Constant Current Dimmable Driver

Model:XC50W530-1400 3IN1
XC50W1450-2100 3IN1
XC75W700-1050 3IN1
XC75W1300-2100 3IN1
XC100W700-1050 3IN1
XC100W1750-2780 3IN1

Model	Output Current	Input Current	Input Power	Output Power Range	PF	Efficiency (*Typical)	Output Voltage	No load Voltage
XC50W530-1400 3IN1	1400mA	≤0.30A	56W	11.7-50W	0.95	89%	22~54V	64V
XC50W1450-2100 3IN1	2100mA	≤0.30A	56W	11.7-50W	0.95	88%	22~34V	46V
XC75W700-1050 3IN1	1050mA	≤0.45A	89W	37-75W	0.95	91%	53~107V	119V
XC75W1300-2100 3IN1	2100mA	≤0.45A	89W	35-75W	0.95	89%	27-56V	64V
XC100W700-1050 3IN1	1050mA	≤0.60A	115W	49.7-100W	0.95	91%	71-142V	155V
XC100W1750-2780 3IN1	2780mA	≤0.60A	115W	47.25-100W	0.95	91%	27-56V	64V

*** Test result @230V, 50Hz, Full Load.**

1. Parameters

Category	Item	Technical Norm
Features	Output Type	Constant Current
	Dimming Type	3 in 1: 1-10VDC, PWM signal, Resistance
	Output Features	Isolation
	IP Grade	IP67
	Insulation Class	Class Ⅰ
Input	Rated Input Voltage	100-277VAC
	Range of Input Voltage	100-305VAC or 142-431VDC
	Frequency	0/50/60Hz
	Input Current	≤0.30A @50W(230VAC，full load) ≤0.45A @75W(230VAC，full load) ≤0.60A @100W(230VAC，full load)
	Input Power	≤56W @50W(230VAC，full load) ≤89W @75W(230VAC，full load) ≤115W @100W(230VAC，full load)
	Power Factor	≥0.95 (230VAC，full load)
	THD	≤10% (230VAC，full load)
	Standby Power Consumption	≤0.5W @230VAC
	Inrush Current	≤80A/200us (230VAC，full load)
Output	Output Voltage Range	22-54VDC@XC50W530-1400 3IN1

		22-34VDC@XC50W1450-2100 3IN1 53-107VDC@XC75W700-1050 3IN1 27-56VDC@XC75W1300-2100 3IN1 71-142VDC@XC100W700-1050 3IN1 27-56VDC@XC100W1750-2780 3IN1
	No Load Voltage	64VDC Max.@XC50W530-1400 3IN1 46VDC Max.@XC50W1450-2100 3IN1 119VDC Max.@XC75W700-1050 3IN1 64VDC Max.@XC75W1300-2100 3IN1 155VDC Max.@XC100W700-1050 3IN1 64VDC Max.@XC100W1750-2780 3IN1
	Output Current	530-1400mA @XC50W530-1400 3IN1(adjustable) 1450-2100mA @XC50W1450-2100 3IN1(adjustable) 350-1050mA @XC75W700-1050 3IN1(adjustable) 650-2100mA @XC75W1300-2100 3IN1(adjustable) 350-1050mA@XC100W700-1050 3IN1(adjustable) 875-2780mA@XC100W1750-2780 3IN1(adjustable)
	Max. Output Power	50W@XC50W530-1400 3IN1 50W@XC50W1450-2100 3IN1 75W@XC75W700-1050 3IN1 75W@XC75W1300-2100 3IN1 100W@XC100W700-1050 3IN1 100W@XC100W1750-2780 3IN1
	Efficiency	≥89%@XC50W530-1400 3IN1 (230VAC，full load) ≥88%@XC50W1450-2100 3IN1 (230VAC，full load) ≥91%@XC75W700-1050 3IN1 (230VAC，full load) ≥89%@XC75W1300-2100 3IN1 (230VAC，full load) ≥91%@XC100W700-1050 3IN1 (230VAC，full load) ≥91%@XC100W1750-2780 3IN1 (230VAC，full load)
	Current Ripple(< 120 Hz)	±5%
	PstLM	≤1
	SVM	≤0.4
	Current Accuracy	±5%（Minimum current deviation -5%, maximum current deviation + 5%）
	Line Regulation	±5%
	Load Regulation	±5%
	Started Delay Time	≤0.5S(230VAC，full load) ≤1.2S(115VAC，full load)
Control Method	1-10V(0-10V)dimming	0-10Vdc, Port source current 0.1mA typical
	PWM dimming	PWM Signal dimming Duty: 10-99%, 100Hz-3KHz, Voltageamplitude:1-10V
	Resistance dimming	10-100/N Kohm (N=driver quantity for synchronized dimming operation)

	Output Dimming range	Dimming: 10%-99%,Dim to off.
	Dimming frequency	2KHz
Protection	Short Circuit Protection	Auto Recovery
	Over-temperature protection	When the TC point temperature of the casing exceeds 90℃, it switches to a current reduction mode, and the current automatically resumes once the over-temperature is cleared.
	AC Over Voltage Protection	320-380Vac（When the input voltage exceeds the protection voltage, the output voltage will be shut off, and it can automatically recover after the abnormal input condition is removed）
	AC Under Voltage protection	75-85Vac（When the input voltage falls below the protection voltage, the output voltage will be cut off and can automatically recover after the abnormal input condition is removed）
	Overload Protection	Auto Recovery
	No-load Protection	Auto Recovery
	Insulation voltage	I/P-O/P: 3750Vac/5mA/60S I/P-FG: 1800Vac/5mA/60S O/P-FG: 1500Vac/5mA/60S
	Insulation resistance	>100M ohm @ 500VDC/+25℃/70%RH
	Leakage current	I/P-O/P: <0.75mA
Environment	Ta/Operation Temperature	-40….+50℃@Vin100-200V -40….+55℃@Vin200-277V
	Ts/Storage Temperature	-40….+85℃
	Tc/Enclosure Temperature	+90 ℃
	Humidity	10%....90%RH
	Atmosphere	86-108KPa
Construction	Connection Method	Cable
	Installation	Independent
	PRI Wire preparation	3*1.0mm² /395mm
	SEC Wire preparation	2*0.75mm² /295mm@50W,75W 2*1.0mm² /295mm@100W
	Signal Wire preparation	2*22AWG/295mm
	Dimension	126*41*29mm (L*W*H)@50W 143*49*33mm (L*W*H)@75W 164*53*33mm (L*W*H)@100W
Standards	Certification	CE
	Safety Standards	EN 61347-1:2015/A1:2021 EN 61347-2-13:2014/A1:2017 EN IEC 62384:2020 EN 62493:2015 AS61347.2.13:2018 AS/NZS61347.1:2016 Inc A1 BS EN 61347-1:2015/A1:2021

		BS EN 61347-2-13:2014/A1:2017 BS EN 62493:2015 BS EN IEC 62384:2020
	EMC Standards	EN IEC 55015:2019 EN IEC 55015:2019/A11:2020 EN IEC 61000-3-2:2019/A1:2021 EN 61000-3-3:2013/A2:2021 EN 61547:2009
	Performance	EN62384:2020
	Surge	L-N/:6kV @50W,75W,100W L/N-Earth:6kV @50W L/N-Earth:10kV @75W,100W
Others	RoHS	complied to 2011/65/EU
	REACH	EU Regulation (EC) No 1907/2006
	Life Time	50000h @Tc<+80℃
	Warranty	5years ,F.R. < 100ppm
	Noise	≤ 24dB @Background noise ≤18dB ,Interval≥15cm

Remark:

1. All Parameters, if not specified, are measured at 230VAC/50Hz and 25℃ambient temperature.
2. LED Driver is a component of the luminaires, Luminaires and wire layout will affect the EMC, please check the EMC with end products again.
3. Do not install upside down.

2. Connected quantities of different current Breaker

TYPE	Connected quantities of different current Breaker						Input Voltage（V）	Inrush Current(A)	Time（μs）
	current（A）	10	13	16	20	25			
	Installation wire diameter	1.5mm²	2.5mm²	2.5mm²	4mm²	4mm²			
TYPE B		8	10	12	15	19	@230VAC	80	200
TYPE C		12	16	19	24	30			
TYPE D		19	25	31	38	48			

3. Label

XC50W530-1400 3IN1

XC50W1450-2100 3IN1

XC75W700-1050 3IN1

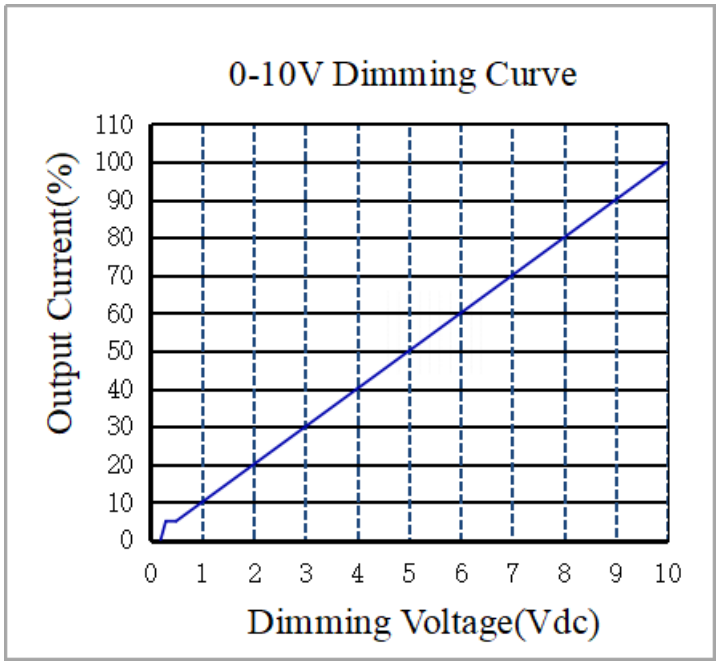
XC75W1300-2100 3IN1

XC100W700-1050 3IN1

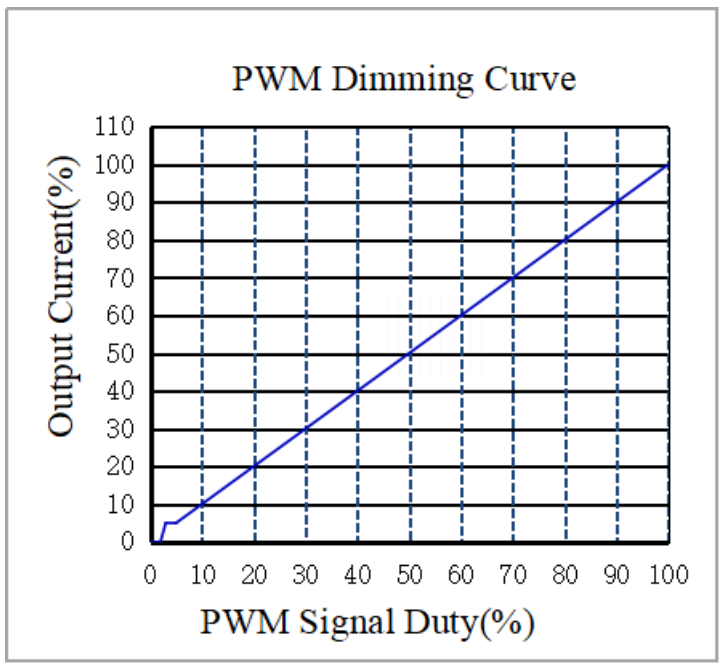
XC100W1750-2780 3IN1

4. Dimming curve

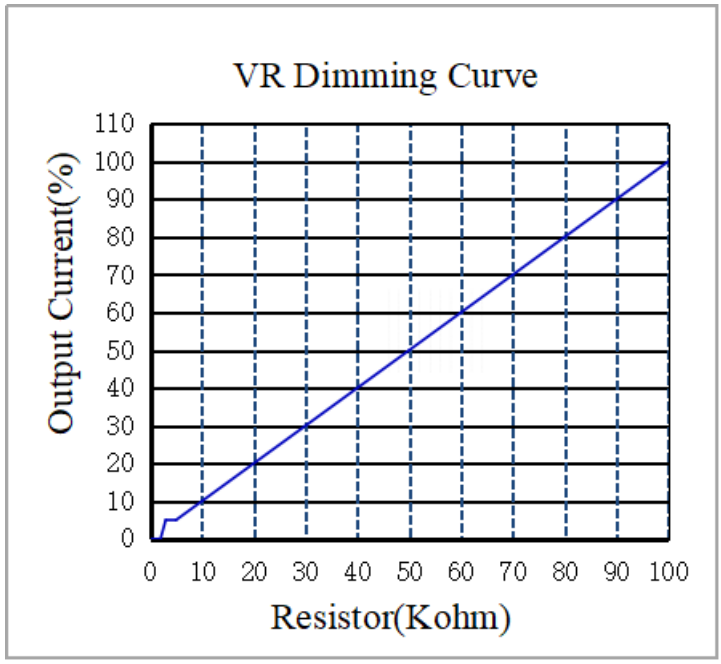
Applying additive 0 ~ 10VDC



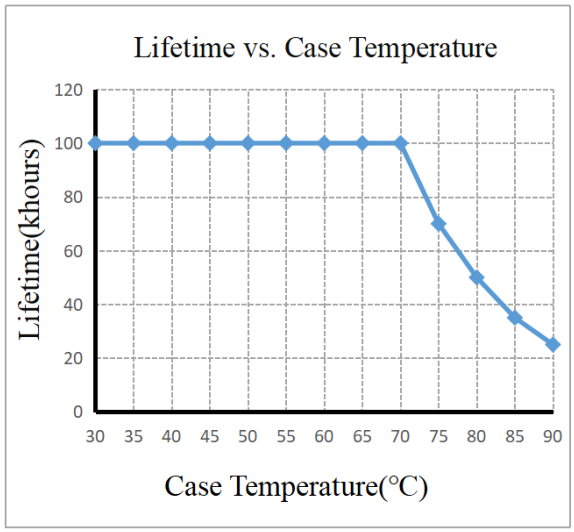
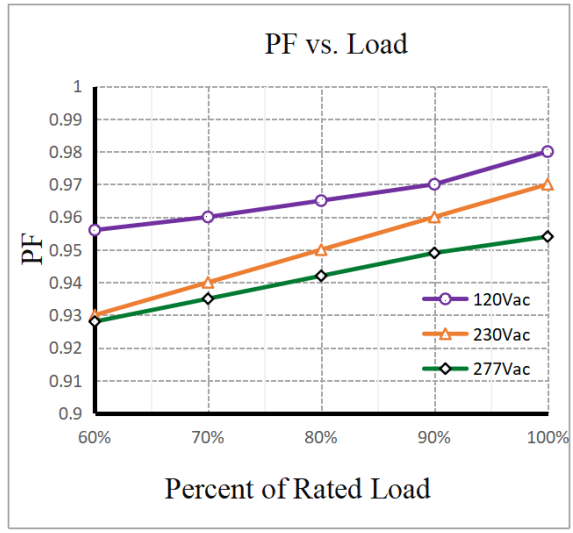
Applying additive PWM signal

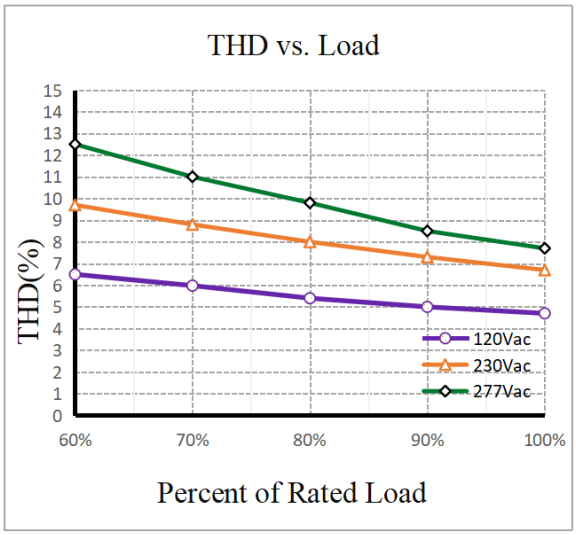


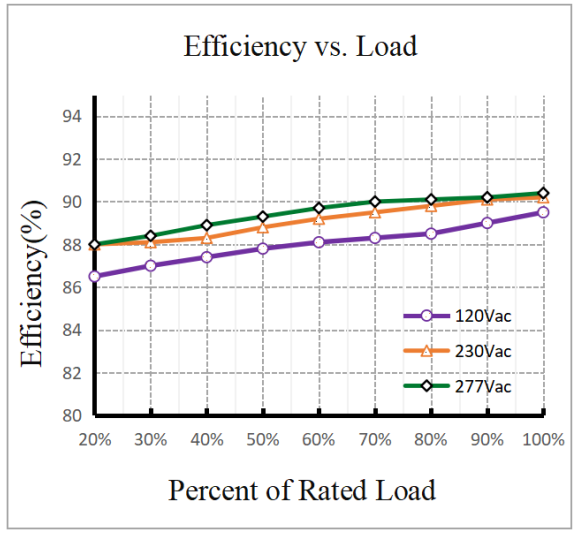
Applying additive resistance



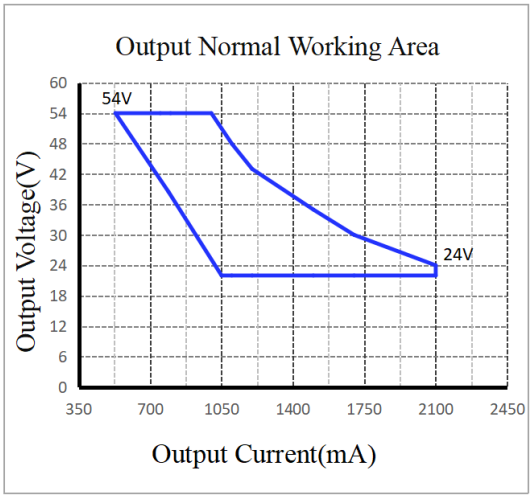
5. Electrical values

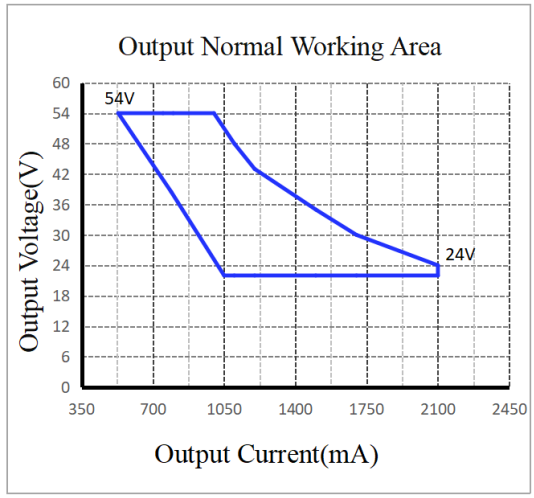
XC50W530-1400 3IN1 & XC50W1450-2100 3IN1	
Lifetime vs. Case Temperature	PF vs. Load
	
THD vs. Load	Efficiency vs. Load





Output Power Window



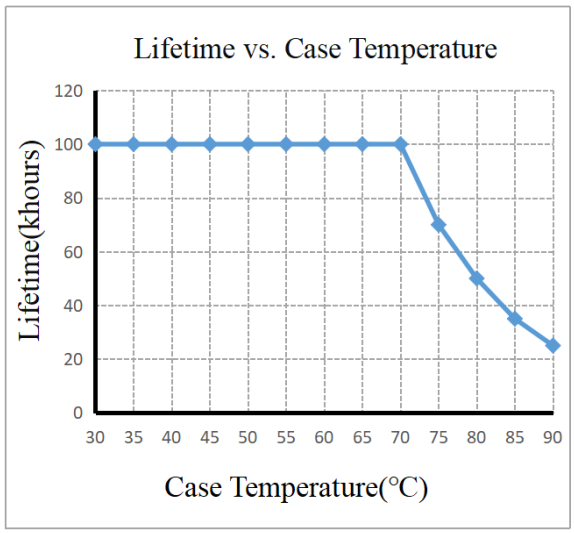


22-54(V)	输　出								
负载工作电压	22V	27V	30V	36V	40V	43V	46V	51V	54V
电源电流 Io_MAX	1.4A	1.4A	1.4A	1.4A	1.25A	1.16A	1086mA	980mA	926mA
电源输入功率 P_i_MAX	30.8W	37.5W	42W	50W	50W	50W	50W	50W	50W

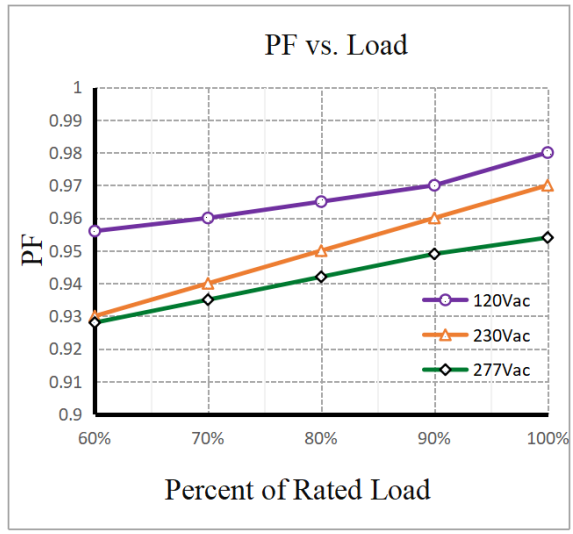
22-34（V）	输　出						
负载工作电压	22V	24V	26V	28V	30V	32V	34V
电源电流 Io_MAX	2.1A	2.1A	1.92A	1.79A	1.67A	1.56A	1.47A
电源输入功率 P_i_MAX	46.2W	50W	50W	50W	50W	50W	50W

XC75W700-1050 3IN1　&　XC75W1300-2100 3IN1

Lifetime vs. Case Temperature

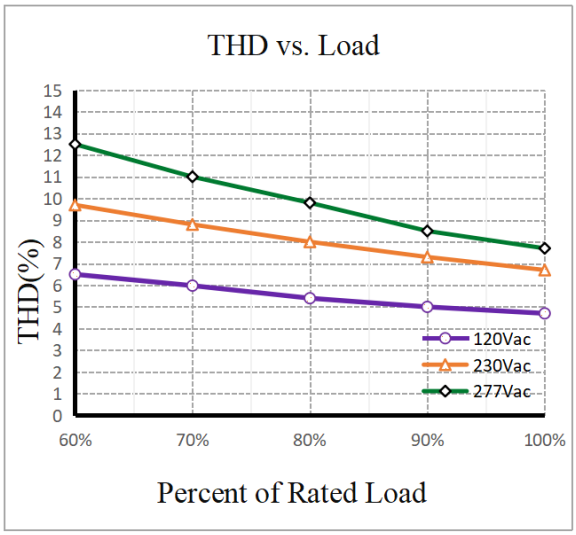


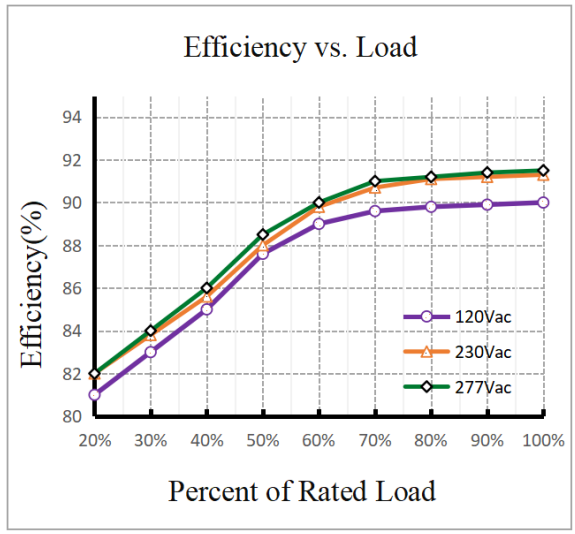
PF vs. Load



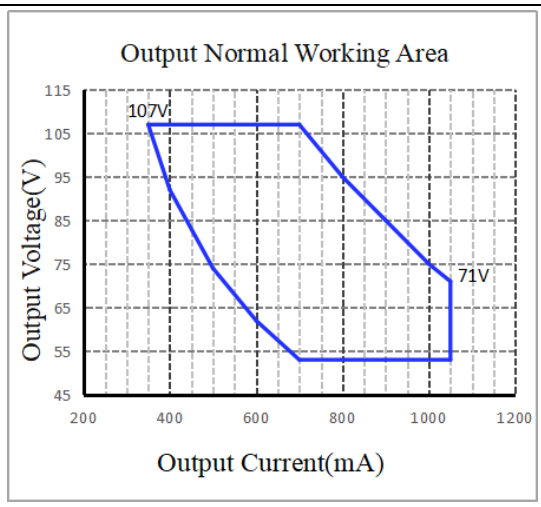
THD vs. Load

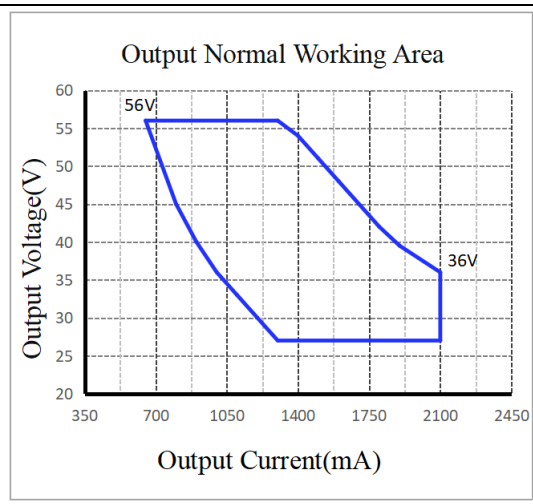
Efficiency vs. Load





Output Power Window



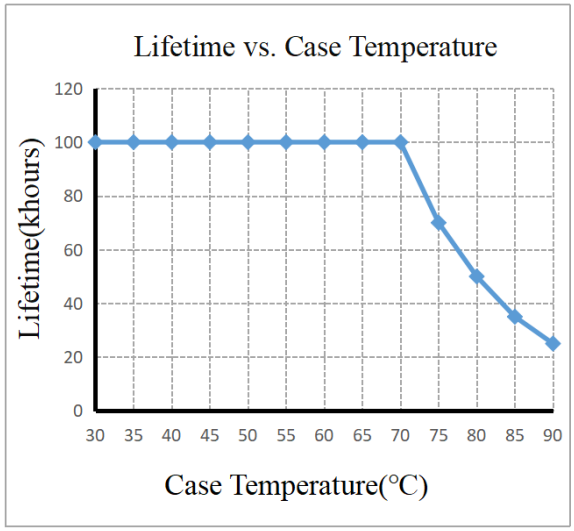


53-107(V)	Output							
Load operating voltage	71V	75V	79V	83V	88V	94V	100V	107V
supply currentIo_MAX	1050mA	1000mA	950mA	900mA	850mA	800mA	750mA	700mA
input powerP_i_MAX	75W	75W	75W	75W	75W	75W	75W	75W

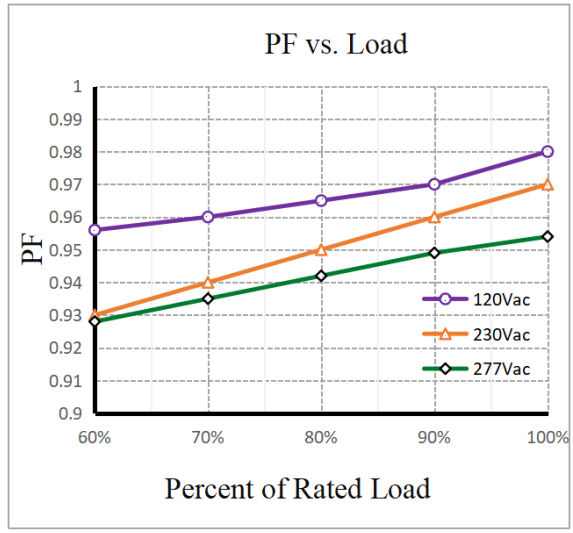
27-26(V)	Output								
Load operating voltage	27V	30V	36V	40V	44V	47V	50V	53V	56V
supply currentIo_MAX	2.1A	2.1A	2.1A	1.88A	1.7A	1.6A	1.5A	1.42A	1.34A
input powerP_i_MAX	56.7W	63W	100W	75W	75W	75W	75W	75W	75W

XC100W700-1050 3IN1 & XC100W1750-2780 3IN1

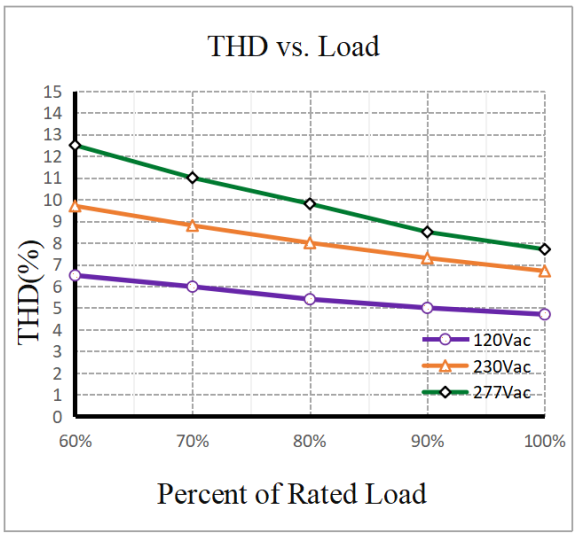
Lifetime vs. Case Temperature



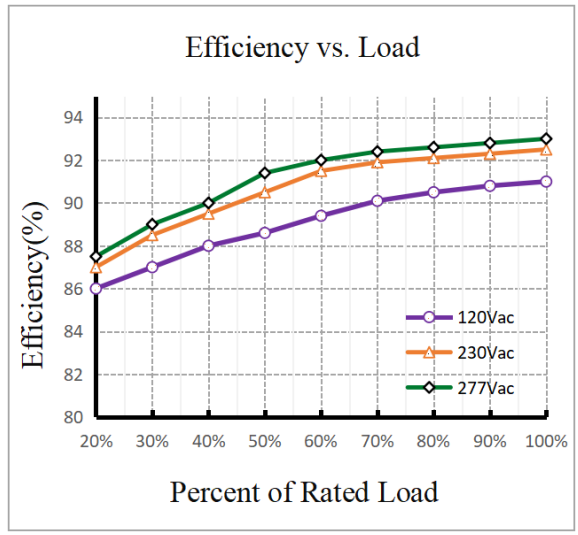
PF vs. Load



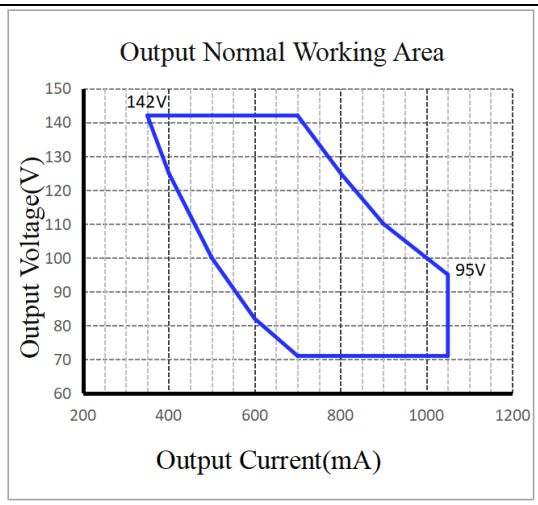
THD vs. Load

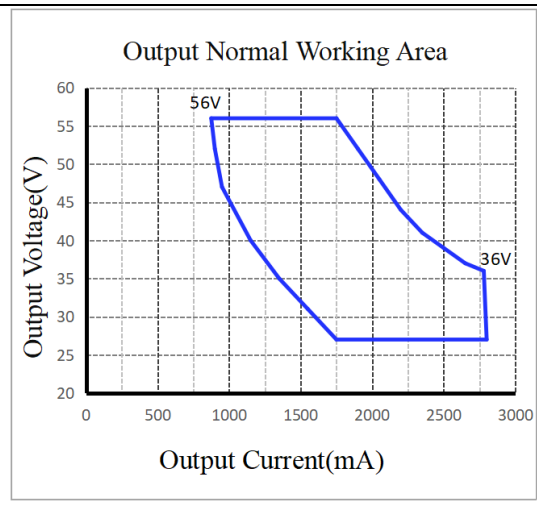


Efficiency vs. Load



Output Power Window





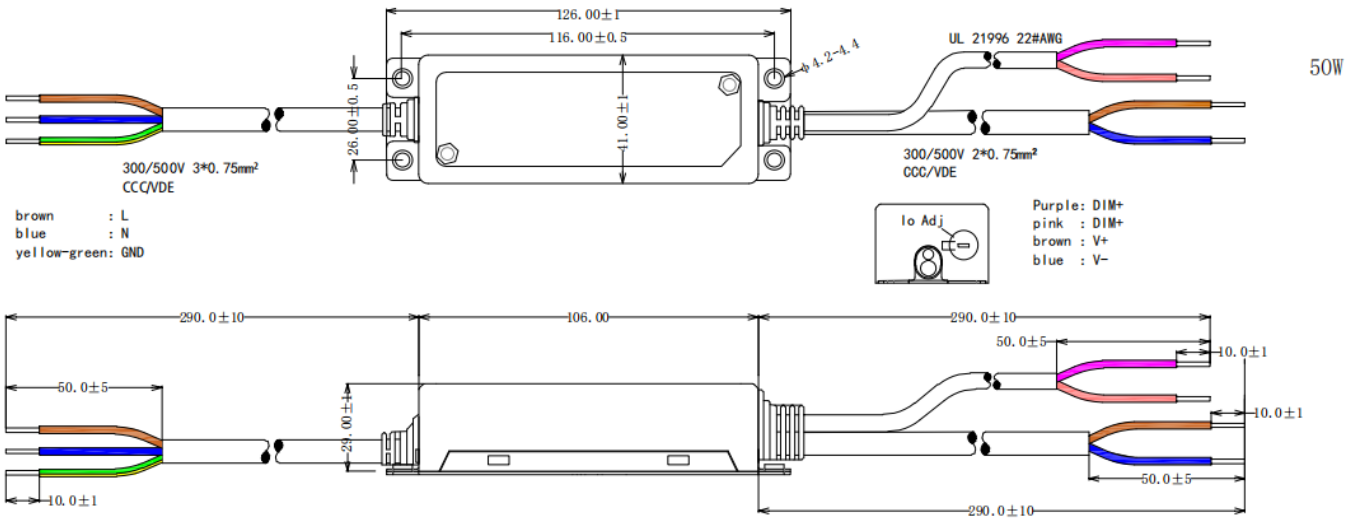
KGP Electronics GmbH
Hueckstraße 19
DE-58511 Lüdenscheid

71-142(V)	Output								
负载工作电压	71V	95V	100V	105V	111V	118V	125V	133V	142V
电源电流 Io_MAX	1050mA	1050mA	1000mA	950mA	900mA	850mA	800mA	750mA	700mA
电源输入功率 P_i_MAX	74.55W	100W	100W	100W	100W	100W	100W	100W	100W

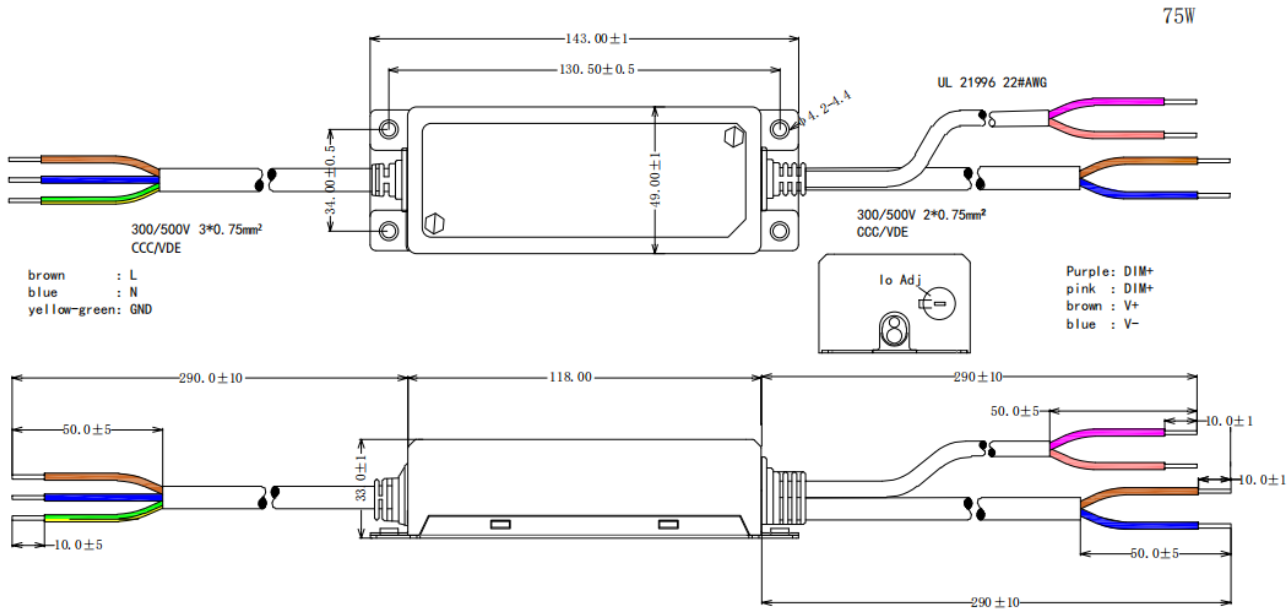
27-56(V)	Output								
负载工作电压	27V	30V	36V	40V	44V	47V	50V	53V	56V
电源电流 Io_MAX	2.78A	2.78A	2.78A	2.5A	2.27A	2.13A	2A	1.89A	1.79A
电源输入功率 P_i_MAX	75.06W	83.4W	100W	100W	100W	100W	100W	100W	100W

6. Dimension （Unit：mm）

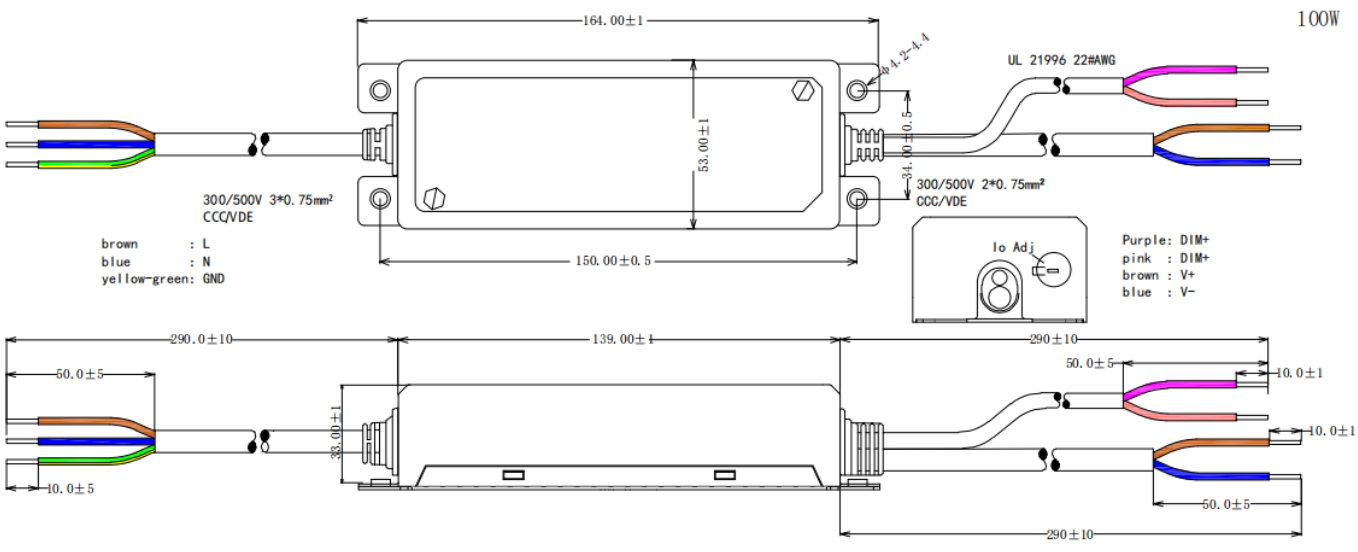
XC50W530-1400 3IN1 & XC50W1450-2100 3IN1



XC75W700-1050 3IN1 & XC75W1300-2100 3IN1

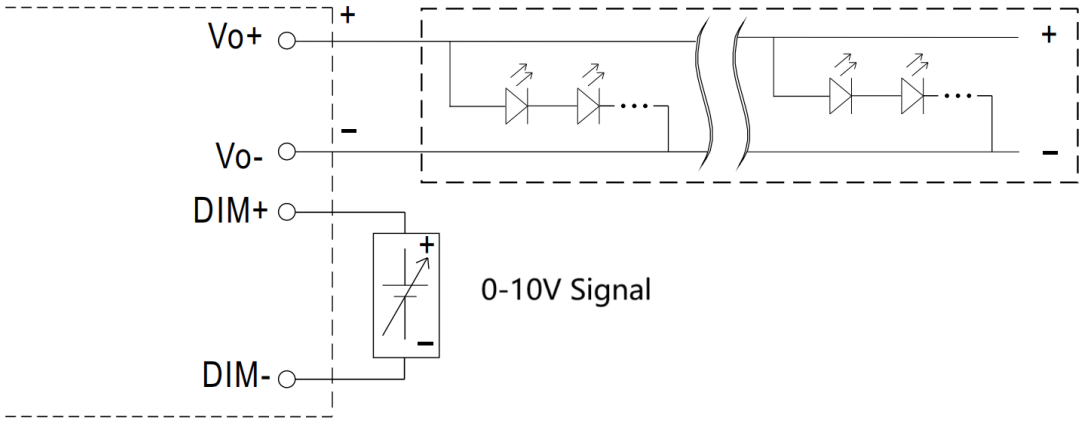


XC100W700-1050 3IN1 & XC100W1750-2780 3IN1

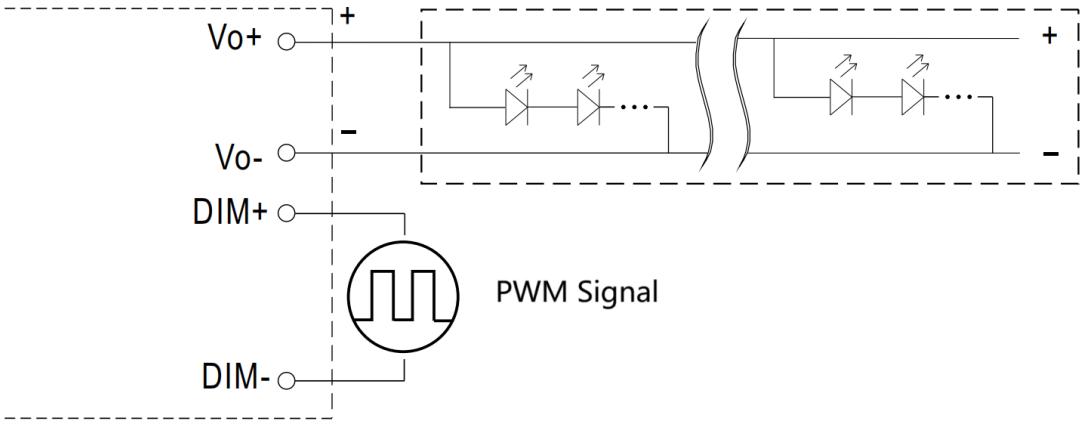


7. Wiring Diagram

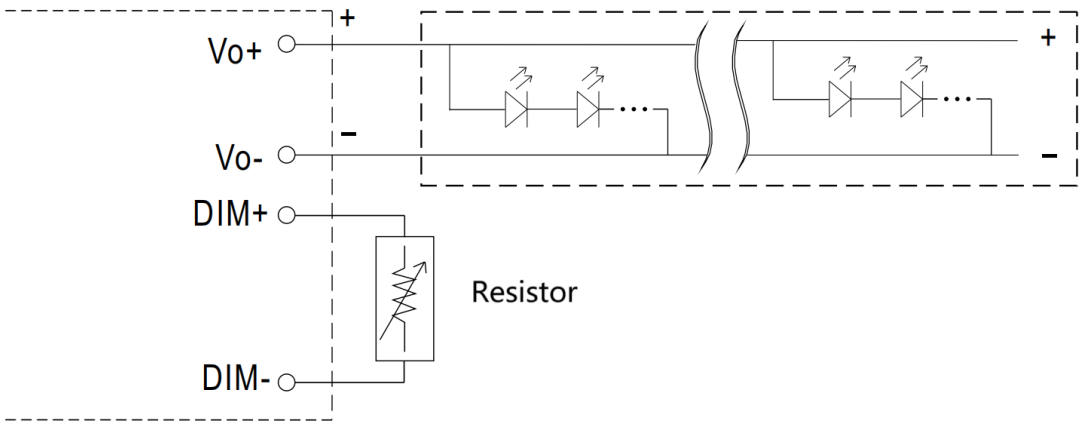
◎ 0-10V Dimming



◎ 10V PWM Signal Dimming (Frequency Range:100Hz ~ 3kHz)



◎ Resistance Dimming



8. Packing information

Packing way	Model	Colour	Carton L*W*H(mm)	Pcs/ Carton	Net weight/ Pcs(kg)	Net weight/ Carton(kg)	Gross weight/ Carton(kg)
Industrial	XC50W530-1400 3IN1	Silver-white	L345*W310*H158	32	0.37	11.8	12.9
Industrial	XC50W1450-2100 3IN1	Silver-white	L345*W310*H158	32	0.37	11.8	12.9
Industrial	XC75W700-1050 3IN1	Silver-white	L375*W245*H220	30	0.44	13.2	14.4
Industrial	XC75W1300-2100 3IN1	Silver-white	L375*W245*H220	30	0.44	13.2	14.4
Industrial	XC100W700-1050 3IN1	Silver-white	L420*W280*H210	30	0.59	17.7	18.9
Industrial	XC100W1750-2780 3IN1	Silver-white	L420*W280*H210	30	0.59	17.7	18.9

9. Wiring instructions

• All connections must be kept as short as possible to ensure good EMI behaviour
• Mains leads should be kept apart from LED Driver and other leads (ideally 5 – 10 cm distance)
• Advice the maximum length of output wires is 0.5 m
• Secondary switching is not permitted（Except for constant voltage）
• Incorrect wiring can damage LED modules.
• The wiring must be protected against short circuits to earth (sharp edged metals parts, metal cable clips, louver, etc.)
• Hot plug-in is not supported due to residual output voltage of > 0 V up to mains voltage. Danger to life.
• When connecting an LED load, restart the device to activate the LED output.
• This can be done via mains reset or via interface (DALI, DSI, switch DIM).

10. Replace LED module

•Mains off
•Remove LED module
•Wait for 30 seconds
•Connect LED module again
•Hot plug-in or secondary switching of LEDs is not permitted and may cause a very high current to the LEDs

11. REVISION HISTORY

DATE	REV	Modification details
2025-10-10	V1.0	Initial release.