Model: GP-CVM600P Series

■ Features

- Universal AC Input Range 90 ~ 305VAC.
- Constant Voltage mode.
- Active PFC design.
- Protections: OVP / OCP / SCP / OTP.
- High Efficiency up to 96%
- Surge protection with 4KV/2KV
- No-load power consumption < 0.5W at 230VAC (for non-dimming models).
- Standby Power consumption < 0.5W at 230VAC (for dimming models).
- Suitable for LED strips and Moving Sign applications.
- 3-in-1 dimming (dim-to-off) and DALI-2 functions available.
- Fully Insulated Case with IP67 rated.
- Cooling by Free Air Convection (Metal Housing)
- The output and dimming lines are compliant with the new regulations with isolation.

■ Approvals

CE UKCA SELV IP67 DALI 2 (24V)

■ Size

300 x 138x 47mm (L x W x H)

GP-CVM600P-12V
GP-CVM600P-24V

GP-CVM600P-12VA / 12VD2
GP-CVM600P-24VA / 24VD2

GP-CVM600P-xxV
(xx = 36,48 or 54)

GP-CVM600P-xxVA
GP-CVM600P-xxVD2
(xx = 36,48 or 54)

■ Specifications

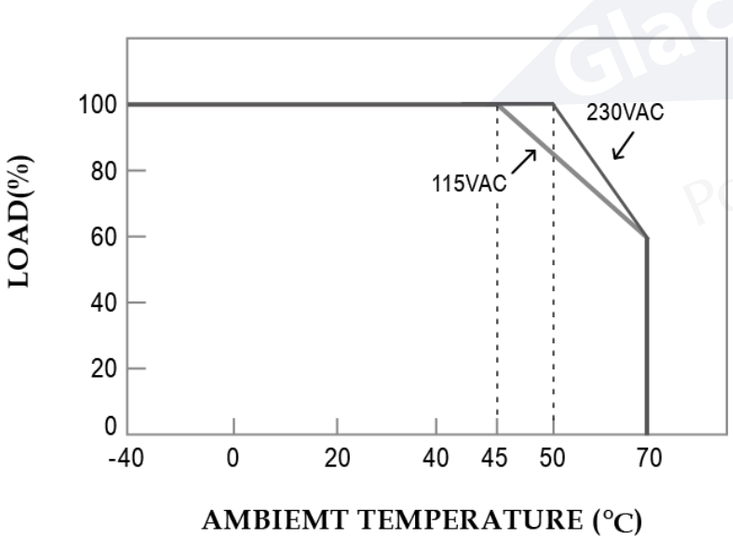
Note: GP-CVM600P-xxV(X): xx=12, 24, 36, 48 or 54 (X)=Blank➔ Non DIM. , (X)=A➔ 3-in-1 DIM. , (X)=D2 ➔DALI-2 DIM.

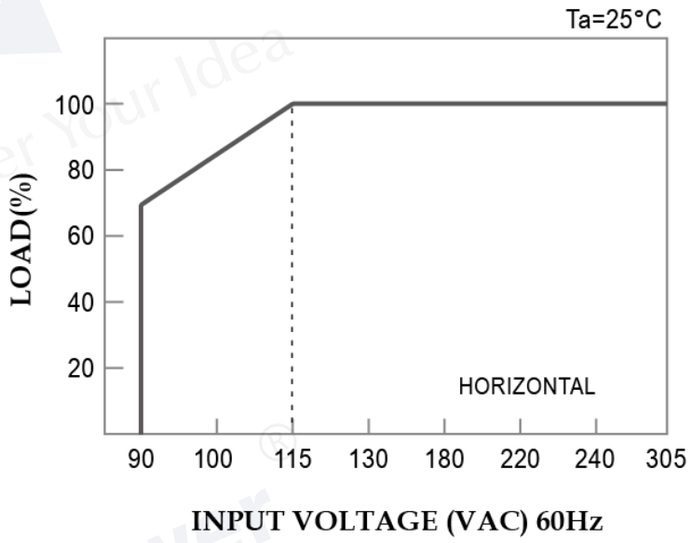
Model No.		GP-CVM600P-12V(X)	GP-CVM600P-24V(X)	GP-CVM600P-36V(X)	GP-CVM600P-48V(X)	GP-CVM600P-54V(X)
Output	DC Voltage	12V	24V	36V	48V	54V
	Rated Current	0~40A	0~25A	0~16.66A	0~12.5A	0~11.1A
	Rated Power	480W	600W	599.76W	600W	599.4W
	Ripple &Noise (Max.) Note.2	150mV	150mV	250mV	250mV	350mV
	Efficiency at 230VAC (Typ.)	92.5%	95%	95.5%	96%	96%
	Voltage Tolerance Note.3	± 5%	± 5%	± 5%	± 5%	± 5%
	PWM Dimming (optional)	> 1600 Hz (for dimmable version)				
	Set up time (Max.)	0.5s / 230VAC, 1s / 115VAC, at full load. 0.7s / 230VAC for DALI-2 version				

