



Features & Benefits

- Universal AC Input Voltage(120-277VAC)
- Condensed design, very high power density of 24 W/in³
- 93% high efficiency , low temperature rise
- IP65 rated case with silicone-based potting
- All-Round Protection: SCP, OVP, OPP, OTP
- UL Class2 output, Class P
- Operating temperature: -40°C~+55°C, wet location
- Comply with IEEE1789, UL8750

<p>LUMIGEAR CVP-A1-096S024U-ND Constant Voltage LED Driver</p> <p>● WHI(N) ● BLK(L) ● GRN(PE)</p> <p>Class 2 Class P</p> <p>Input:120-277Vac 50/60Hz 1.05Amax Output:24Vdc 0-4000mA 96Wmax</p>	<p>IP65 FC RoHS</p> <p>CAUTION: For connections use wire rated for at least 90°C(194°F). Disconnect line voltage before installing or replacing. Dry or damp locations only. Ground enclosure in installation.</p>	<p>UL LISTED</p> <p>RED(LED+) ● BLU(LED-) ●</p> <p>Made in China</p>
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Model List

Model Name	Rated Input Voltage	Max Output Power(Total)	Output Current(Total)	Rated Output Voltage	Efficiency	Dimension
CVP-A1-096S024U-ND	120-277VAC	96W max.	0-4000mA	24VDC	93%	150*28.5*20.7 mm/ 5.9*1.1*0.8 in.
CVP-A1-096S036U-ND	120-277VAC	96W max.	0-2667mA	36VDC	93%	150*28.5*20.7 mm/ 5.9*1.1*0.8 in.
CVP-A1-096S048U-ND	120-277VAC	96W max.	0-2000mA	48VDC	93%	150*28.5*20.7 mm/ 5.9*1.1*0.8 in.

Approvals



Model name code

<u>CVP-A1</u>	-	<u>096S</u>	<u>024</u>	<u>U</u>	-	<u>ND</u>
①		②	③	④		⑤

①	Series	CVP Series
②	Output power	Maximum output power: 96W
③	Output Voltage(max)	output voltage: 24V
④	Input voltage	120-277VAC
⑤	Dimming Control	Non-dimming

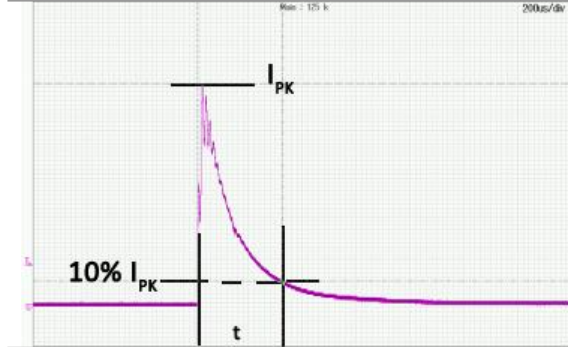
Specification:

Parameters	Symbols	Test Conditions / Comment	Min	Typ	Max	Units
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INPUT

Input Voltage	V_{IN}		108		305	V_{AC}
Rated Input Voltage	$V_{IN RATED}$		120		277	V_{AC}
Input Frequency	f_{line}		47	50/60	63	Hz
Input Current	I_{IN}	Full Load, $V_{IN} = 120V_{AC}$			1.05	A
Inrush Current	I_{INRUSH}	Cold Start, $V_{IN} = 277V_{AC}$			70	A
Leakage Current	$I_{Leakage}$	$V_{IN} = 277V_{AC}$, 60Hz			0.75	mA

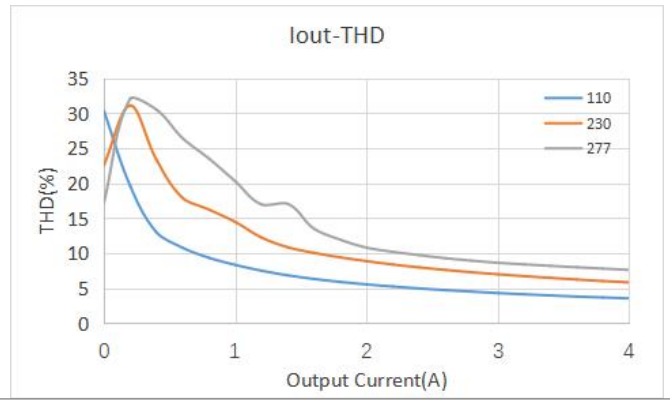
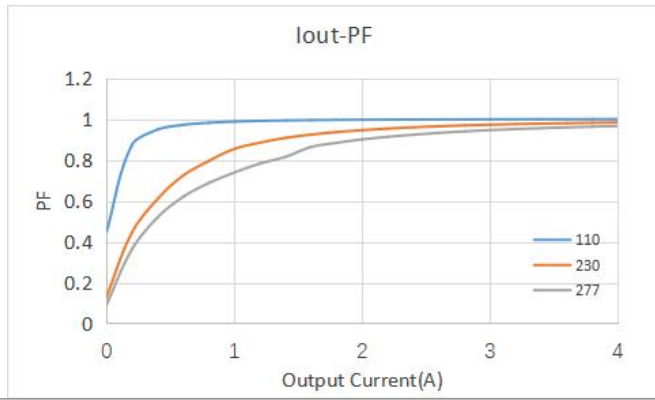
Number of Drivers per MCB(Circuit Breaker)	MCB type	B10	C10	D10	B13	C13	D13	B16	C16	D16	B20	C20	D20
	120VAC	6	7	8	8	10	11	10	12	14	13	15	17
	230VAC	4	7	14	5	9	19	7	11	23	8	14	29
	277VAC	4	6	13	5	9	18	6	11	22	8	13	27



Input Voltage	Inrush Current	t(us)10%-10%
120VAC	28A	158
230VAC	54A	160
277VAC	65A	166

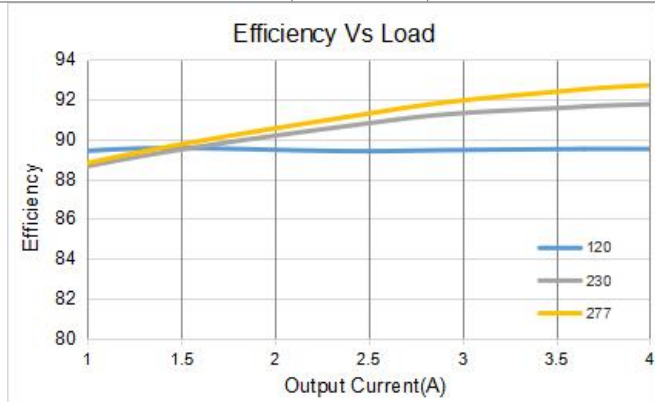
General Characteristics

Power Factor	PF	20-100% load, $V_{IN} = 120V_{AC}$	0.9		PF
		60~100% load, $V_{IN} = 277V_{AC}$	0.9		
Total Harmonic Distortion	THD	20-100% load, $V_{IN} = 120V_{AC}$		20	%
		60~100% load, $V_{IN} = 277V_{AC}$		20	
Efficiency	η_{24V}	CVP-A1-096S024U-ND, Full load, $V_{IN} = 120V_{AC}$, Steady state	89	91	%
		CVP-A1-096S024U-ND, Full load, $V_{IN} = 277V_{AC}$, Steady state	91	93	
	η_{36V}	CVP-A1-096S036U-ND, Full load, $V_{IN} = 120V_{AC}$, Steady state	89	91	
		CVP-A1-096S036U-ND, Full load, $V_{IN} = 277V_{AC}$, Steady state	91	93	
	η_{48V}	CVP-A1-096S048U-ND, Full load, $V_{IN} = 120V_{AC}$, Steady state	88.5	90.5	
		CVP-A1-096S048U-ND, Full load, $V_{IN} = 277V_{AC}$, Steady state	91	93	
Turn On Delay Time	$T_{on, delay}$	Cold Start		0.5	S

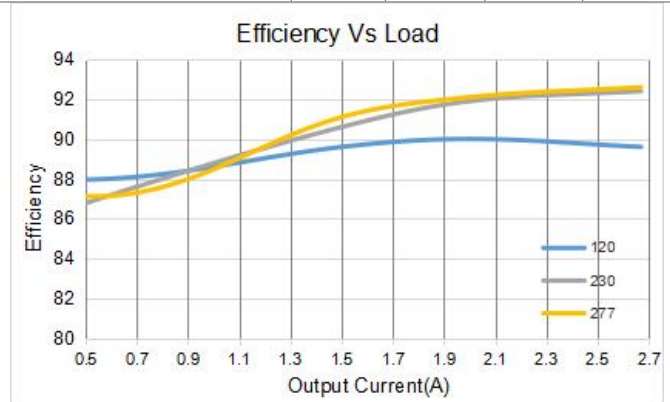


OUTPUT

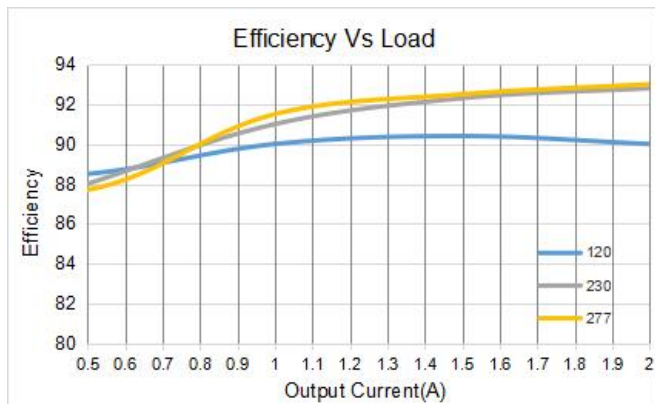
Output Voltage Tolerance	t_{OUT}			5	%
No Load Output Voltage Tolerance	$t_{NO\ LOAD}$	No Load,		3	%
Output Current	I_{OUT}	CVP-A1-096S024U-ND	0	4000	mA
		CVP-A1-096S036U-ND	0	2667	mA
		CVP-A1-096S048U-ND	0	2000	mA
Output Power	P_{OUT}			96	W
Line Regulation	$V_{OUT-LINE}$			1	%
Ripple Voltage	$V_{OUT-LINE}$	Full Load, (pk-to-pk)/Average, Without Dimmer		10	%
Output Voltage Overshoot	$V_{OVERSHOOT}$	Turning Power ON		10	%



CVP-A1-096S024U-ND



CVP-A1-096S036U-ND



CVP-A1-096S048U-ND

Protection

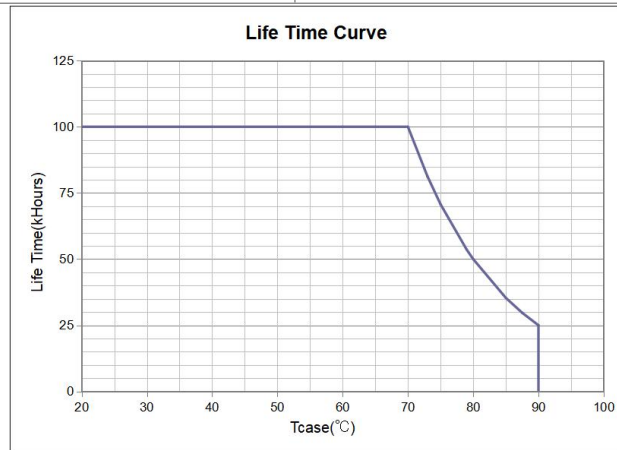
Over Voltage Protection	V_{OVP}	CVP-A1-096S024U-ND, Latch mode.	28		36	V
		CVP-A1-096S036U-ND, Latch mode.	38		44	V
		CVP-A1-096S048U-ND, Latch mode.	50		60	V
Over Current Protection	I_{OCP}	CVP-A1-096S024U-ND, Hiccup mode.	4000		4500	mA
		CVP-A1-096S036U-ND, Hiccup mode.	2667		3000	mA
		CVP-A1-096S048U-ND, Hiccup mode.	2000		2300	mA
Over Temperature Protection	TOTP	When the TC temperature exceeds the protection point, the drive will turn off the output; when the TC temperature drops back to the recovery point, the output will be resumed.		95		°C
	TOTP_RESUME			75		°C
Over Power Protection	CC/CV mode.					
Short Circuit Protection	The unit can recover automatically after fault conditions is removed.					

Environment

Storage Temperature	$T_{Storage}$	Humidity: 10% RH to 90% RH	-40	-	+85	°C
Ambient Operating Temperature	T_a		-40	-	+55	°C
Max. Case Temperature	T_c	Hot spot on case			90	°C
Operating Relative Humidity	H_a	Non-Condensing	10		90	%
Acoustic Noise		Measured from 1m away			24	dB(A)
Cooling	Convection Cooling					
IP Rating	IP65					

Others

Life Time	T_{Life}	Full Load, 80°C case temperature,	50			kHrs
MTBF	T_{MTBF}	Full Load, 25°C ambient temperature	200			kHrs
Net Weight	W_{NET}			TBD		g
Warranty	5 Years Warranty at $T_c \leq 80^\circ\text{C}$					
Flicker	IEEE 1789, Title 24					



Safety Compliance

CUL/UL	UL8750, CAN/CSA-C22.2 No. 250.13
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Electromagnetic Compliance

EMC Requirements	Standard	Conditions
EMI Emissions	FCC Title 47 Part 15B	Class B at 120VAC, Class A at 277VAC
Voltage Fluctuations and Flicker	IEC61000-3-3	
Immunity Compliance	IEC 61000-4-2	±8kV air Discharge, ±6kV Contact Discharge
	ANSI/IEEE C62.41.2	2 kV combination wave
	ANSI/IEEE C62.41.1-2002	2.5kV Ring Wave, test at 30Ω 7 Strikes/1 minute interval, Common and Differential mode, 56 total strikes
	IEC 61000-4-11	>95% dip, .5 period; 30% dip, 25 periods; 95% reduction, 250 periods
	IEC 61000-4-4	± 2kV Direct couple to Line input, 5kHz repetition rate, 15mS duration, 300mS period. 7 coupling paths, 1 minute per path (14 total combinations)

Note:

1. Unless otherwise specified, all the above parameters are measured at ambient temperature of 25°C and rated voltage.
2. Case must be grounded when installation

Packaging

Driver quantity (pcs)	Layer	Weight (kg)	Outer dimensions of Carton L*W*H(mm)
84	7	15.0	335*265*215

Mechanical Drawing:

