

TOMCARLINE

120W Single Output LED Driver

120H Series



■ Features:

- Universal AC input/Full rang 90~305VAC
- Built-in active PFC function
- Protections: Short circuit/Over current/Over voltage/Over temperature
- Cooling by free air convection
- Built-in 3 in 1 dimming function
- (1~10VDC or 10V PWM signal or resistance)
- Metal case, IP65 design for indoor or outdoor installations
- Suitable for outdoor LED street lighting, outdoor
- LED and moving sign applications
- 5 years warranty



120H-421

V: IP65Level, Io adjustable through built-in potentiometer

D: IP65Level, 3 in 1 dimming function (1~10VDC,10V PWM signal and resistance)

SPECIFICATION

Parameter Name	Min.	Typ.	Max.	Unit
Input Voltage	100	100; 230	277	Vac
Input Current	---	0.6	3	A
Power Factor	0.95	0.98	0.99	PF
Frequency Rang	47	50\60	63	Hz
Output no-load Voltage	43	46	48	Vdc
Output Serving Voltage	36	42	43	Vdc
Output Current	-3%	2.85	+3%	Adc
Overshoot	---	---	10	%
Ripple & Noise	---	---	300	mV
No Load Power	---	0.5	2	W
Efficiency	88	91	---	% (230VA)
Over Current Protection	---	---	110	%
Over Temperature Protection	Shut down O/P voltage, recovers automatically after temperature goes down			
Short Circuit Protection	Constant Current limiting, recovers automatically after fault condition is remove			

WORKING ENVIRONMENT

Item	Min.	Typ.	Max.	Unit
Working Temp.	-40~+70℃ (Please refer to "OUTPUT LOAD vs TEMPERATURE" section)			
IP Rating	IP65			
MAX. Working Humidity	20~95%RH non-condensing			
Cooling Method	Cooling by free air convection, External LED Driver can improve the lifespan.			
Storage Temp. , Humidity	-40~+80℃,10~95%RH			
Working Atmosphere	70	---	106	Kpa

SAFETY

Item	Min.	Typ.	Max.	Unit
I/P-O/P	3750	---	---	V(AC)
I/P-FG	2000	---	---	V(AC)
O/P-FG	500	---	---	V(DC)
Surge: L-N	2000	---	---	V
Surge :L,N-FG	4000	---	---	V

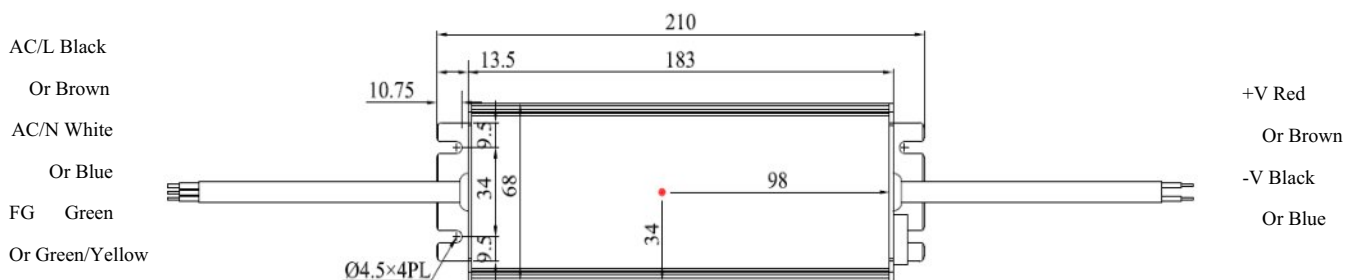
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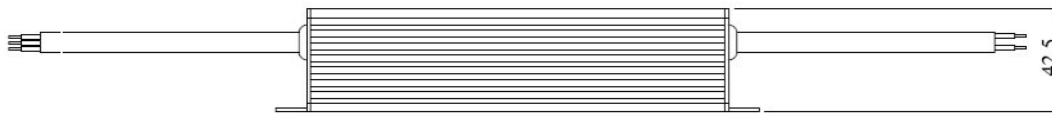
120H Series

