

S.M.P.S

LED Converter

Water Proof Converter

F20CH2D-EX Series

20W single output with c.c circuit
and PFC function



- **Constant current design(C.C. mode)**
- Built-in PFC function
- Protections: Over current / Short circuit
- IP68 design for outdoor installations
- 100% full load burn-in test
- 3 in 1 dimming function
- Suitable for LED lighting and street lighting applications
- Safety standards : K61347-1, K61347-2-13
- EMC standards : K61547
- Metal case

IP68     SELV   

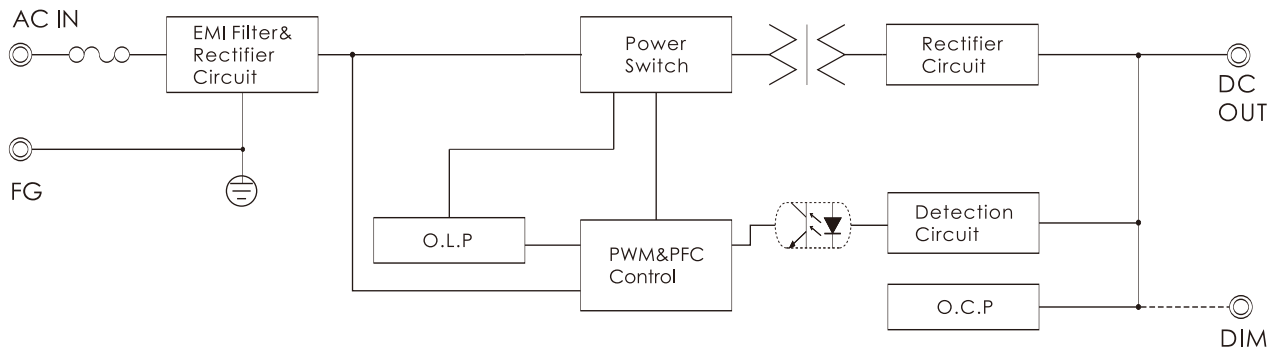
ITEM		UPF20S24CH2D-EX
INPUT	VOLTAGE RANGE	AC180~264V
	FREQUENCY RANGE	47~63Hz
	POWER FACTOR	PF>0.9
	EFFICIENCY(typ.)	85%
	AC CURRENT(typ.)	0.09A/230VAC (typ)
	INRUSH CURRENT(typ.)	COLD START 5A/230VAC
	LEAKAGE CURRENT	<2.5mA / 230VAC
OUTPUT	RATED CURRENT	0.7A
	CONSTANT CURRENT REGION	18-26V
	RATED POWER	16.8W
	CURRENT ADJ. RANGE	0.5~0.8A
	CURRENT ACCURACY	±5%
	RIPPLE&NOISE(max.) Note2	3.0Vp-p
	SETUP,RISE TIME(max.)	3000ms,100ms/230VAC at full load
PROTEC-TION	OVER CURRENT Note3	95~108%
	SHORT CIRCUIT	Hiccup mode ; recovers automatically after fault condition is removed
ISOLA-TION	WITHSTAND VOLTAGE	I/P-O/P:AC3KV, I/P-F.G:AC1.5KV, O/P-F.G:AC0.5KV
	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	174*61.5*36.8mm(L*W*H)/0.67Kg
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 pare-wire terminated with 0.1 uF & 47uF parallel capacitor. 3. Refer to "DRIVING METHODS of LED MODULE"	

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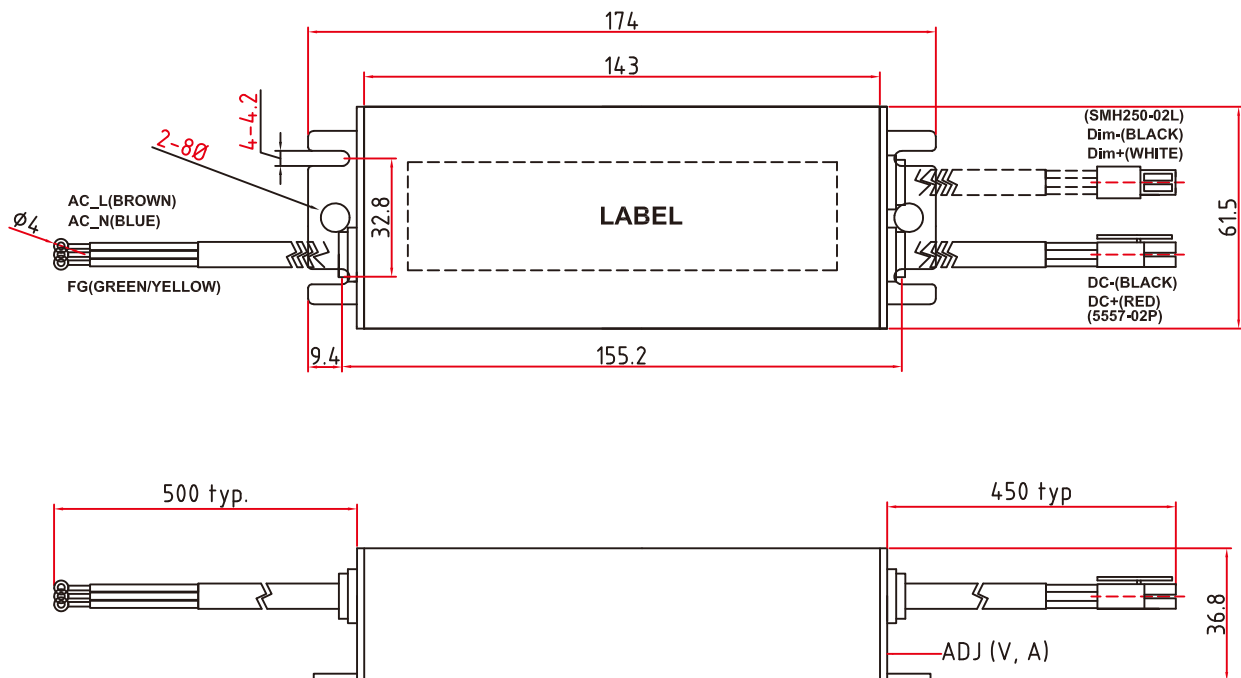
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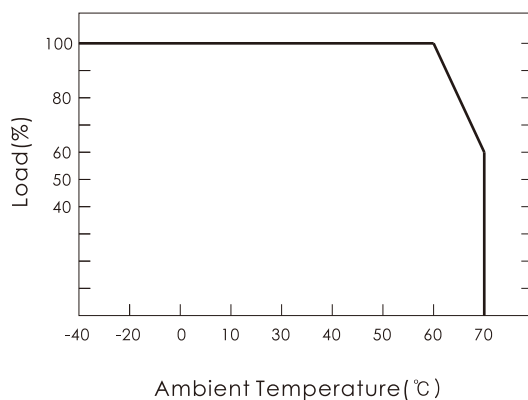
BLOCK DIAGRAM



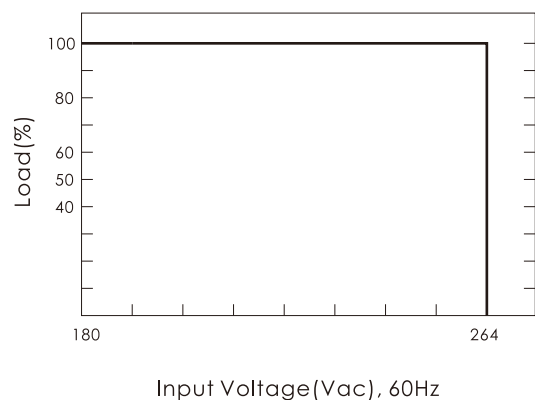
DIMENSIONS(unit:mm)



DERATING CURVE



STATIC CHARACTERISTICS



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■ DIMMING OPERATION

● 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	5~20%	15~25%	25~35%	35~45%	45~55%	55~65%	65~75%	75~85%	85~95%	95~105%	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	5~20%	15~25%	25~35%	35~45%	45~55%	55~65%	65~75%	75~85%	85~95%	95~105%	95~108%

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

Resistance Value	Single driver	10K Ω	20K Ω	30K Ω	40K Ω	50K Ω	60K Ω	70K Ω	80K Ω	90K Ω	100K Ω	Open
	Multiple driver (N=driver quantity for synchronized dimming operation)	10K Ω /N	20K Ω /N	30K Ω /N	40K Ω /N	50K Ω /N	60K Ω /N	70K Ω /N	80K Ω /N	90K Ω /N	100K Ω /N	---
Percent of Rated Current		5~20%	15~25%	25~35%	35~45%	45~55%	55~65%	65~75%	75~85%	85~95%	95~105%	95~108%