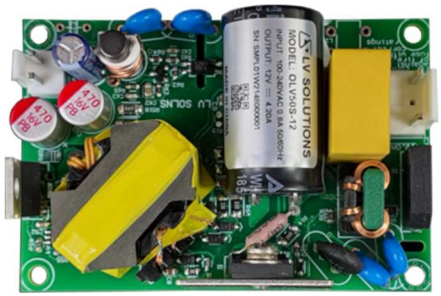
OLV SERIES DATASHEET



KEY FEATURES

- Open Frame Standard Power Supply
- Universal AC Input
- Protected against Over Current & Over Voltage faults
- 3 years warranty[1]
- Meets Medical Safety requirements

Notes:

1. At input AC230Vac, full Load, 8 hours usage per day.

PRODUCT CONFIGURATION:

OLV	XX	X	-	XX
Series Name	**Output Power**	**No. of Outputs**		**Output Voltage (Single)**
OLV	30: 30W 60: 60W 350: 350W	S: Single		5: 5V 12: 12V 24: 24V 36: 36V 48: 48V

OLV30 ~ OLV350 SERIES

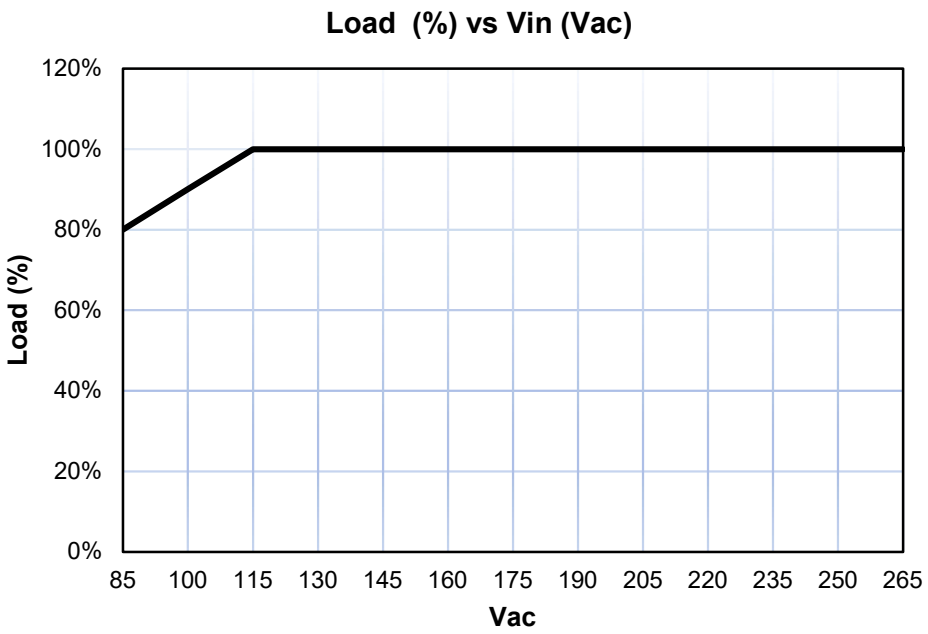
SPECIFICATIONS:

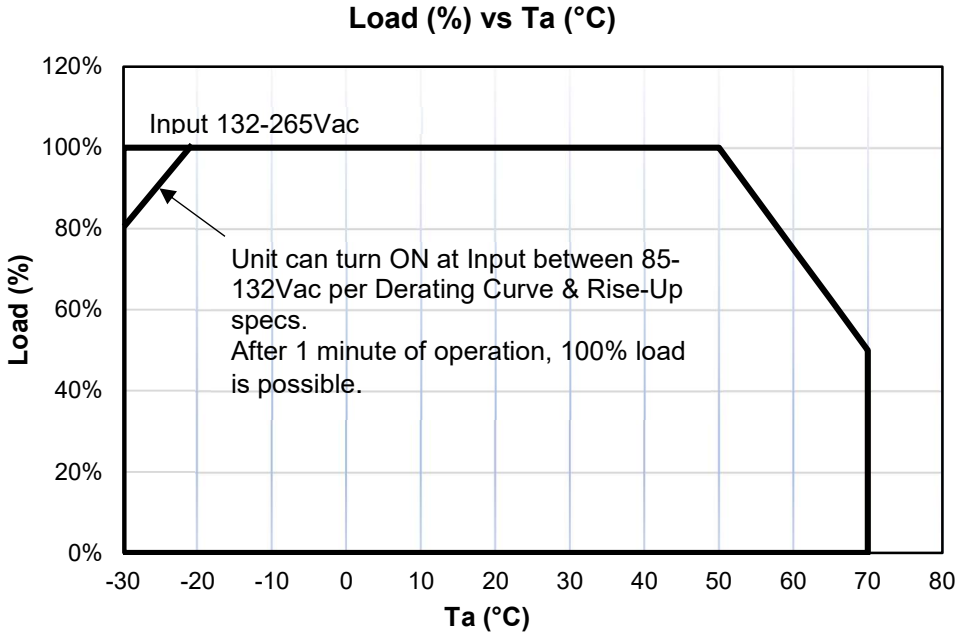
MODEL	Notes	OLV30S					OLV60S				
Model		OLV30S-5	OLV30S-12	OLV30S-24	OLV30S-36	OLV30S-48	OLV60S-5	OLV60S-12	OLV60S-24	OLV60S-36	OLV60S-48
INPUT											
Input Rated Voltage		100 ~ 240Vac					100 ~ 240Vac				
Input Voltage Range		85 ~ 265Vac / 120 ~ 375Vdc					85 ~ 265Vac / 120 ~ 375Vdc				
Input Rated Frequency		50 ~ 60Hz					50 ~ 60Hz				
Input Frequency Range		47 ~ 63Hz					47 ~ 63Hz				
Input Current (max)		800mA					1.5A				
Inrush Current (max)	9	60A at Cold Start 230Vac					60A at Cold Start 230Vac				
No Load Input Power (max)	1	0.5W					0.5W				
Efficiency	1	84%	85%	85%	87%	88%	84%	86%	87%	88%	89%
OUTPUT											
Output Rated Voltage		5V	12V	24V	36V	48V	5V	12V	24V	36V	48V
Output Voltage Range		±5%	±5%	±5%	±5%	±5%	±5%	±5%	±5%	±5%	±5%
Output Rated Current		6A	2.5A	1.3A	0.85A	0.65A	8A	5A	2.5A	1.7A	1.3A
Output Min Current		0A					0A				
Output Rated Power		30W	30W	31.2W	30.6W	31.2W	40W	60W	60W	61.2W	62.4W
Output Ripple & Noise p-p	2,3	300mV	300mV	300mV	300mV	400mV	300mV	300mV	300mV	300mV	400mV
Load Regulation	4	2%					2%				
Line Regulation	5	0.5%					0.5%				
Rise-up Delay (max)	6	2s/1s 115/230Vac					2s/1s 115/230Vac				
Hold up Time (min)	7	8ms/40ms 115/230Vac					8ms/40ms 115/230Vac				
OCP (trigger range)	10	>105% of Output Rated Current					>105% of Output Rated Current				
OVP (trigger range)	11	>110% of Output Rated Voltage					>110% of Output Rated Voltage				
OUTLINE											
Size (L x W x H)		63.5 x 38.1 x 25.5 mm					76.2 x 50.8 x 26.5 mm				
STANDARDS											
Safety Standards		Built to meet IEC62368, 60601 CE LVD									
Insulation Strength		Withstand between INPUT-OUTPUT: 4kVac 1min									
EMC Emissions Comply to	8	Meeting EN55032									
EMC Immunity Comply to	8	Meeting EN55035									
ENVIRONMENT											
Storage Environment		-40 ~ 85°C, 10~95% RH									
Operating Environment		-30 ~ 70°C (see Derating Curve); 20~90% RH									
Vibration		10~500Hz, 2G 1min/cycle, 1hr each X, Y, Z axis									
Operating Altitude	12	2000m max									
Temperature Coefficient		0.03%/°C									

