



**LUMIGEAR**  
**CVJ-A1-192S024U-VT**  
 Constant Voltage LED Driver

Input:120-277VAC 50/60Hz 2.00Amax  
 Output:24Vdc 0-4000mA  
 Output:36Vdc 0-4000mA  
 Output:48Vdc 0-2000mA

CAUTION:  
 Disconnect line voltage before installing or replacing.  
 For connections see wire rated for at least 90°C(194°F).  
 Dimming input is isolated Class 2 or non-Class 2 wiring allowed.  
 DIM: Single-Wire LLC-DRIVER  
 Ground enclosure in installation.  
 POUSSEZ LES CONDUCTEURS.  
 UTILISER DES CONDUCTEURS D'ALIMENTATION CONVIENTANT NOTÉ.  
 Made in Vietnam

**FC RoHS** **UL LISTED**

VLT(DIM+) ●  
 PNK(DIM+) ●  
 RED(LED1+) ●  
 BLU(LED1+) ●  
 RED(LED2+) ●  
 BLU(LED2+) ●

● BLK(L)  
 ● WHI(N)  
 ● GRN(PE)

Class 2  
 Class 2  
 0-10V Dimming  
 PWM Style Output  
 Title: Dimming@20Vdc

## 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°C~+50°C
- 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-A1-192D024X-VT	120-277VAC 120-347VAC	2*96W max.	2*0-4000mA	2*24VDC	91%	248.5*115.5*40 mm 9.8*4.5*1.5 in.
CVJ-A1-192D036X-VT	120-277VAC 120-347VAC	2*96W max.	2*0-2666mA	2*36VDC	91%	248.5*115.5*40 mm 9.8*4.5*1.5 in.
CVJ-A1-192D048X-VT	120-277VAC 120-347VAC	2*96W max.	2*0-2000mA	2*48VDC	91%	248.5*115.5*40 mm 9.8*4.5*1.5 in.

## Optional Function

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

## Approvals

TRIAC 0/1-10 V **cUL** **us** LISTED CLASS P

## Model name code

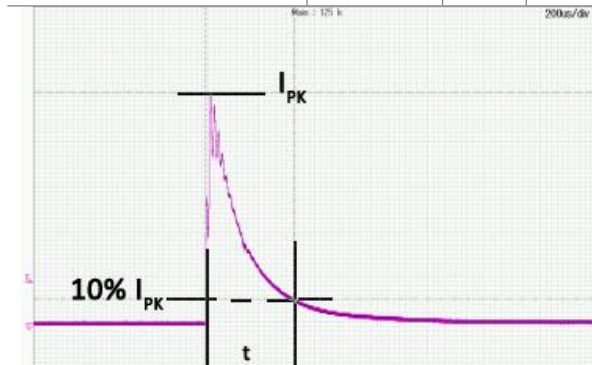
CVJ-A1	=	192D	XXX	X	-	VT
①		②	③	④		⑤

①	Series	CVJ Series
②	Output power	Maximum output power: 192W
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
<b>INPUT</b>						
Input Voltage	$V_{IN}$	CVJ-A1-192DXXXU-VT	108		305	$V_{AC}$
		CVJ-A1-192DXXXM-VT	108		382	$V_{AC}$
Rated Input Voltage	$V_{INRATED}$	CVJ-A1-192DXXXU-VT	120		277	$V_{AC}$
		CVJ-A1-192DXXXM-VT	120		347	$V_{AC}$
Input Frequency	$f_{line}$		47	50/60	63	Hz
Input Current	$I_{IN}$	Full Load, $V_{IN} = 120V_{AC}$			2.0	A
Input Current	$I_{IN}$	Full Load, $V_{IN} = 277V_{AC}$			0.9	A
Input Current	$I_{IN}$	Full Load, $V_{IN} = 347V_{AC}$			0.7	A
Inrush Current	$I_{INRUSH}$	Cold Start, $V_{IN} = 347V_{AC}$			100	A
Leakage Current	$I_{Leakage}$	$V_{IN} = 347V_{AC}$ , 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	3	3	4	4	5	5	5	6	7	6	7	8
	277VAC	2	4	9	3	6	12	4	7	14	5	9	18
	347VAC	2	4	9	3	6	12	4	7	14	5	9	18

