	3000	4000	5000	V
Ignition interval time		1-5-5-5			Min

## 9. Lumatek Controller Troubleshooting

Phenomenon	Inspection method	Troubleshooting
Controller doesn't have any display after plug in the power	Check the power supply	Waiting power supply to come back
	Check the adaptor	Change the adaptor
	Check the controller	Change the controller
Fail to control ballasts	Check the connection between controller and ballasts, make sure each connection is well plugged	Reconnect the wires
Controller doesn't have any temperature display after the temperature probe is connected	Check if the temperature probe is damaged.	Change to another temperature probe
Fail to turn on the lamp	Check the LED on the ballast to make sure the LED above the phone-output plug is flashing normally	Reconnect the wire
Ballast working power is not the same as the one the command controller sends	Check the sunrise and sunset time,	Reset sunrise or sunset time or ignore it.
	Check the temperature probe and temperature-controlled value you set	Change the temperature-control value you set or ignore it.
When several ballasts are working together, some units are working well but some others fail to work	Check if the connection wire between ballasts is not wellplugged	Change connection wire or plug out and in to try again
	Check the connection between the taps	Plug in and out to try again or change to another taps
	Check if the ballast is faulty	Check the LED on the ballast

## 10. LED failure indicator on electronic ballast

Status	LED
Ignition time use up, ballast enter into locked automatically	Flash 1
Ballast output abnormal	Flash 2
Low voltage protection	Flash 3
High temperature protection	Flash 4
Over voltage protection	Flash 5

### Note:

**A)** Controller not connected. Dimming LED will go On normally and if any failure happens, the LED above 1100w will flash (failure reason can be found on the list above)

**B)** Controller connected. Dimming LED will not go On, controller LED will go On and flash (Controller LED will flash every 2 seconds, this means that the controller is working normally) If the ballast fails to receive command from the controller (Now the controller connection is not well established or the controller is faulty), the controller LED on the ballast will flash quickly (quick flash every 0.2 seconds).