Notes & Conditions

1. All specifications are measured at input voltage of 230Vac, Ta at 25°C & loaded within output rated current, unless otherwise specified.
2. Noise & Ripple is measured at 300mm away from the power supply, between the output terminals & load. Connected across the terminals are 1x 100µF electrolytic capacitor and 1x 0.1µF ceramic cap connected in parallel. The oscilloscope's bandwidth is set to 20MHz.
3. Noise & Ripple at Ta<-10°C will exceed specification, but not exceeding the specification limits by more than 100mV.
4. Load regulation is being measured while varying the load from minimum to the rated current, and while input voltage is fixed within the rated input voltage range.
5. Line regulation is being measured while varying the input voltage from minimum to maximum input voltage range, and while load is fixed at the rated load.
6. Rise-up delay is the time taken for power supply output voltage to reach 95% of output rated voltage after the power supply is cold started.
7. Hold up time is the time taken for power supply to maintain its output voltage within 95% after input is turned off.
8. Compliance to EMC limits were done whereby the power supply is mounted onto a metal plate during testing. Customer will need to retest EMI compliance after power supplies are assembled in their equipment.
9. Inrush Current is being measured when the power supply is cold started at 230Vac input.
10. After OCP is triggered, the power supply will go into hiccup mode and will recover after the removal of overload fault.
11. After OVP is triggered, unit will go into hiccup mode and will recover after the removal of overvoltage fault.
12. When operating at altitude above 2000m, derating of 5°C/1000m is required.

DERATING CURVE (OLV30S & OLV60S)





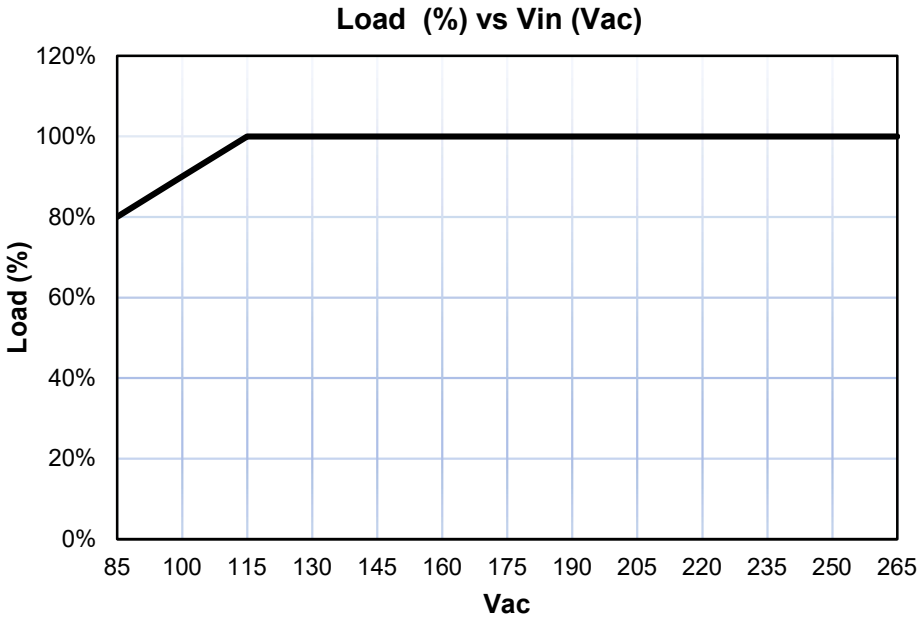
SPECIFICATIONS:

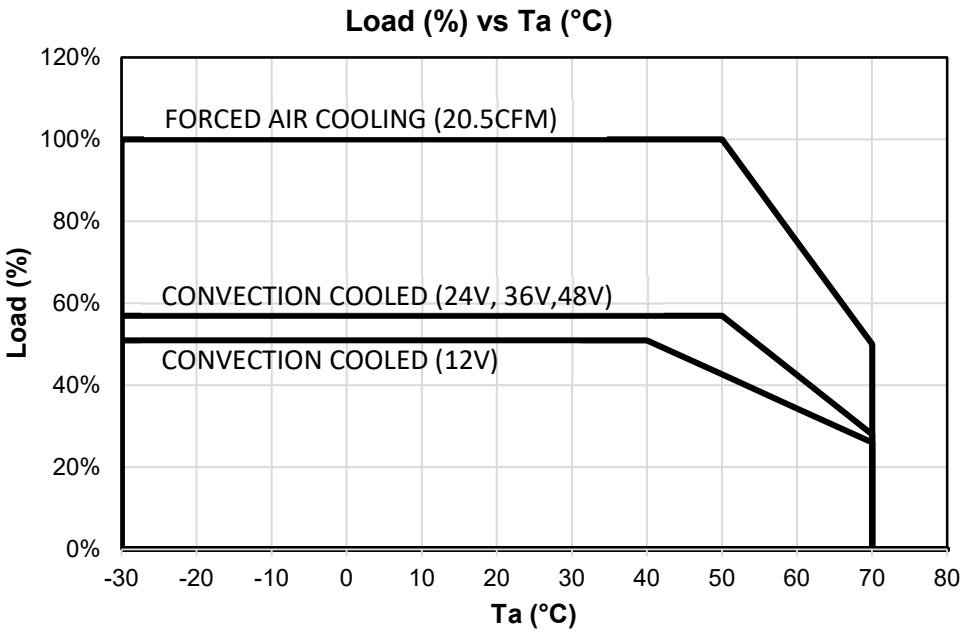
MODEL	Notes	OLV350S			
Model		**OLV350S-12**	**OLV350S-24**	**OLV350S-36**	**OLV350S-48**
INPUT					
Input Rated Voltage		100 ~ 240Vac			
Input Voltage Range		90 ~ 265Vac / 120 ~ 375Vdc			
Input Rated Frequency		50 ~ 60Hz			
Input Frequency Range		47 ~ 63Hz			
Input Current (max)		4.5A			
Inrush Current (max)	9	80A at Cold Start 230Vac			
Power Factor (min)		0.96 115/230Vac			
No Load Input Power (max)	1	0.5W			
Efficiency	1	91%	91%	92%	92%
OUTPUT					
Output Rated Voltage		12V	24V	36V	48V
Output Voltage Range		±5%	±5%	±5%	±5%
Output Rated Current	13	15A (convection) /29.2A (20.5CFM)	8.33A (convection) /14.6A (20.5CFM)	5.56A (convection) /9.73A (20.5CFM)	4.17A (convection) /7.3A (20.5CFM)
Output Min Current		0A			
Output Rated Power	13	180W (convection) /350W (20.5CFM)	200W (convection) /350W (20.5CFM)	200W (convection) /350W (20.5CFM)	200W (convection) /350W (20.5CFM)
Output Ripple & Noise p-p	2,3	300mV	300mV	400mV	400mV
Load Regulation	4	2%			
Line Regulation	5	0.5%			
Rise-up Delay (max)	6	2s 115/230Vac			
Hold up Time (min)	7	10ms/10ms 115/230Vac			
OCP (trigger range)	10	>105% of Output Rated Current			
OVP (trigger range)	11	>110% of Output Rated Voltage			
OUTLINE					
Size (L x W x H) max		127 x 76.2 x 36.0 mm (+/-1.0)			
STANDARDS					
Safety Standards		Built to meet IEC62368, 60601 CE LVD			
Insulation Strength		Withstand between INPUT-OUTPUT: 4kVac 1min			
EMC Emissions Comply to	8	Meeting EN55032			
EMC Immunity Comply to	8	Meeting EN55035, EN61000-3-2 Class A			
ENVIRONMENT					
Storage Environment		-40 ~ 85°C, 10~95% RH			
Operating Environment		-30 ~ 70°C (see Derating Curve); 20~90% RH			
Vibration		10~500Hz, 2G 1min/cycle, 1hr each X, Y, Z axis			
Operating Altitude	12	2000m max			
Temperature Coefficient		0.03%/°C			