MECHANNIC SPECIFICATION

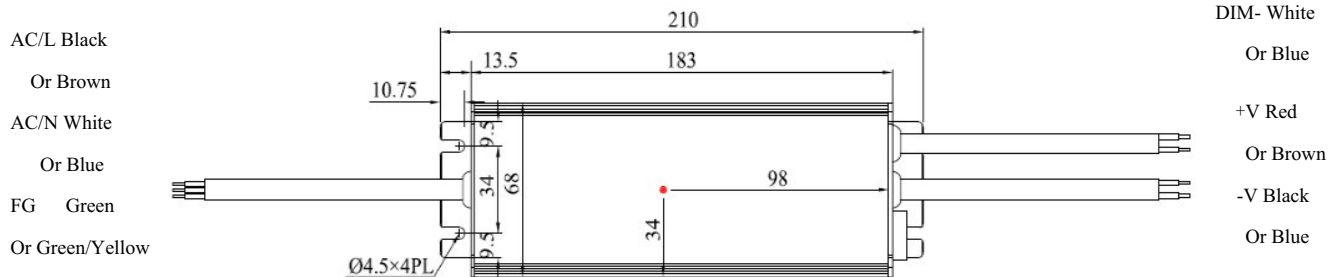
※ V-Type:(120H- 42V)



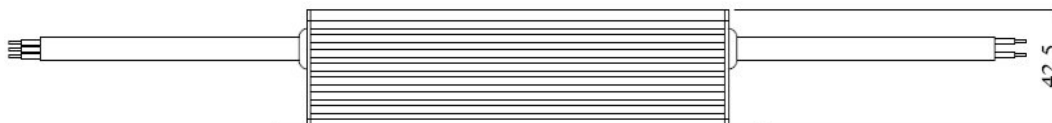
• tc: MAX. Case Temperature



※ D-Type:(120H- 42D)



• tc: MAX. Case Temperature



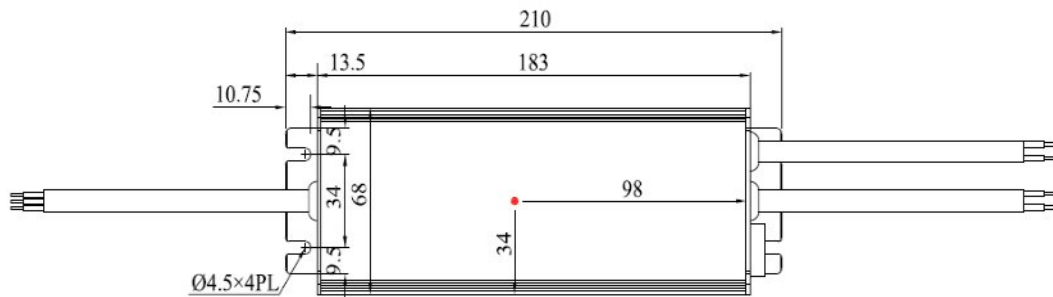
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DIMMING OPERATION

AC/L Black
Or Brown
AC/N White
Or Blue
FG Green
Or Green/Yellow

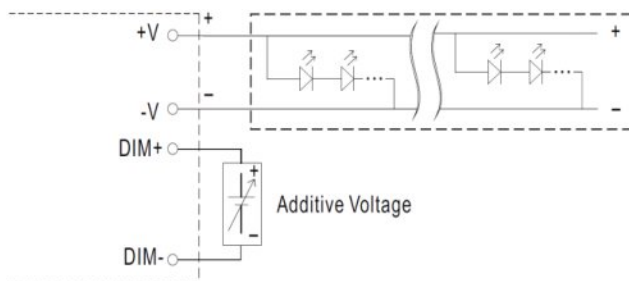


DIM+ Blue
Or Brown
DIM- White
Or Blue
+V Red
Or Brown
-V Black
Or Blue

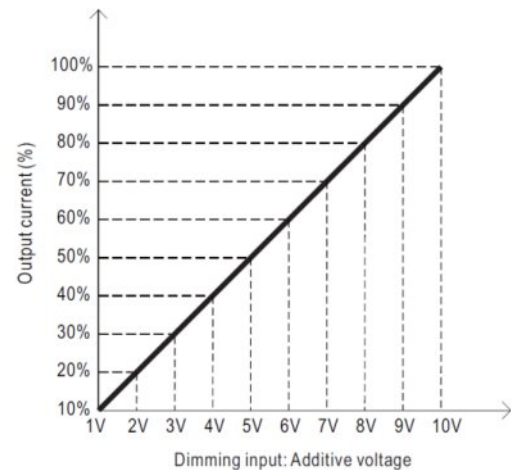
※ 3 in 1 dimming function(for D-Type)

- Output constant current level can be adjusted by applying one of the three methodologies between DIM+ and DIM-: 1~10VDC, or 10V PWM signal or resistance.
- Direct connecting to LEDs is suggested. It is not suitable to be used with additional drivers.
- Dimming source current from power supply: 100uA (typ.).

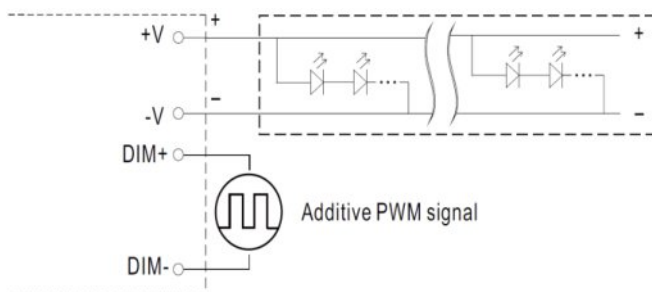
© Applying additive 1~10VDC



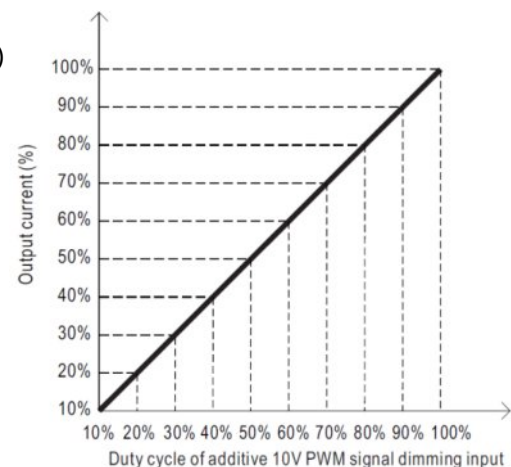
DO NOT connect "DIM- to V-"



© Applying additive 10V PWM signal(frequency rang 100Hz~3KHz)



DO NOT connect "DIM- to V-"

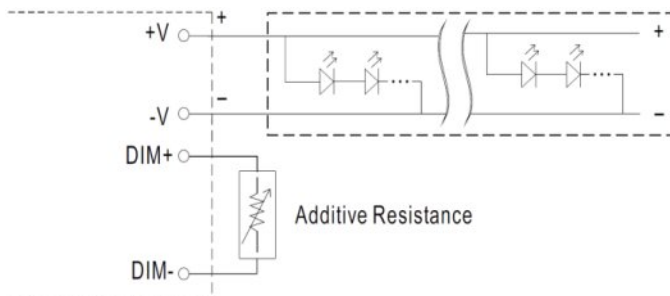


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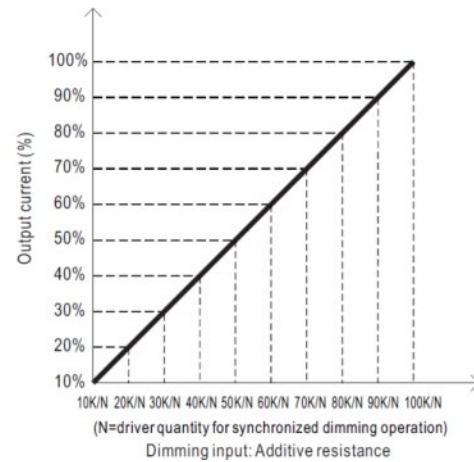
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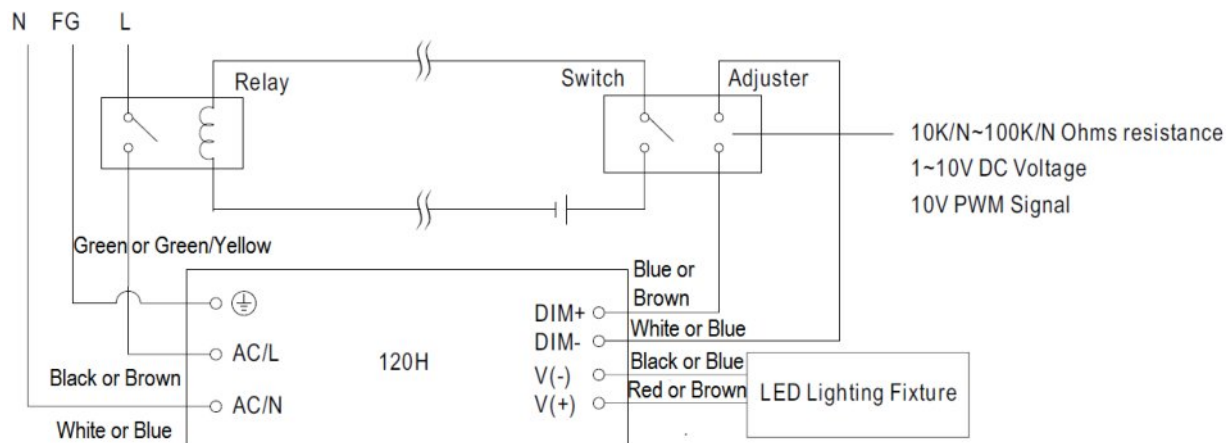
© Applying additive resistance:



DO NOT connect "DIM- to V-"



Note: In the case of turning the lighting fixture down to 0% brightness, please refer to the configuration as follow:



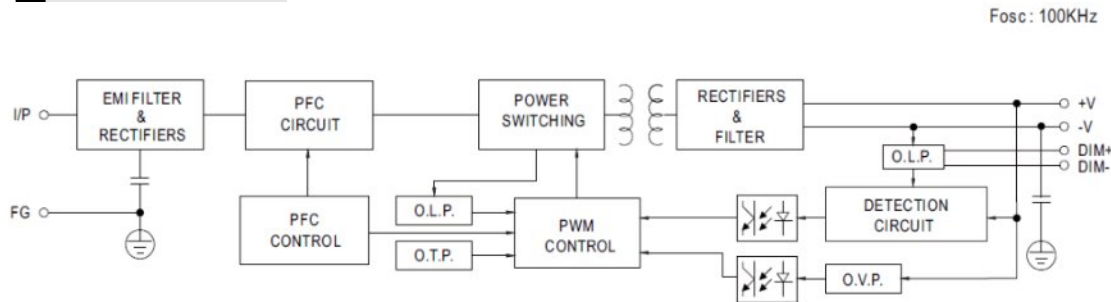
※ Using a switch and relay can turn ON/OFF the lighting fixture.

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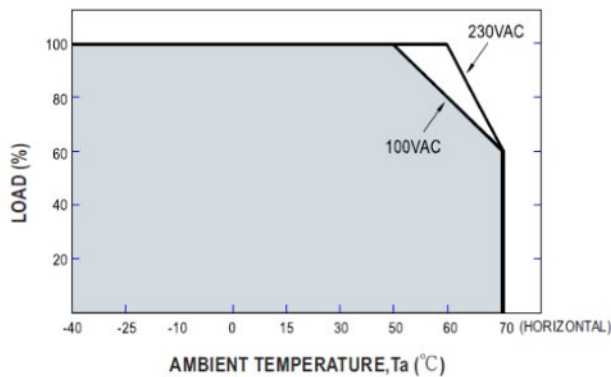
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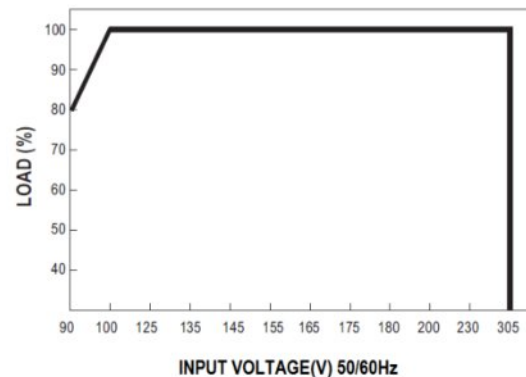
BLOCK DIAGRAM



OUTPUT LOAD vs TEMPERATURE

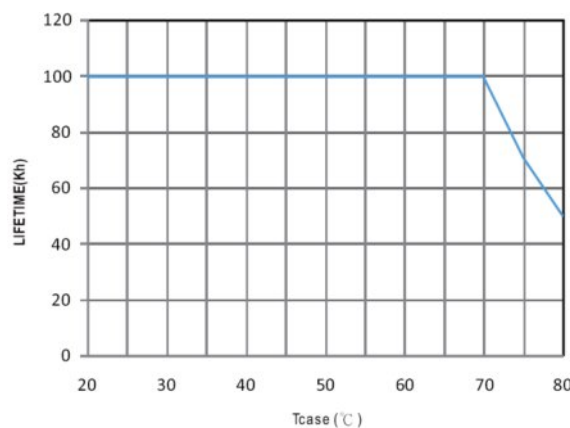


STATIC CHARACTERISTICS



※ De-rating is needed under low input voltage.

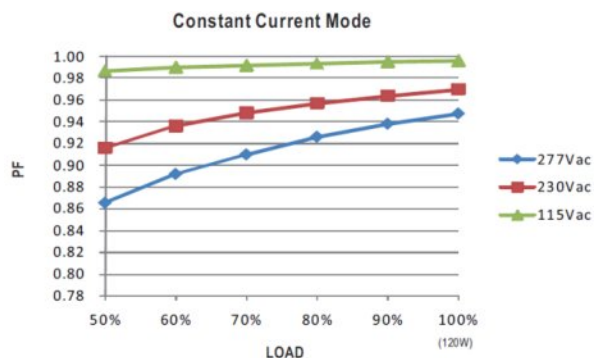
LIFETIME



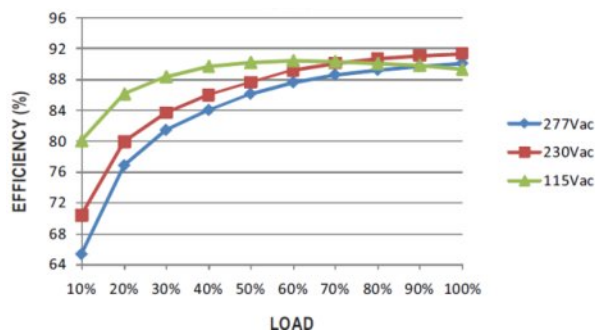
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POWER FACTOR (PF) CHARACTERISTIC**EFFICIENCY vs LOAD**

120H series possess superior working efficiency that up to 91% Can be reached in field applications.

**DRIVING METHODS OF LED MODULE**

- ※ This series is able to work in either Constant Current mode(a direct drive way) or Constant Voltage mode (usually through additional DC/DC drive) to drive the LEDs.

