

## ■ Features

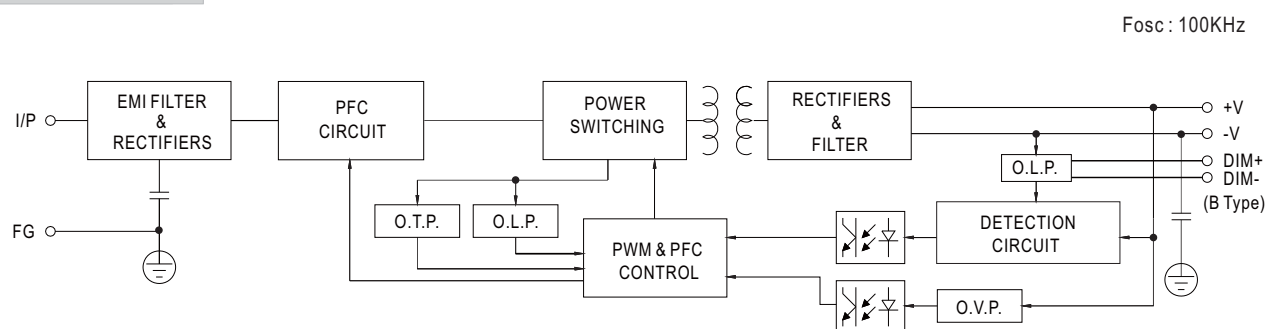
- Constant Voltage + Constant Current mode output
- Metal housing with class I design
- Built-in active PFC function
- Class 2 power unit
- IP67 / IP65 rating for indoor or outdoor installations
- Function options: output adjustable via potentiometer;  
3 in 1 dimming; Timer dimming
- Typical lifetime > 62000 hours
- 7 years warranty

## ■ Applications

- LED street lighting
- LED high-bay lighting
- Parking space lighting
- LED fishing lamp
- LED greenhouse lighting
- Type “HL” for use in Class I , Division 2  
hazardous (Classified) location.

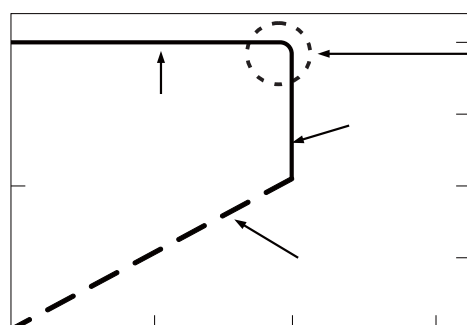
Type	IP Level	Function
B	IP67	3 in 1 dimming function (1~10VDC, 10V PWM signal and resistance)

## ■ BLOCK DIAGRAM



## ■ 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 driver) to drive the LEDs.



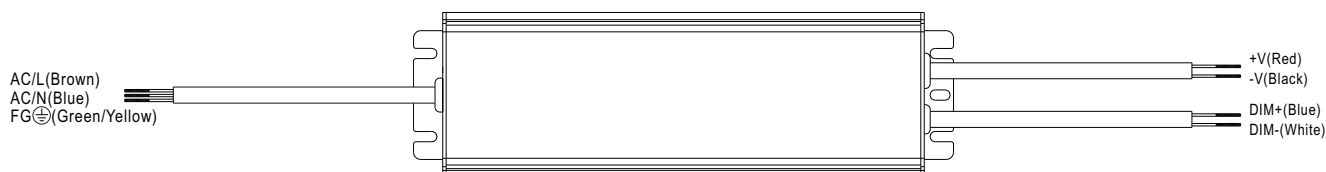
In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems.

Typical output current normalized by rated current (%)

