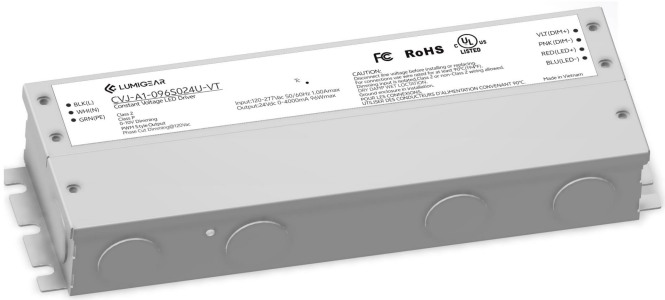
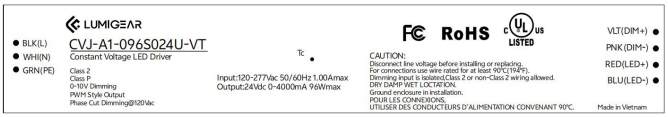
CVJ-A1-096SXXXX-VT

96w TRIAC+0~10V, Constant Voltage Series





Features & Benefits

- Universal ac input voltage(120-277VAC and 120-347VAC)
- Field or factory installation
- Dry, damp and wet location,**IP66**
- Built-in APFC
- Isolated 0-10V dimming, dim down to 0.1%
- Complies with leading-edge/trailing-edge dimmer
- Wide load range from 10% to 100%(triac dimming)
- Flicker free, excellent camera compatibility, spec-grade smoothness
- All-Round Protection: SCP, OVP, OTP, OPP(CC/CV mode, especially suitable for LED strip)
- Constant voltage PWM style output
- Class2, Class P
- Operating temperature: -40℃~+55℃
- Comply with IEEE1789(≥1% dimming), UL8750

Model List

Model Name	Rated Input Voltage	Max Output Power(Total)	Output Current(Total)	Rated Output Voltage	Efficiency	Dimension
CVJ-A1-096S024X-VT	120-277VAC 120-347VAC	96W max.	0-4000mA	24VDC	91%	218*71.7*35 mm 8.6×2.8×1.4 in.
CVJ-A1-096S036X-VT	120-277VAC 120-347VAC	96W max.	0-2666mA	36VDC	91%	218*71.7*35 mm 8.6×2.8×1.4 in.
CVJ-A1-096S048X-VT	120-277VAC 120-347VAC	96W max.	0-2000mA	48VDC	91%	218*71.7*35 mm 8.6×2.8×1.4 in.

Optional Function

Input voltage: 120-277VAC or 120-347VAC
Aux power, 12V/50mA

Approvals

TRIAC 0/1-10 V c UL us LISTED CLASS P

Model name code

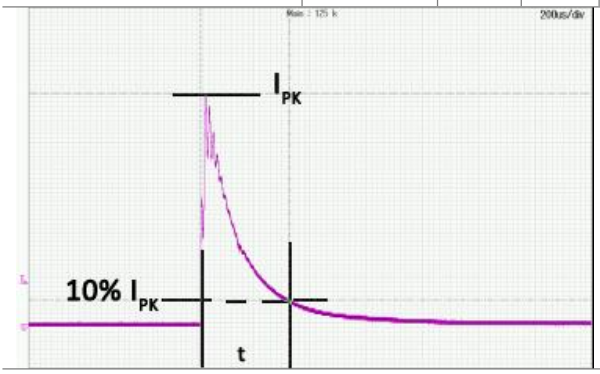
CVJ-A1	-	096S	XXX	X	–	VT
①		②	③	④		⑤

①	Series	CVJ Series
②	Output power	Maximum output power: 96W
③	Output Voltage(max)	024=24V 036=36V 048=48V
④	Input voltage	U=120-277VAC M=120-347VAC
⑤	Dimming Control	Triac&0-10V

Specification:

Parameters	Symbols	Test Conditions / Comment	Min	Typ	Max	Units
INPUT						
Input Voltage	V_{IN}	CVJ-A1-096SXXXU-VT	108		305	V_{AC}
		CVJ-A1-096SXXXM-VT	108		382	V_{AC}
Rated Input Voltage	$V_{IN\ RATED}$	CVJ-A1-096SXXXU-VT	120		277	V_{AC}
		CVJ-A1-096SXXXM-VT	120		347	V_{AC}
Input Frequency	f_{line}		47	50/60	63	Hz
Input Current	I_{IN_120}	Full Load, V_{IN} = 120V_{AC}			1.0	A
	I_{IN_277}	Full Load, V_{IN} = 277V_{AC}			0.45	A
	I_{IN_347}	Full Load, V_{IN} = 347V_{AC}			0.35	A
Inrush Current	I_{INRUSH}	Cold Start, V_{IN} = 347V_{AC}			75	A
Leakage Current	$I_{Leakage}$	V_{IN} = 347$V_{AC,}$ 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
	120V_{AC}	6	7	8	8	10	11	10	12	14	13	15	17
	277V_{AC}	3	6	12	5	8	16	6	10	20	7	12	25
	347V_{AC}	3	6	12	4	7	15	5	9	19	7	12	24

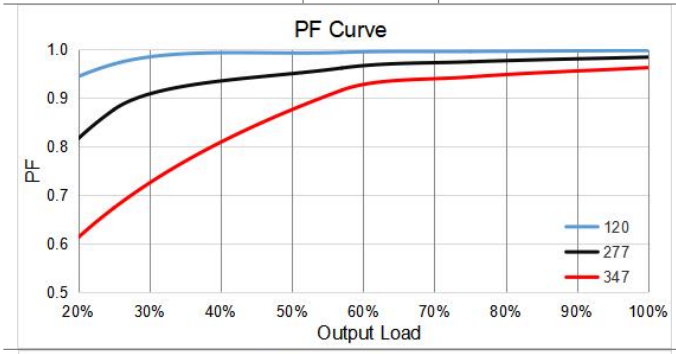


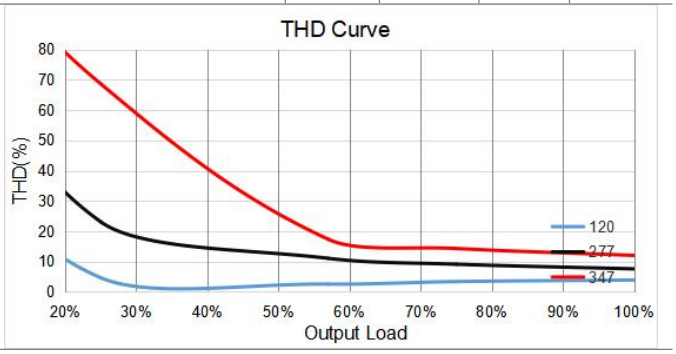
Input Voltage	Inrush Current	t(us)10%-10%
120VAC	27.4A	260
277VAC	61.8A	324
347VAC	74.0A	366

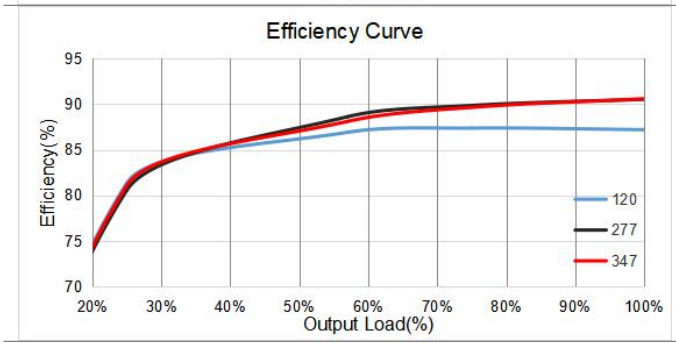
General Characteristics

Power Factor	PF	CVJ-A1-096SXXXX-VT, 30-100% load, V_{IN} = 120V_{AC}	0.9			PF
		CVJ-A1-096SXXXX-VT, 60~100% load, V_{IN} = 277V_{AC}	0.9			
		CVJ-A1-096SXXXX-VT, 70~100% load, V_{IN} = 347V_{AC}	0.9			
Total Harmonic Distortion	THD	CVJ-A1-096SXXXX-VT, 30-100% load, V_{IN} = 120V_{AC}			20	%
		CVJ-A1-096SXXXX-VT, 60~100% load, V_{IN} = 277V_{AC}			20	
		CVJ-A1-096SXXXX-VT, 70~100% load, V_{IN} = 347V_{AC}			20	
Efficiency	η	Full load,V_{IN} =120V_{AC}, V_{OUT}=24V, Steady state	87	88		%
		Full load,V_{IN} =277V_{AC}(U type), V_{IN} =347V_{AC}(M type), V_{OUT}=24V, Steady state	89	90		
		Full load,V_{IN} =120V_{AC}, V_{OUT}=36V, Steady state	88	89		
		Full load,V_{IN} =277V_{AC}(U type), V_{IN} =347V_{AC}(M type), V_{OUT}=36V, Steady state	90	91		

		Full load,V_{IN} =120V_{AC}, V_{OUT}=48, Steady state	88	89		
		Full load,V_{IN} =277V_{AC}(U type), V_{IN} =347V_{AC}(M type), V_{OUT}=48V, Steady state	90	91		
Turn On Delay Time	T_{on_delay}	Cold Start			0.5	S







OUTPUT

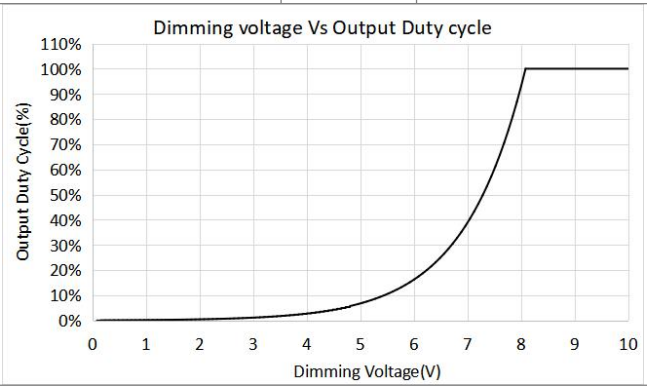
Output Voltage Tolerance	t_{OUT}	No Dimming			3	%
No Load Output Voltage Tolerance	$t_{NO\ LOAD}$	No Load, No Dimming			1.5	%
Output Current	I_{OUT}	CVJ-A1-096S024X-VT	0		4000	mA
		CVJ-A1-096S036X-VT	0		2666	mA
		CVJ-A1-096S048X-VT	0		2000	mA
Output Power	P_{OUT}				96	W
Line Regulation	$V_{OUT-LINE}$				1	%
Ripple Voltage	$V_{OUT-LINE}$	Full Load, (pk-to-pk)/Average			5	%
Output Voltage Overshoot	$V_{OVERSHOOT}$	Turning Power ON			10	%

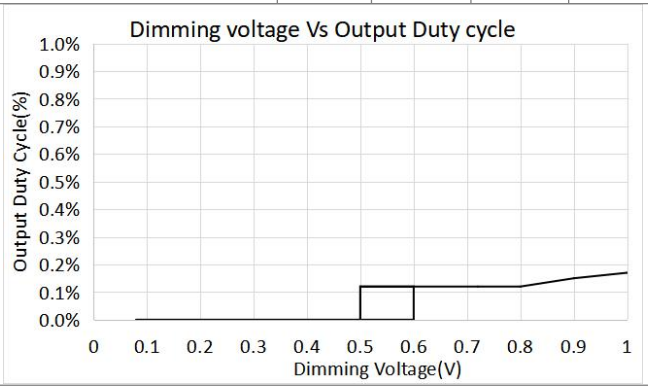
0~10V or Resistor Dimming(Optional)

The 0~10V or resistor dimming can be used to dim the output voltage via a standard commercial wall dimmer (0~10VDC) or an external control voltage source (0~10VDC) or external resistor. The unit can be compatible with both sink and source current dimmers.

Dimming Curve	Linear. please see "Dimming curve".					
Absolute Maximum Voltage on 0~10V Pin	V_{DIM}		0		50	V
Source Current on 0~10V Dimming Pin	I_{DIM}			200		uA
Light On	V_{DIM-on}	With AUX power version		0.6		V
Light Off	$V_{DIM-off}$	With AUX power version		0.5		V

Dimming Voltage for Full Bright	$V_{DIM-MAX}$		8			V
Leakage Voltage	V_{Leak_rms}	Voltage between DIM- and Ground			10	V_{AC}





Triac Dimming(Optional)

The unit is compatible With Leading-edge and Trailing-edge Dimmer.

Input Voltage	$V_{IN-TRIAC\ DIM}$			120		V_{AC}
Dim Output Voltage	$V_{OUT-TRIAC}$	PWM Output	0	-	100	% of V_{OUT}
Suggest Load Range	$P_{Suggest}$	V_{IN} = 120 V_{AC}	10		100	%

Auxiliary source (Optional)

Voltage range	V_{AUX}	Standard product	11.4	12	12.6	Vdc
Current range	I_{AUX}	V_{AUX}=12V			50	mA
Output Power	P_{AUX}				0.6	W
Voltage tolerance	t_{AUX}				8	%

Protection

Over Voltage Protection	V_{OVP}	CVJ-A1-096S024X-VT, Latch mode.	28		36	V
		CVJ-A1-096S036X-VT, Latch mode.	40		47	V
		CVJ-A1-096S048X-VT, Latch mode.	56		60	V
Over Current Protection	I_{OCP}	CVJ-A1-096S024X-VT, Hiccup mode.	4000		4500	mA
		CVJ-A1-096S036X-VT, Hiccup mode.	2666		3000	mA
		CVJ-A1-096S048X-VT, Hiccup mode.	2000		2250	mA
Over Temperature Protection	T_{OTP}	If the case temperature exceeds OTP point, the output voltage of the driver is automatically reduced.	90	95	100	℃
Over Power Protection	CC/CV mode.					
Short Circuit Protection	The unit can recover automatically after fault conditions is removed.					

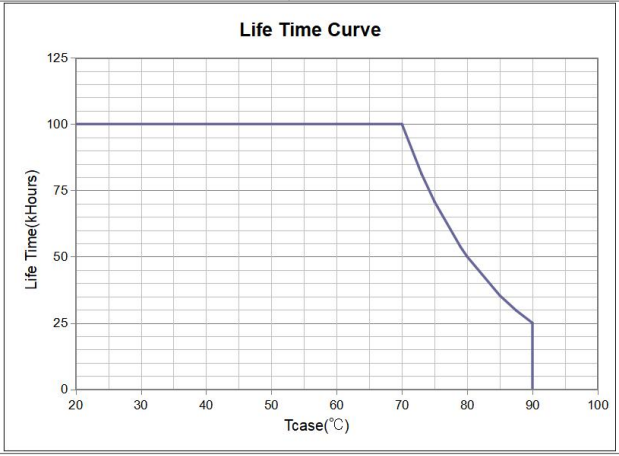
Environment

Storage Temperature	$T_{Storage}$	Humidity: 5% RH to 95% RH	-40	-	+85	℃
Ambient Operating	T_a		-40	-	+55	℃

Temperature						
Max. Case Temperature	T_c	Hot spot on case			90	℃
Operating Relative Humidity	H_a	Non-Condensing	10		90	%
Acoustic Noise		Measured from 1 m w/o dimmer.			24	dBA
Cooling	Convection Cooling					
IP Rating	IP66					

Others

Life Time	T_{Life}	Full Load, 80℃ case temperature,	50			kHrs
MTBF	T_{MTBF}	Full Load, 25℃ ambient temperature	200			kHrs
Net Weight	W_{NET}			670		g
Warranty	5 Years Warranty at T_c ≤80℃					
Flicker	IEEE 1789(≥1% dimming),Title 24					



Safety Compliance

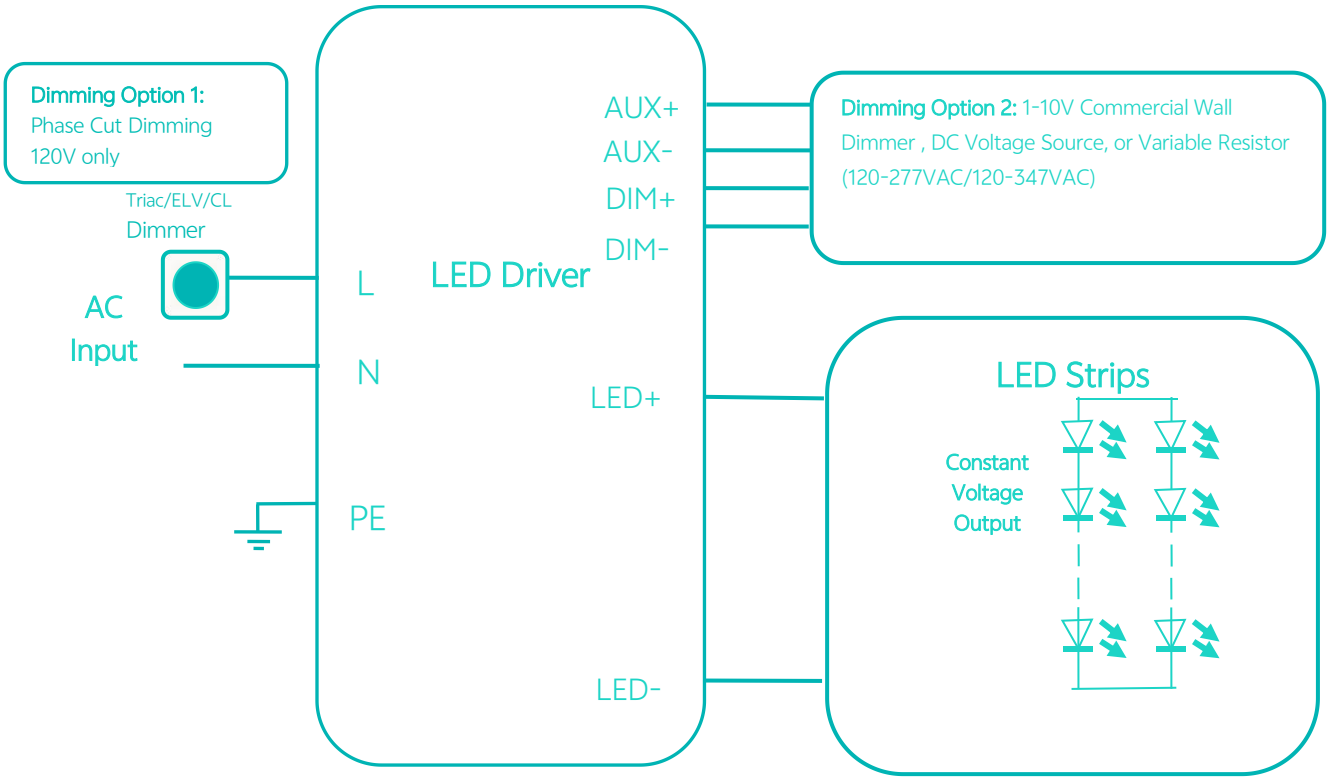
CUL/UL	UL8750, CAN/CSA-C22.2 No. 250.13

Electromagnetic Compliance

EMC Requirements	Standard	Conditions
EMI Emissions	FCC Title 47 Part 15B	Class A at 120VAC, Class A at 277VAC & 347VAC
Voltage Fluctuations and Flicker	IEC61000-3-3	
Immunity Compliance	IEC 61000-4-2	±8kV air Discharge, ±6kV Contact Discharge
	IEC 61000-4-5 or ANSI/IEEE C62.41-2002	± 4kV Common Mode(12 Ω), ± 2kV Differential Mode(2 Ω), 5 strikes/1minute interval (40 total strikes)
	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 repitition rate, 15mS duration, 300mS period. 7 coupling paths, 1 minute per path (14 total combinations)

Note: Unless otherwise specified, all the above parameters are measured at ambient temperature of 25℃ and rated voltage.

Typical Application

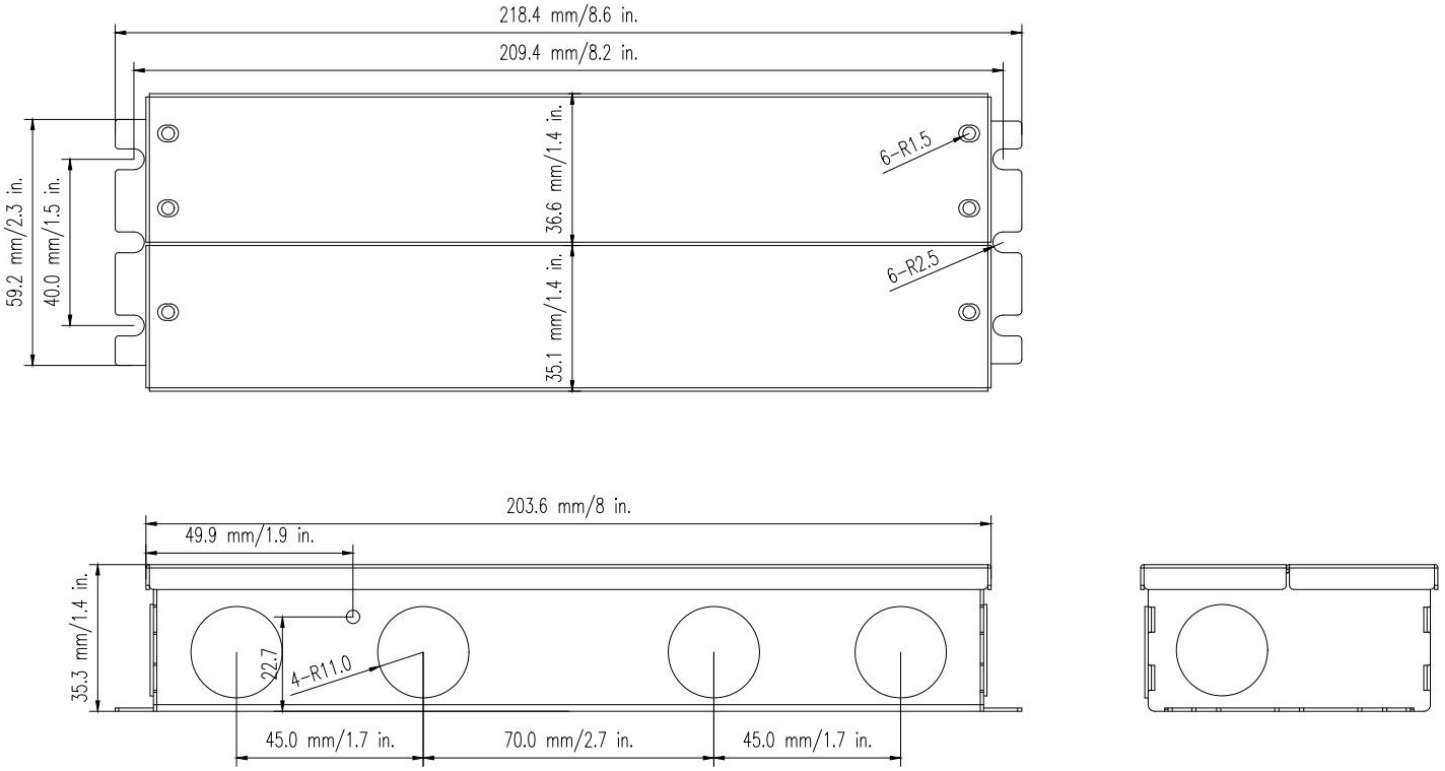


Packaging

Driver quantity (pcs)	Layer	Weight (kg)	Outer dimensions of Carton L*W*H(mm)
TBD			330 X 305 X 210

www.lumigear.com
sales@lumigear.com

Mechanical Drawing:



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