Input	Rated Voltage	100 ~ 277VAC 141~392VDC				
	Voltage Range	90 ~ 305VAC				
	Frequency Range	47 Hz ~ 63 Hz				
	AC Current (Typ.)	6.4A at 115VAC / 3.2A at 230VAC , 5.2A at 115VAC / 2.6A at 230VAC only for 12V(X)				
	Power Factor	>0.98 at 115VAC / >0.95 at 230VAC at full load. PF≧0.9 at 70% load				
	Total Harmonic Distortion	THD < 10% at 230VAC, full load. Note 4				
	Inrush Current (Typ.)	Cold Start 55A (Td=2020us measured at 50% Ipeak) at 230VAC				
	Max. Number of PSUs on Circuit Breaker	B type : 1 unit (16A) / 2 unit (25A), C type : 1 unit (10A) / 2 units (16A) / 3 units (25A), D type : 4 units (16A) / 6 units (25A) at 230VAC				
	Leakage Current	<1mA / 240VAC				
DIM. Control (3-in-1)	DC dimming	DC 0-10V				
	PWM dimming	Puls:Hi=10V Low=0V, Duty:0%~100%, Fsw 0.5-3KHz				
	Resistance dimming	0KΩ~100KΩ or Electronic Potentiometer 0-10V				
DIM. Control (DALI-2)	DALI-2 Standards	Compatibility with IEC 62386-101 ed2, 102 ed2 and 207 ed2				
	DALI bus current consumption	<2mA (typical 1.6mA)				
Protections	Over Current	105~180% rated current. Type: Hiccup mode (Auto recover after fault condition disappeared).				
	Short Circuit	Type: Hiccup mode (Auto recover after fault condition disappeared).				
	Over Voltage	13~19V	26~38V	38V~50V	50V~65V	56~70V
		Type: Latch at full load				
	Over Temperature	Tcase: 95°C ± 10°C				
		Type: Shut down output, recovers automatically after temperature goes down.				
Environment	Operation Temp.	-40°C ~50°C (Refer to output load derating curve).				
	Operation Humidity	20% ~ 90% RH non-condensing.				
	Storage Temp.	-40 ~ +80°C				
	Storage Humidity	10% ~ 90% RH				
	Vibration	10~500 Hz, 2G 10 min./1 cycle, period for 60 min. each along X, Y, Z axes.				
Safety& EMC	Safety Standards	EN61347-1, EN61347-2-13, independent, IP67 Approved.				
	Withstand Voltage	I/P-O/P: 3.75KVAC I/P-FG:1.88KVAC O/P-FG:0.5KVAC				
	Isolation Resistance	I/P-O/P,I/P-FG,O/P-FG:100M ohms / 500VDC at 25°C				
	EMI Conduction & Radiation	Compliance to EN55015				
	Harmonic Current	Compliance to EN61000-3-2 Class C(≧75% load),EN61000-3-3				
	EMS Immunity	Compliance to EN61000-4-2,3,4,5,6,8,11;EN61547,criteria B				
Others	MTBF	120K hours min. MIL-HDBK-217F(25°C)				
	Dimension(L x W x H)	300 x 138 x 47mm; 2450g/pcs				

Note	1. All specifications not specially mentioned are measured at 230VAC full load and 25°C ambient temperature. 2. Ripple & Noise are measured at 20MHz bandwidth by using a 12" twisted pair-wire terminated with 0.1uf & 47uf parallel capacitor. 3. Voltage Tolerance: includes line regulation, load regulation and set-up tolerance. 4. THD < 20% at 277VAC, full load.

■ Derating Curve





■ 3-in-1 Dimming Control (DC/ PWM/ Resistance)

◆ 3-in-1 Dimmable Function Description

(1) 0-100KΩ Resistance Dimmable (Typical):

Resistor	Single-driver	Short	9K	20K	30K	40K	50K	60K	70K	80K	95K	100K
	Multi-driver	Short/N	9K/N	20K/N	30K/N	40K/N	50K/N	60K/N	70K/N	80K/N	95K/N	100K/N
Vout Duty Cycle (%)		0%	2%	14.5%	25.9%	37.3%	48.7%	60.1%	71.5%	82.9%	100%	100%

※ The length of extended wire for DIM+/- shall not exceed 20 meters. (Wire≦20m)

※ N=The number of dimmer drivers should not exceed 15.(N≦15)

※ DIM+/- <7K or 7K/N Vout Duty cycle 0%

(2)DC: 0-10V Dimmable (Typical):

DIM(Voltage)	0V	0.9V	2V	3V	4V	5V	6V	7V	8V	9.5V	10V
Vout Duty Cycle (%)	0%	2%	14.5%	25.9%	37.3%	48.7%	60.1%	71.5%	82.9%	100%	100%

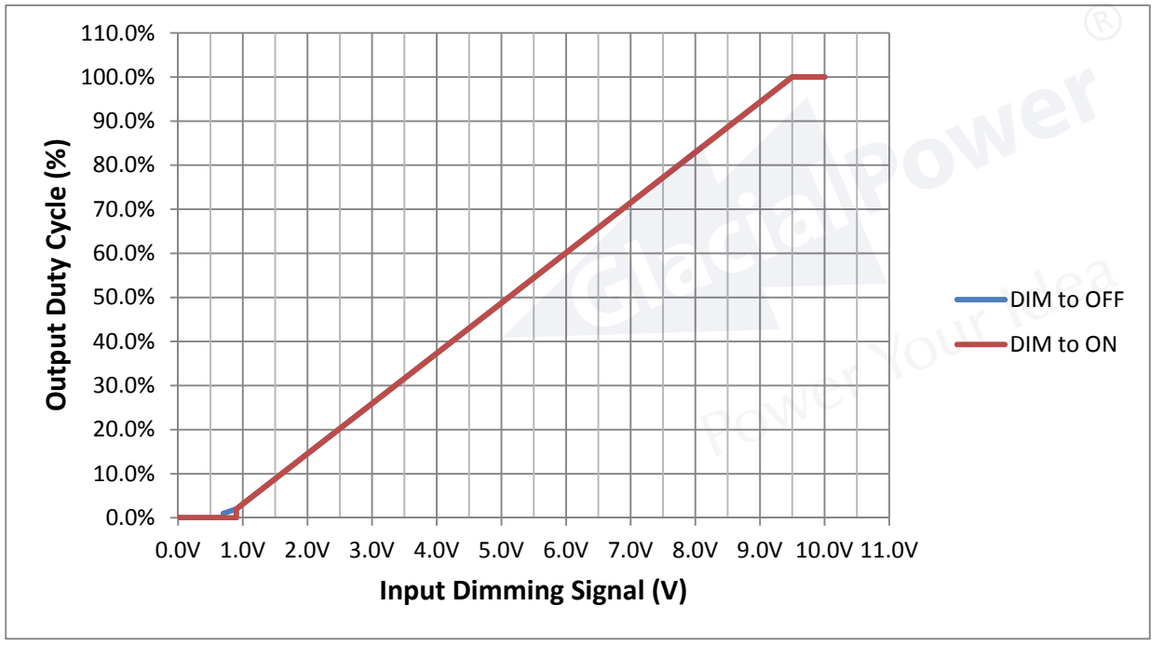
※ DIM+/- <0.7V Vout Duty Cycle 0%

(3)10V / PWM Dimmable (Typical):

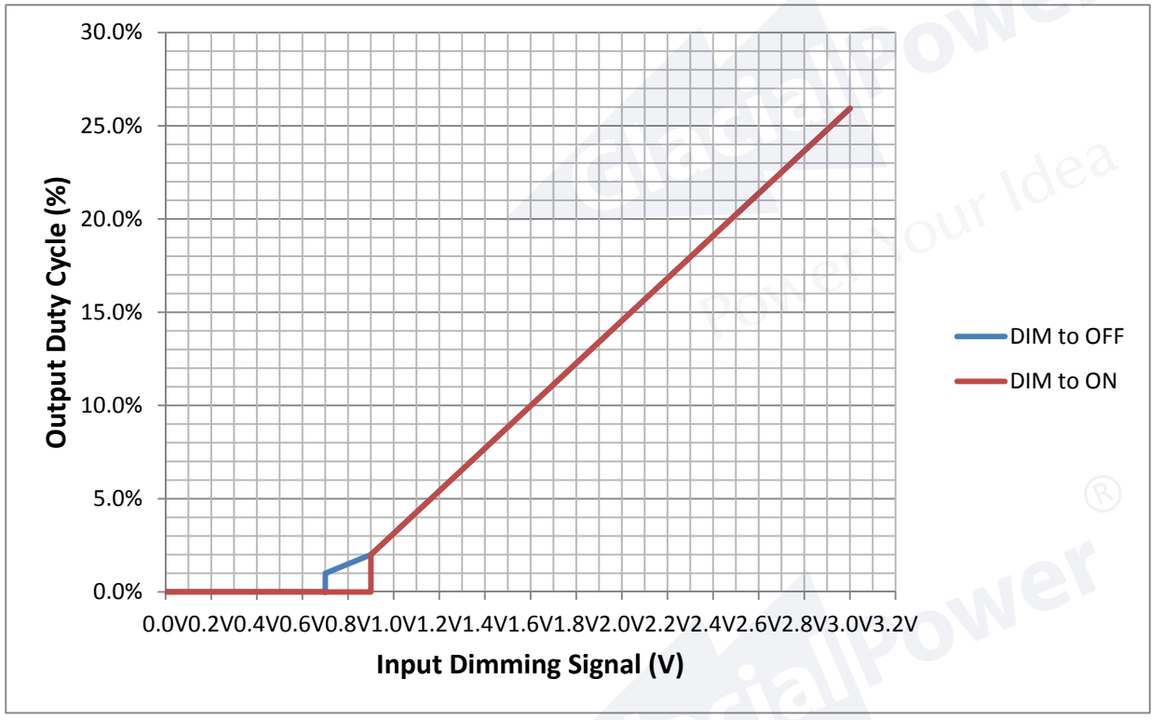
DIM(10V/PWM Duty)	0%	9%	20%	30%	40%	50%	60%	70%	80%	95%	100%
Vout Duty Cycle (%)	0%	2%	14.5%	25.9%	37.3%	48.7%	60.1%	71.5%	82.9%	100%	100%

※ DIM+/- <7% Vout Duty Cycle 0%

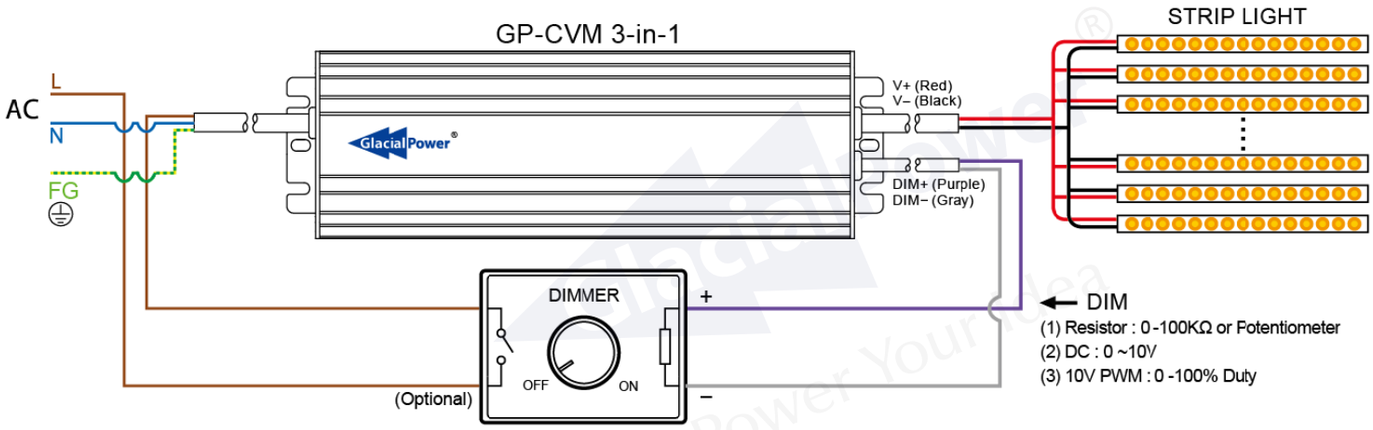
◆ Dimming Curve



◆Dimming Curve (Enlarge)



◆ Wiring Diagram



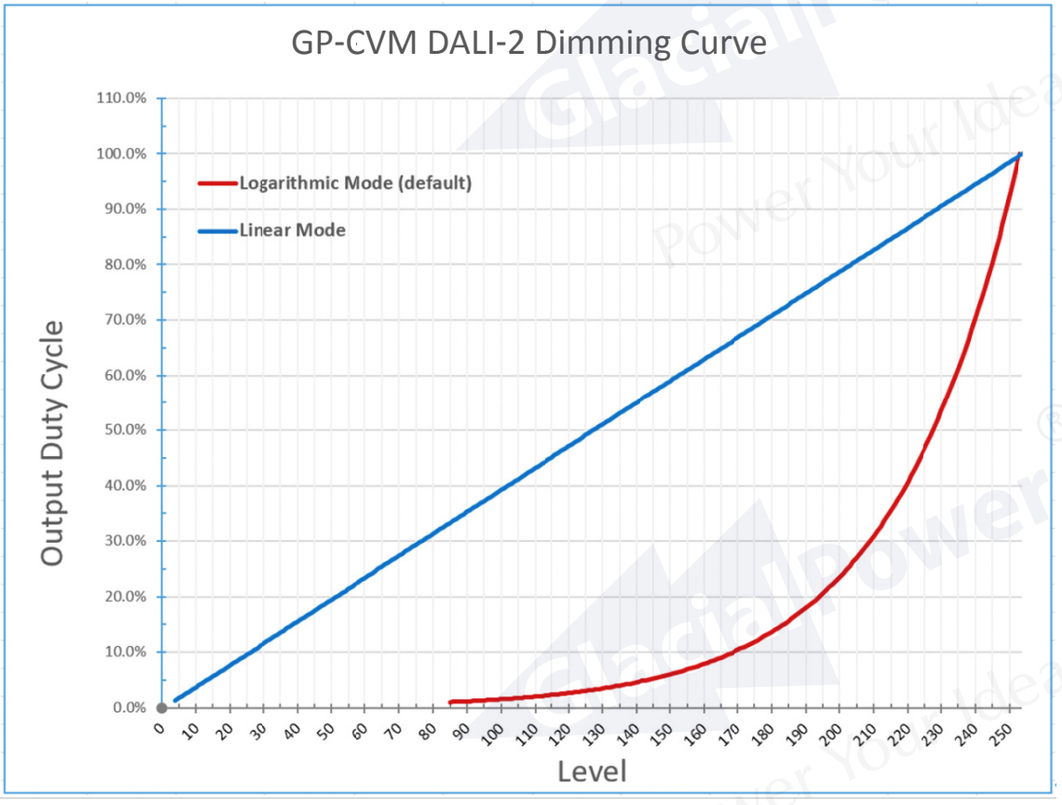
■ DALI Interface

◆ DALI Function Description

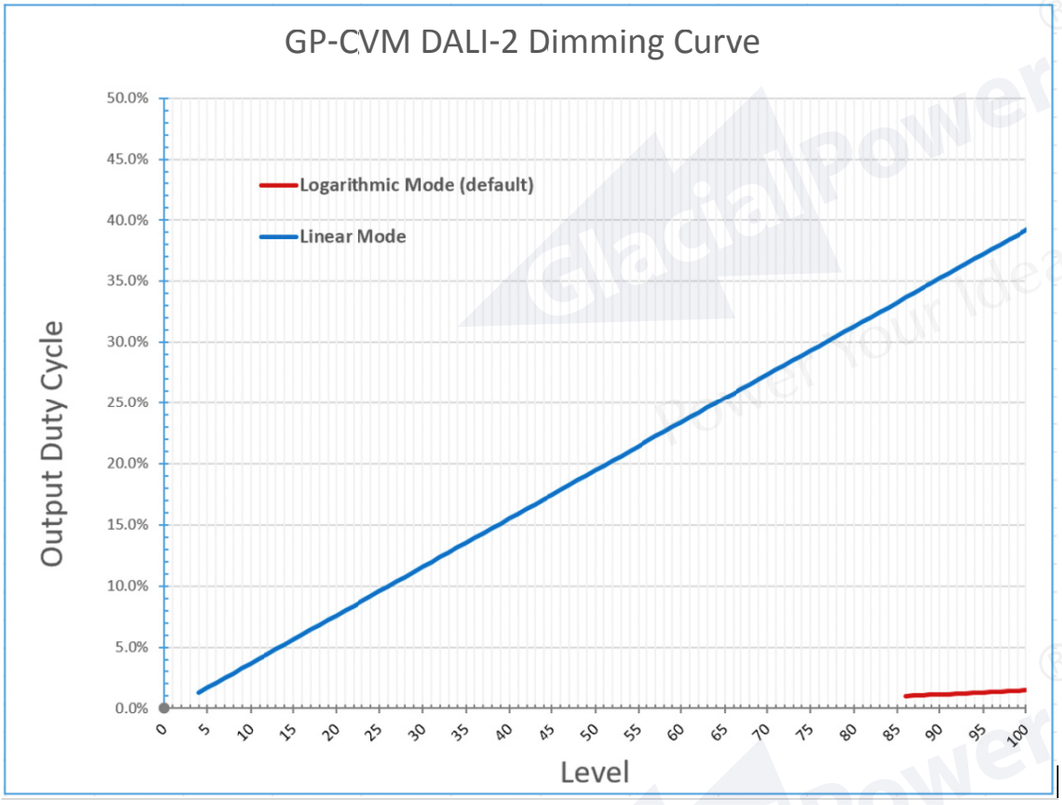
(1) Apply DALI signal between DA wires

(2) First step is fixed at 1% of output

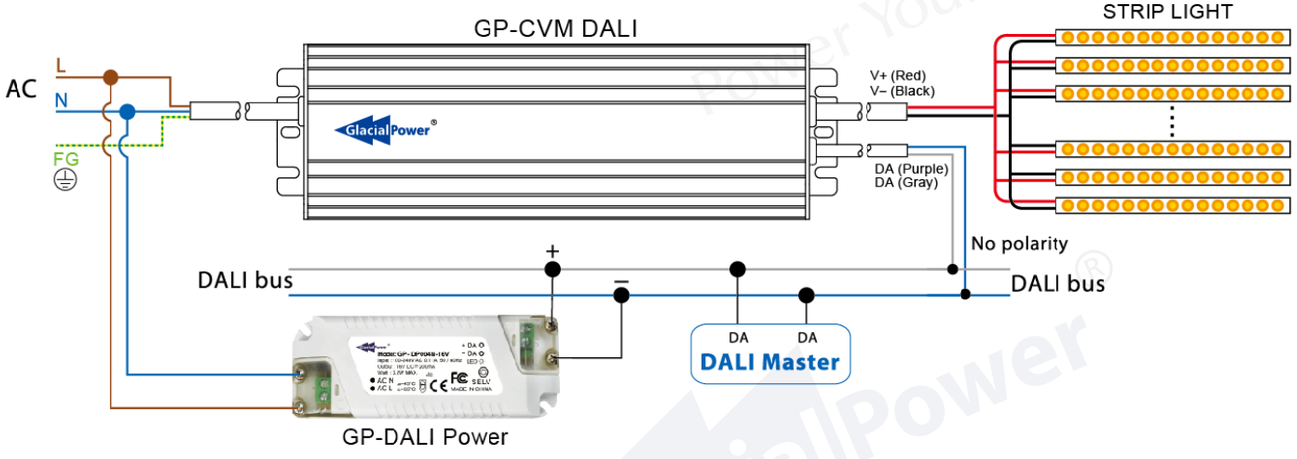
(3) Dimming Curve



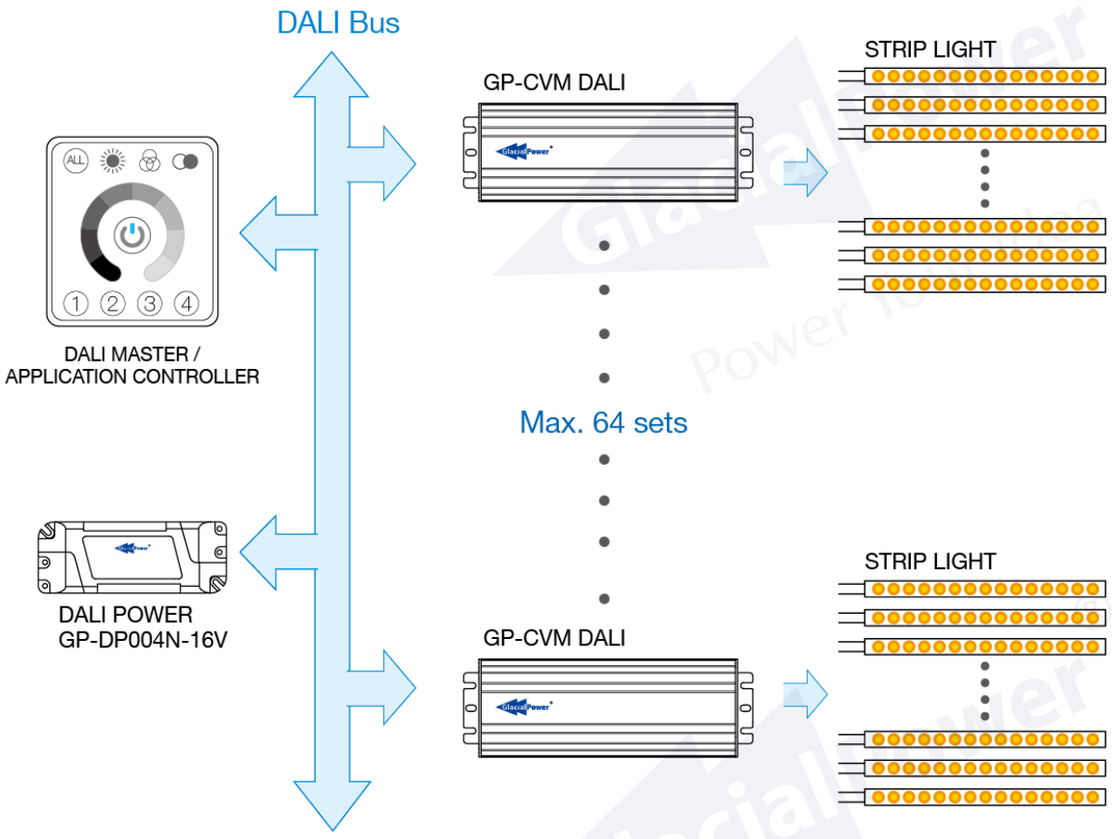
Dimming Curve (Enlarge)