## SPECIFICATION

OUTPUT	DC VOLTAGE	24V
	CONSTANT CURRENT REGION <small>Note.4</small>	14.4 ~ 24V
	RATED CURRENT	3.4A
	RATED POWER	81.6W
	RIPPLE & NOISE (max.) <small>Note.2</small>	150mVp-p
	VOLTAGE ADJ. RANGE	Adjustable for A-Type only (via built-in potentiometer) 22 ~ 27V
	CURRENT ADJ. RANGE	Adjustable for A/AB-Type only (via built-in potentiometer) 2.04 ~ 3.4A
	VOLTAGE TOLERANCE <small>Note.3</small>	± 1.0%
	LINE REGULATION	± 0.5%
	LOAD REGULATION	± 0.5%
	SETUP, RISE TIME <small>Note.6</small>	1200ms,200ms/115VAC 500ms,200ms/230VAC
INPUT	HOLD UP TIME (Typ.)	16ms at full load 230VAC /115VAC
	VOLTAGE RANGE <small>Note.5</small>	90 ~ 305VAC 127 ~ 431VDC
	FREQUENCY RANGE	47 ~ 63Hz
	POWER FACTOR (Typ.)	PF ≥ 0.96/115VAC, PF ≥ 0.96/230VAC, PF ≥ 0.94/277VAC @ full load
	TOTAL HARMONIC DISTORTION	THD < 20% (@ load ≥ 60% / 115VAC,230VAC; @ load ≥ 75% / 277VAC) (Please refer to "TOTAL HARMONIC DISTORTION (THD)" section)
	EFFICIENCY (Typ.)	90.5%
	AC CURRENT (Typ.)	0.85A / 115VAC 0.425A / 230VAC 0.4A / 277VAC
	INRUSH CURRENT (Typ.)	COLD START 70A(t <sub>width</sub> =485μs measured at 50% I <sub>peak</sub> ) at 230VAC; Per NEMA 410
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	3 units (circuit breaker of type B)
PROTECTION	LEAKAGE CURRENT	<0.75mA / 277VAC
	OVER CURRENT	95 ~ 108% Constant current limiting, recovers automatically after fault condition is removed
	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed
	OVER VOLTAGE	28 ~ 35V Shut down o/p voltage, re-power on to recover
	OVER TEMPERATURE	Shut down o/p voltage, re-power on to recover
ENVIRONMENT	MAX. CASE TEMP.	T <sub>case</sub> = +80°C
	WORKING HUMIDITY	20 ~ 95% RH non-condensing
	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ~ 95% RH
	TEMP. COEFFICIENT	± 0.03%/°C (0 ~ 60°C)
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes
SAFETY & EMC	SAFETY STANDARDS <small>Note.8</small>	UL8750(type"HL"), CSA C22.2 No. 250.0-08, UL8750 LISTED for HLG-80H- B□BS EN/EN/AS/NZS 61347-1,BS EN/EN/AS/NZS 61347-2-13 J61347-1, J61347-2-13(except for B type), GB19510.1,independent, GB19510.14,EAC TP TC 004,BIS IS15885(for 36A, 54A only), IP65 or IP67,KC61347-1,KC61347-2-13 approved
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P-FG:1.5KVAC
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH
	EMC EMISSION <small>Note.8</small>	Compliance to BS EN/EN55015, BS EN/EN61000-3-2 Class C (@ load ≥ 60%); BS EN/EN61000-3-3,GB17743 and GB17625.1, EAC TP TC 020
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN61547, light industry level (surge immunity Line-Earth 4KV, Line-Line 2KV), EAC TP TC 020
OTHERS	MTBF	1069K hrs min. Telcordia SR-332 (Bellcore) ; 357.8K hrs min. MIL-HDBK-217F (25°C)
	DIMENSION	195.6*61.5*38.8mm (L*W*H)
NOTE	<p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25°C of ambient temperature.</p> <p>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. Please refer to "DRIVING METHODS OF LED MODULE".</p> <p>5. De-rating may be needed under low input voltages.</p> <p>6. Length of set up time is measured at first cold start. Turning ON/OFF the driver may lead to increase of the set up time.</p> <p>7. The driver is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.</p> <p>8. To fulfill requirements of the latest ErP regulation for lighting fixtures, this LED driver can only be used behind a switch without permanently connected to the mains.</p> <p>9. This series meets the typical life expectancy of &gt;62,000 hours of operation when T<sub>case</sub>, particularly (T<sub>c</sub>) point (or T<sub>MP</sub>, per DLC), is about 75°C or less.</p> <p>10. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).</p>	

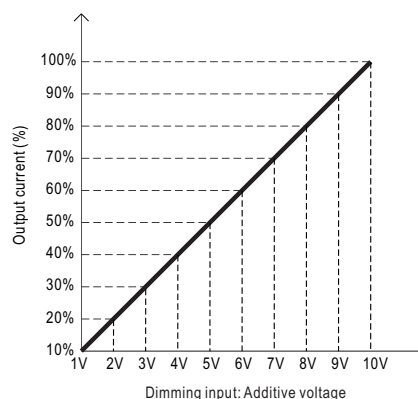
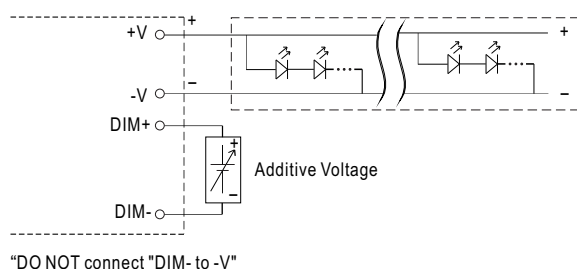
## DIMMING OPERATION



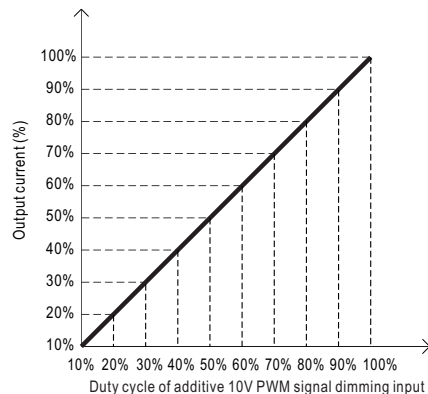
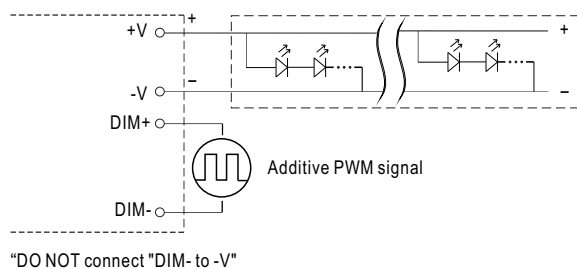
### ※ 3 in 1 dimming function (for B Type)

- 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: 100 $\mu$ A (typ.)

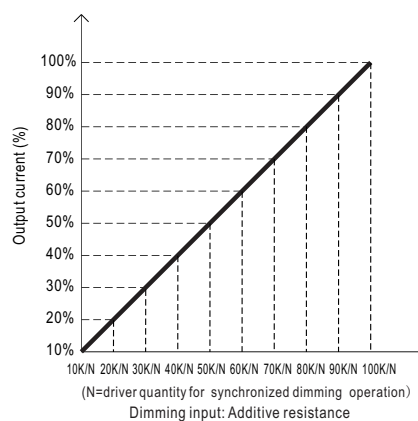
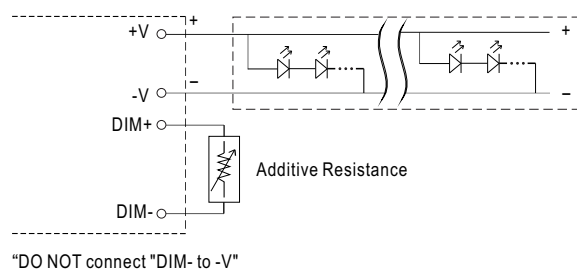
#### ◎ Applying additive 1 ~ 10VDC



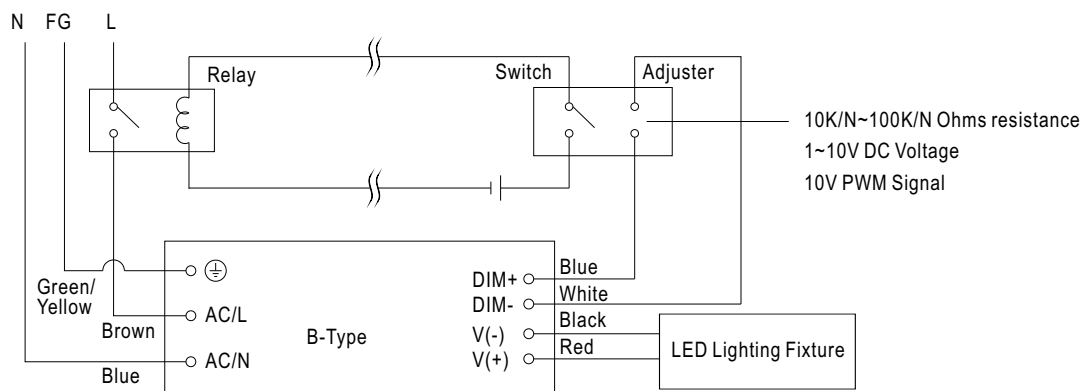
#### ◎ Applying additive 10V PWM signal (frequency range 100Hz ~ 3KHz):



#### ◎ Applying additive resistance:



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.

## ※B-Type