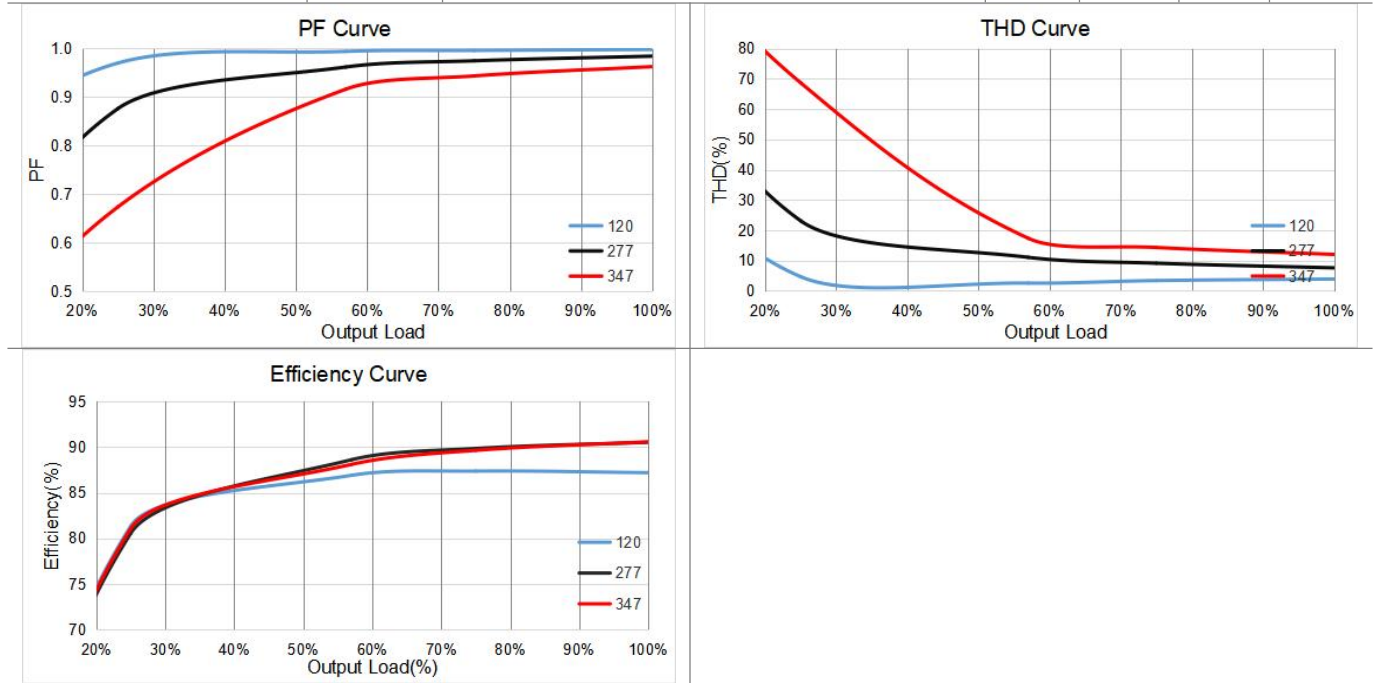


Input Voltage	Inrush Current	t(us)10%-10%
120VAC	37.4A	340
277VAC	85.5A	354
347VAC	96.4.0A	370

## General Characteristics

Power Factor	PF	CVJ-A1-192DXXXX-VT, 30~100% load, $V_{IN} = 120V_{AC}$	0.9		PF
		CVJ-A1-192DXXXX-VT, 60~100% load, $V_{IN} = 277V_{AC}$	0.9		
		CVJ-A1-192DXXXX-VT, 70~100% load, $V_{IN} = 347V_{AC}$	0.9		
Total Harmonic Distortion	THD	CVJ-A1-192DXXXX-VT, 30~100% load, $V_{IN} = 120V_{AC}$		20	%
		CVJ-A1-192DXXXX-VT, 60~100% load, $V_{IN} = 277V_{AC}$		20	
		CVJ-A1-192DXXXX-VT, 70~100% load, $V_{IN} = 347V_{AC}$		20	
Efficiency	$\eta$	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



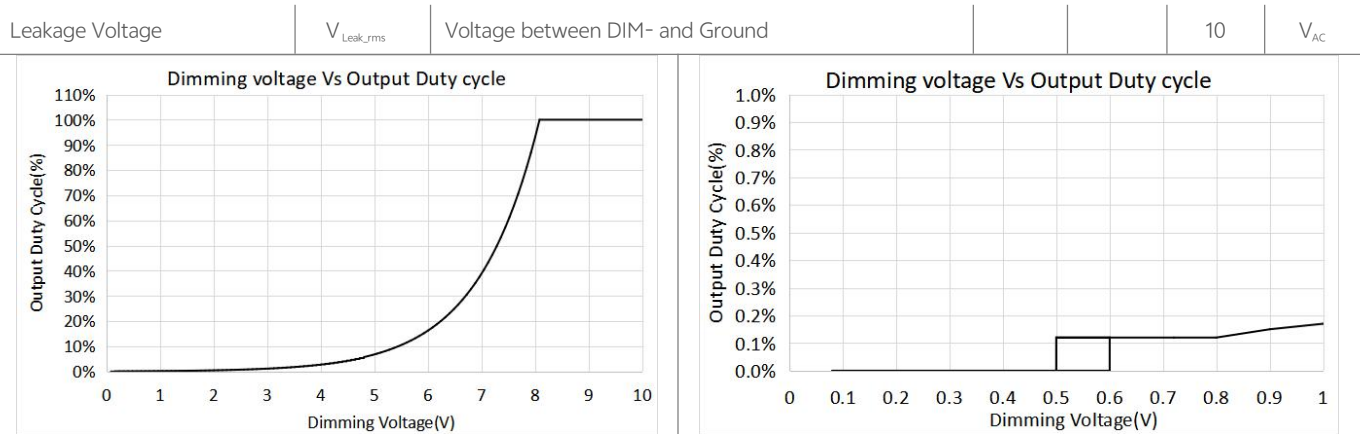
## OUTPUT

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-A1-192D024X-VT	0		2*4000	mA
		CVJ-A1-192D036X-VT	0		2*2666	mA
		CVJ-A1-192D048X-VT	0		2*2000	mA
Output Power	$P_{OUT}$				2*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

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		10	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



## 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-A1-192D024X-VT, Latch mode.	28		36	V
		CVJ-A1-192D036X-VT, Latch mode.	40		47	V
		CVJ-A1-192D048X-VT, Latch mode.	56		60	V
Over Current Protection	$I_{OCP}$	CVJ-A1-192D024X-VT, Hiccup mode.	8000		9000	mA
		CVJ-A1-192D036X-VT, Hiccup mode.	5332		6000	mA
		CVJ-A1-192D048X-VT, Hiccup mode.	4000		4500	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	°C
Over Power Protection	CC/CV mode.					
Short Circuit Protection	The unit can recover automatically after fault conditions is removed.					

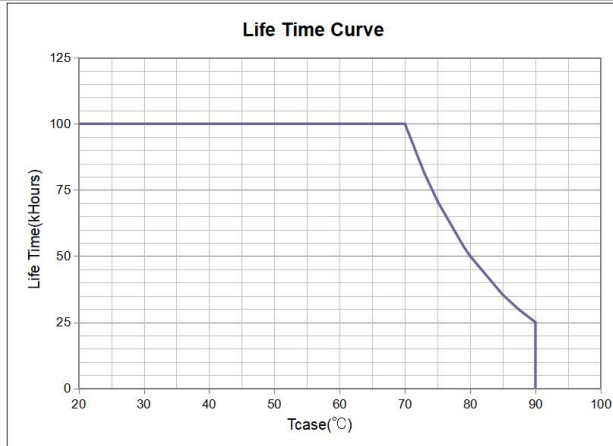
## Environment

Storage Temperature	$T_{Storage}$	Humidity: 5% RH to 95% RH	-40	-	+85	°C
Ambient Operating Temperature	$T_a$		-40	-	+50	°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 1 m w/o dimmer.			24	dBA

Cooling	Convection Cooling
IP Rating	IP66

### 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	$W_{NET}$			1200		g
Warranty	5 Years Warranty at $T_c \leq 80^\circ\text{C}$					
Flicker	IEEE 1789( $\geq 1\%$ dimming), Title 24					



### Safety Compliance

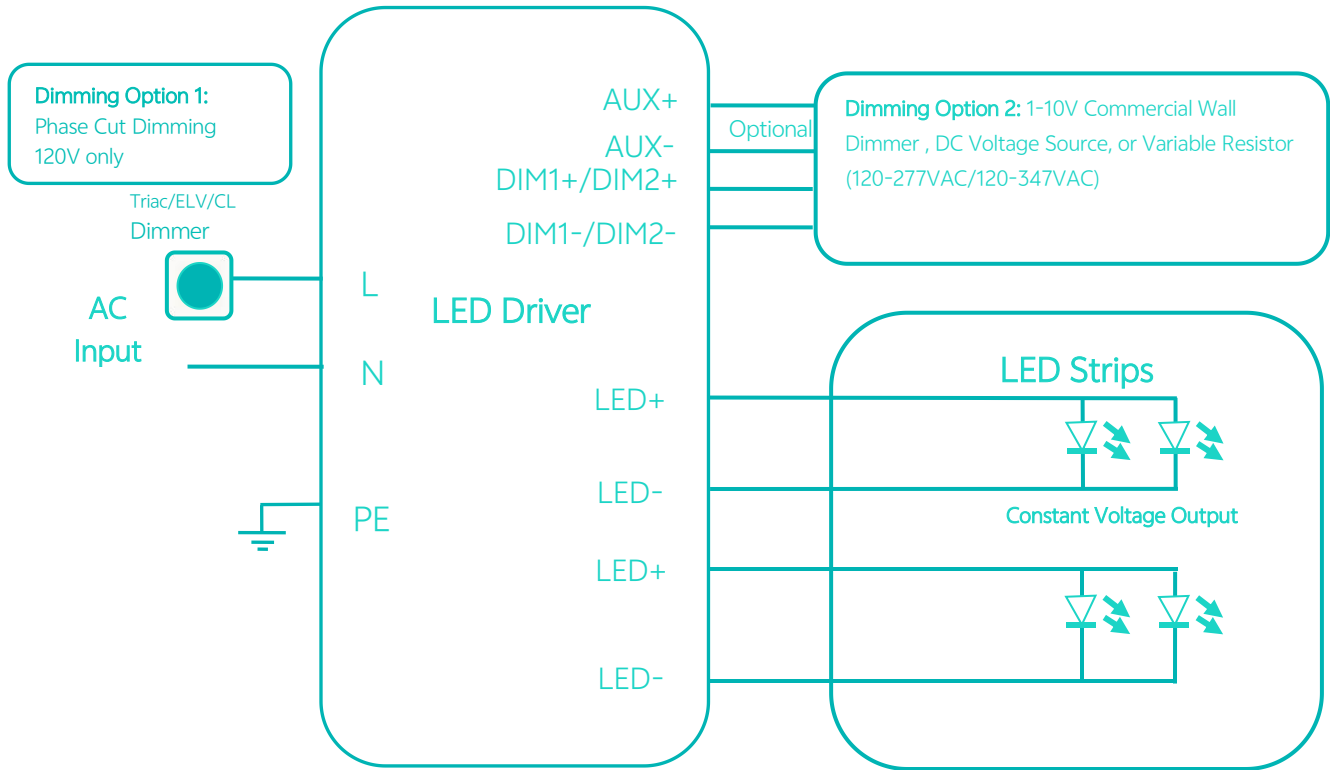
CUL/UL	UL8750, CAN/CSA-C22.2 No. 250.13
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### Electromagnetic Compliance

EMC Requirements	Standard	Conditions
EMI Emissions	FCC Title 47 Part 15B	Class A at 120VAC, Class A at 277VAC & 347VAC
Voltage Fluctuations and Flicker	IEC61000-3-3	
Immunity Compliance	IEC 61000-4-2	$\pm 8\text{kV}$ air Discharge, $\pm 6\text{kV}$ Contact Discharge
	IEC 61000-4-5 or ANSI/IEEE C62.41-2002	$\pm 4\text{kV}$ Common Mode(12 $\Omega$ ), $\pm 2\text{kV}$ Differential Mode(2 $\Omega$ ), 5 strikes/1minute interval (40 total strikes)
	ANSI/IEEE C62.41.1-2002	2.5kV Ring Wave, test at 30 $\Omega$ 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	$\pm 2\text{kV}$ Direct couple to Line input, 5kHz repetition 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°C and rated voltage.

## Typical Application



## Packaging

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

## Mechanical Drawing:

