

S.M.P.S

LED Converter

Water Proof Converter

# F150CQH Series

150W single output with c.v+c.c circuit and PFC function



- **Constant voltage or current design(C.V+C.C. Mode) (12V:C.V mode only)**
- **Built-in PFC function** ● **Wide input range**
- **Protections:Over current /Over voltage / Short circuit/Over temperature**
- **IP68 design for outdoor installations**
- **100% full load burn-in test**
- **3 in 1 dimming function(option:D type)**
- **Suitable for LED lighting and street lighting applications**
- **Safety standards : EN61347-1,EN61347-2-13 K61347-1,K61347-2-13 ,J61347-1,J61347-2-13**
- **EMC standards : EN55015,EN61000-3-2,3 EN61547,K00015,K61547,J55015**
- **Metal case**
- **5years warranty**

**UPF150S48CQH**

Blank : IP68 rated. Cable for I/O connection.

Output voltage and current level can be adjusted through internal potentiometer

D(option) : IP68 rated. Constant current level adjustable through output cable with 10V PWM signal or 1-10Vdc or resistance

IP68

ITEM	UPF150S12CQH	UPF150S24CQH	UPF150S36CQH	UPF150S48CQH	UPF150S60CQH	
INPUT	VOLTAGE RANGE AC90~305V					
	FREQUENCY RANGE 47~63Hz					
	POWER FACTOR PF>0.95 at over 60% of rated power					
	EFFICIENCY(typ.)	89%	90%	91%	91%	91%
	AC CURRENT(typ.)	1.6A/115VAC (typ) 0.8A/230VAC(typ)				
	INRUSH CURRENT(typ.)	COLD START 40A/230VAC				
	LEAKAGE CURRENT	<2.5mA / 230VAC				
OUTPUT	RATED CURRENT	12.5A	6.3A	4.2A	3.2A	2.5A
	CONSTANT CURRENT REGION	-	12-24V	18-36V	24-48V	45-65V
	RATED POWER	150W				
	VOLTAGE ADJ. RANGE	10.8~13.2V	22~27V	32~40V	43~53V	54~66V
	CURRENT ADJ. RANGE	-	3.8~6.3A	2.5~4.2A	1.9~3.2A	1.5~2.5A
	CURRENT ACCURACY	±5%				
	RIPPLE&NOISE(max.) Note2	150mVp-p				
	SETUP,RISE TIME(max.)	3000ms,100ms/115VAC at full load 3000ms,100ms/230VAC at full load				
HOLD UP TIME(typ.)	50ms/115VAC at full load 50ms/230VAC at full load					
PROTEC-TION	OVER CURRENT Note3	12V : Over 110% of rating ; recovers automatically after fault condition is removed 24,36,48V : 95~108%				
	SHORT CIRCUIT	Hiccup mode ; recovers automatically after fault condition is removed only 12V becomes hiccup or shut down mode / recover : automatically or need reapplying power				
	OVER VOLTAGE	115~140% of rating				
	OVER TEMPERATURE	105~110±10℃ (temp. Sensor) ; recovers automatically after fault condition is removed				
ISOLA-TION	WITHSTAND VOLTAGE	I/P-O/P:AC3.75KV, I/P-F.G:AC2KV, O/P-F.G:AC1.5KV				
	ISOLATION RESISTANCE	I/P-O/P, I/P-F.G, O/P-F.G:DC500V 100Mohms(At room temp. & humid.)				
ENVIRON-MENT	WORKING TEMP.&HUMID.	-40~+70℃ (Refer to "DERATING CURVE),20~95%RH				
	STORAGE TEMP.&HUMID.	-40~+80℃, 10~95%RH				
	VIBRATION	10~500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes				
OTHERS	DIMENSION/WEIGHT 231*68*38.8mm(L*W*H)/1.05Kg					

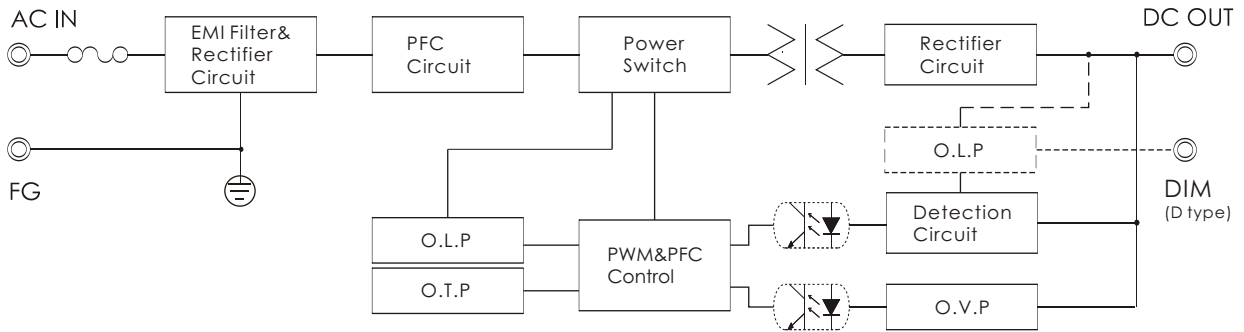
- NOTE**
1. All parameters not specially mentioned are measured at 220vac input, rated load and 25℃ of ambient temperature.
  2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with 0.1 uF & 47uF parallel capacitor.
  3. Refer to "DRIVING METHODS of LED MODULE"

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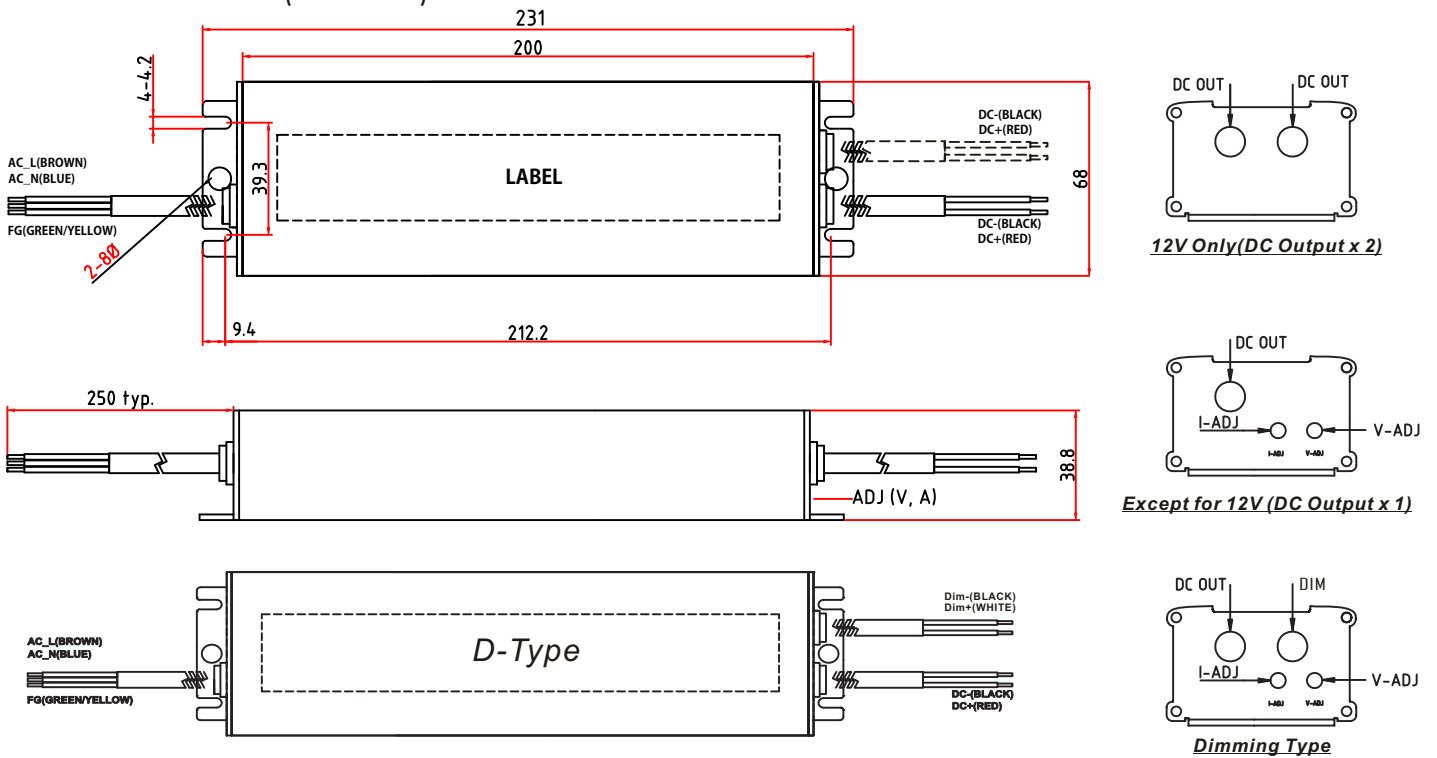
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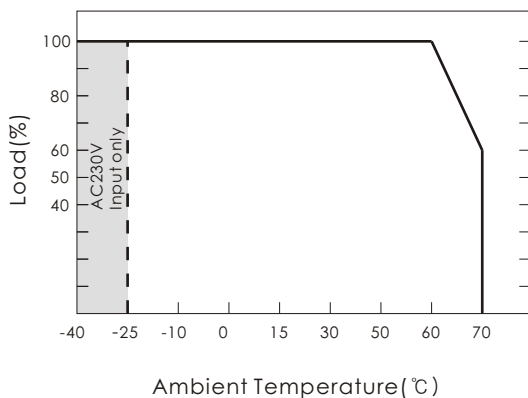
■ BLOCK DIAGRAM



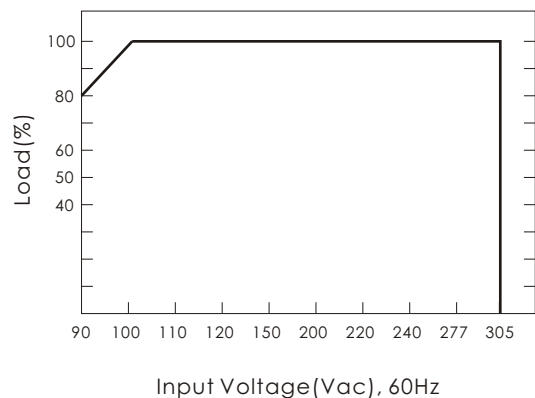
■ DIMENSIONS(unit:mm)



■ DERATING CURVE

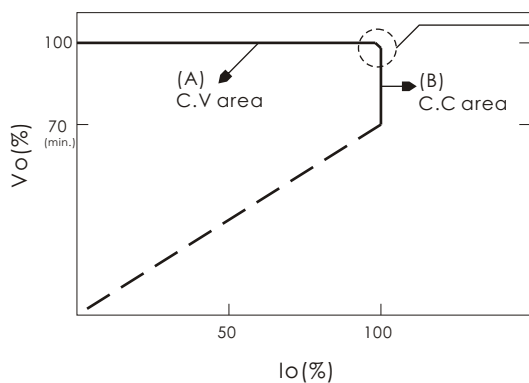


■ STATIC CHARACTERISTICS



DRIVING METHODS of LED MODULE

- C.V.+C.C. characteristics can be operated at both C.V. mode(with LED driver, at area (A)) and C.C. mode(direct driver, at area(B))
- At the moment of power on, the LED converter will work in C.V. Mode and can be provide a peak output current; after the LED turns on, the LED converter will go into C.C. Mode(pattern pending)



In the constant current region, the highest voltage at the output of the driver depends on the configuration of the systems.

DIMMING OPERATION(option:D type)

- Built-in 3 in 1 dimming function. Output constant current level can be adjusted through output cable by connecting 10V PWM signal or 1-10Vdc or resistance between DIM+ and DIM-.
- Please do not connect 'DIM-' to 'V-'
- 10V PWM signal for output current adjustment(typ.): frequency range:100Hz~3KHz

Duty Value	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	Open
Percent of Rated Current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95~108%

- 1-10V dimming function for output current adjustment(typ.)

Dimming Value	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V	Open
Percent of Rated Current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95~108%

- Reference resistance value for output current adjustment(typ.)

Resistance Value	Single driver	10KΩ	20KΩ	30KΩ	40KΩ	50KΩ	60KΩ	70KΩ	80KΩ	90KΩ	100KΩ	Open
	Multiple driver (N=driver quantity for synchronized dimming operation)	10KΩ /N	20KΩ /N	30KΩ /N	40KΩ /N	50KΩ /N	60KΩ /N	70KΩ /N	80KΩ /N	90KΩ /N	100KΩ /N	---
Percent of Rated Current		10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95~108%