(4) Wiring Diagram

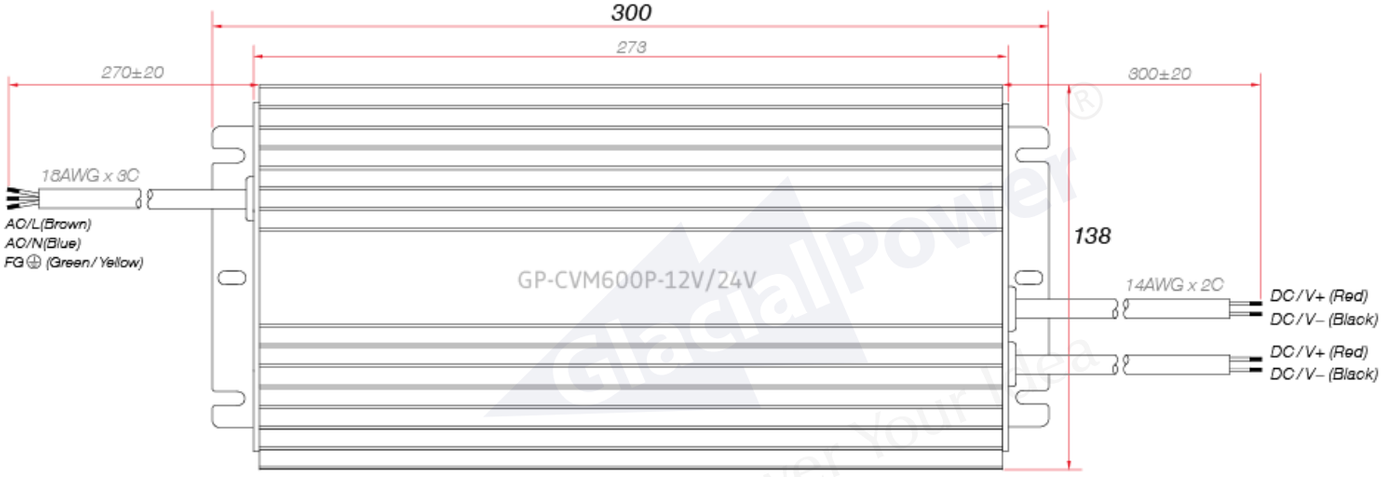


(5) Application Diagram



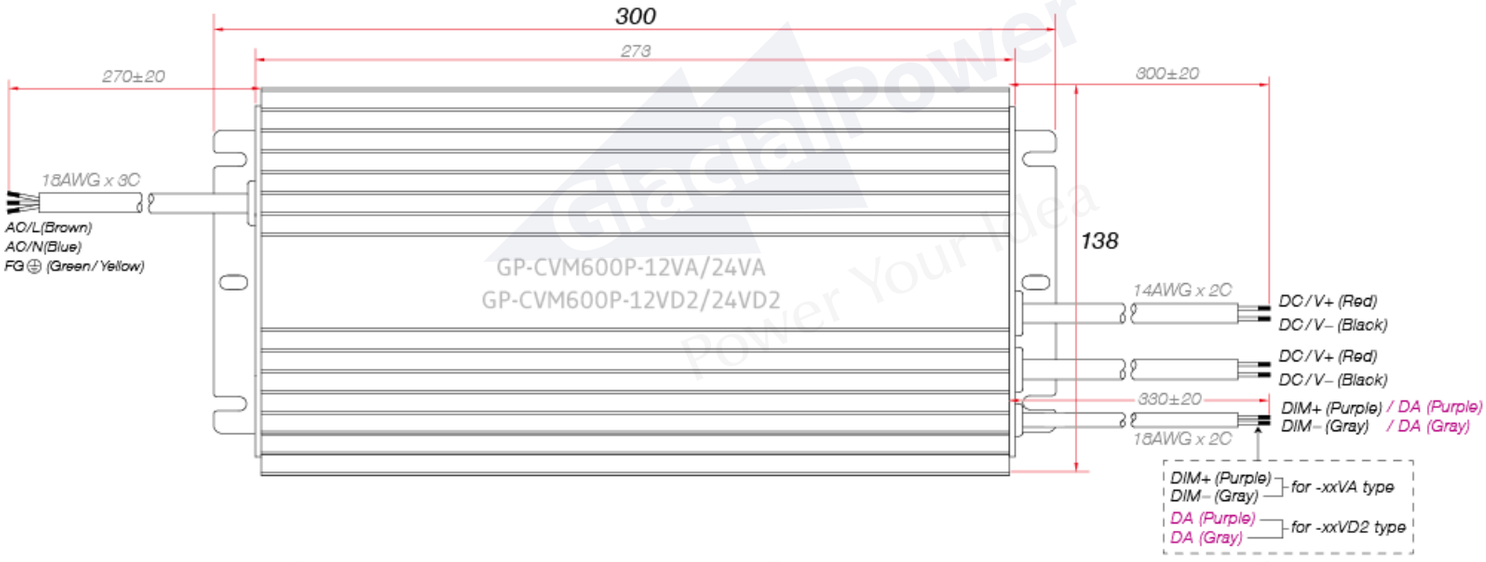
■ Mechanical Specification

GP-CVM600P-12V/24V



■ Mechanical Specification

GP-CVM600P-12VA /24VA
GP-CVM600P-12VD2 /24VD2



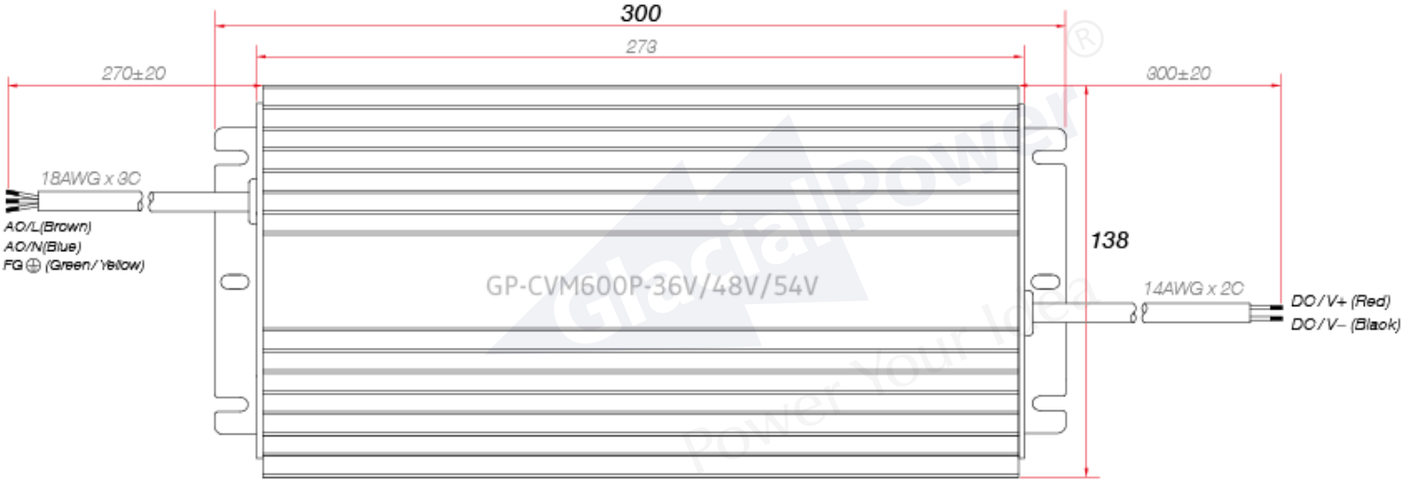
GP-CVM600P-12V/24V

GP-CVM600P-12VA/24VA

GP-CVM600P-12VD2/24VD2

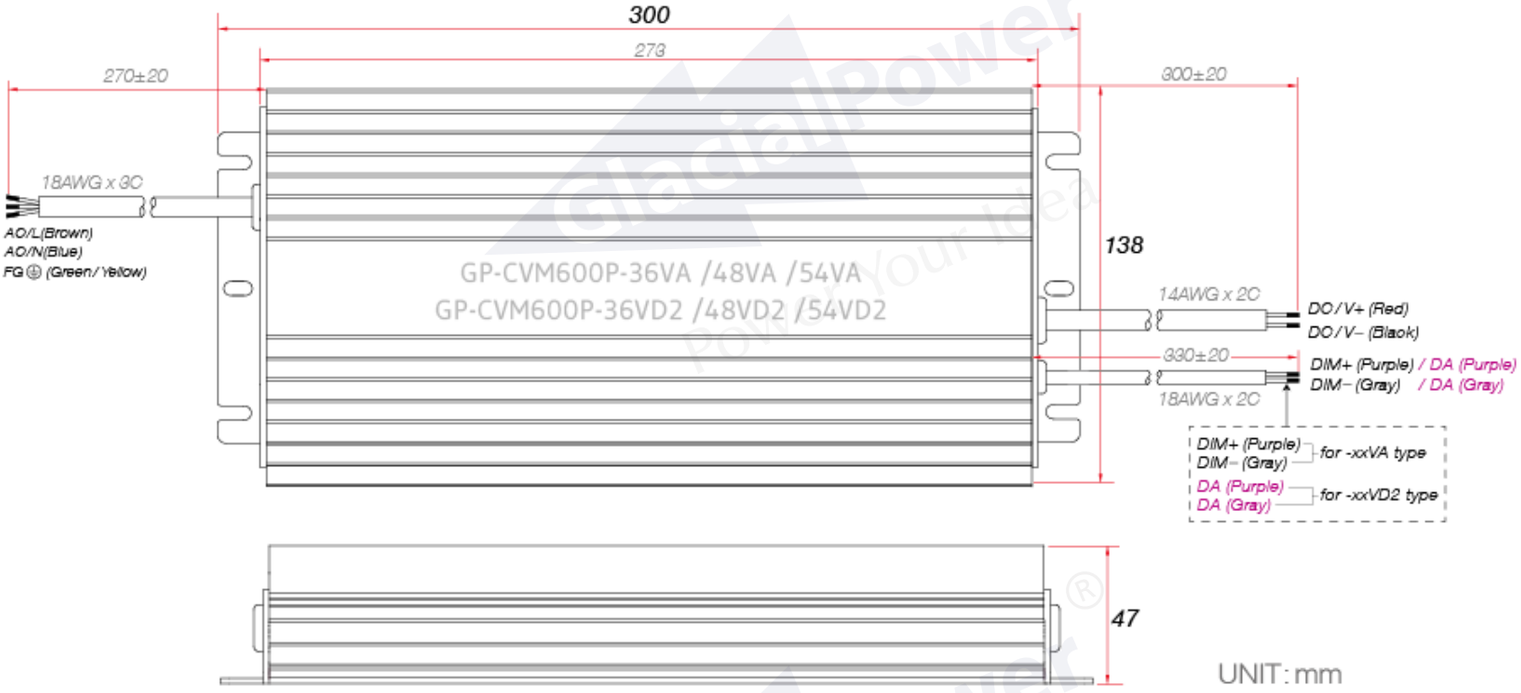
■ Mechanical Specification

GP-CVM600P-36V /48V /54V



■ Mechanical Specification

GP-CVM600P-36VA /48VA /54VA
GP-CVM600P-36VD2 /48VD2 /54VD2



GP-CVM600P-36V/ 48V/ 54V

GP-CVM600P-36VA/ 48VA/ 54VA

GP-CVM600P-36VD2/ 48VD2/ 54VD2