Notes & Conditions

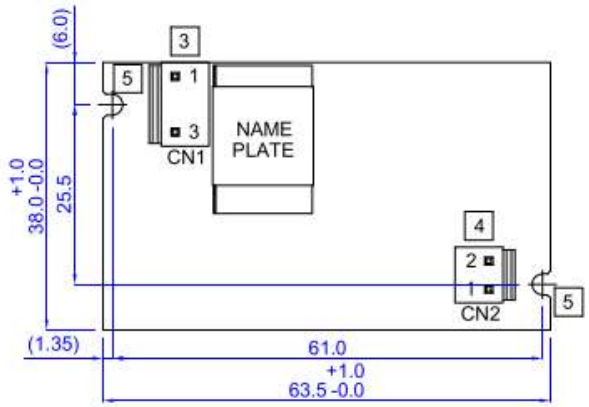
1. All specifications are measured at input voltage of 230Vac, Ta at 25°C & loaded within output rated current, unless otherwise specified.
2. Noise & Ripple is measured at 300mm away from the power supply, between the output terminals & load. Connected across the terminals are 1x 100µF electrolytic capacitor and 1x 0.1µF ceramic cap connected in parallel. The oscilloscope's bandwidth is set to 20MHz.
3. Noise & Ripple at Ta<-10°C will exceed specification, but not exceeding the specification limits by more than 100mV.
4. Load regulation is being measured while varying the load from minimum to the rated current, and while input voltage is fixed within the rated input voltage range.
5. Line regulation is being measured while varying the input voltage from minimum to maximum input voltage range, and while load is fixed at the rated load.
6. Rise-up delay is the time taken for power supply output voltage to reach 95% of output rated voltage after the power supply is cold started.
7. Hold up time is the time taken for power supply to maintain its output voltage within 95% after input is turned off.
8. Compliance to EMI limits were done whereby the power supply is mounted onto a metal plate during testing. Customer will need to retest EMI compliance after power supplies are assembled in their equipment.
9. Inrush Current is being measured when the power supply is cold started at 230Vac input.
10. After OCP is triggered, the power supply will go into hiccup mode and will recover after the removal of overload fault.
11. After OVP is triggered, the unit will shutdown, reset by recycling AC - AC input switch OFF and then ON again.
12. When operating at altitude above 2000m, derating of 5°C/1000m is required
13. Output & Current Ratings: **Convection-Cooled/Forced-Air-Cooled 20.5CFM**.

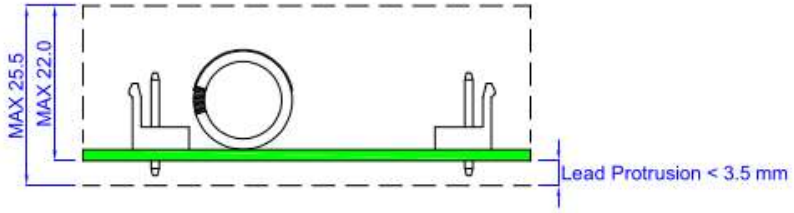
DERATING CURVE: OLV350S





MECHANICAL SPECIFICATION: OLV30S-XX





Notes:

1. All dimensions in mm.
2. Tolerances unless otherwise specified:
   .x (±0.50)
   .xx (±0.25)

[3] Input Connector (CN1):
JST B3P-VH or equivalent.

Pin no	Pin Assignment
1	L
3	N

Mating: JST VHR-3N Housing or equivalent.
Mating: JST SVH-21T-P1.1 Contact or equivalent.
Min. 18AWG cable (UL approved 300V 85°C).

[4] Output Connector (CN2):
JST B2P-VH or equivalent.

Pin no.	Pin Assignment
1	+V
2	-V

Mating: JST VHR-2N Housing or equivalent.
Mating: JST SVH-21T-P1.1 Contact or equivalent.
Min. 18AWG cable (UL approved 300V 85°C).

[5] Customer mounting hole for M3 screw.
Recommended torque: 0.49 N.m (5kgf.cm) max.

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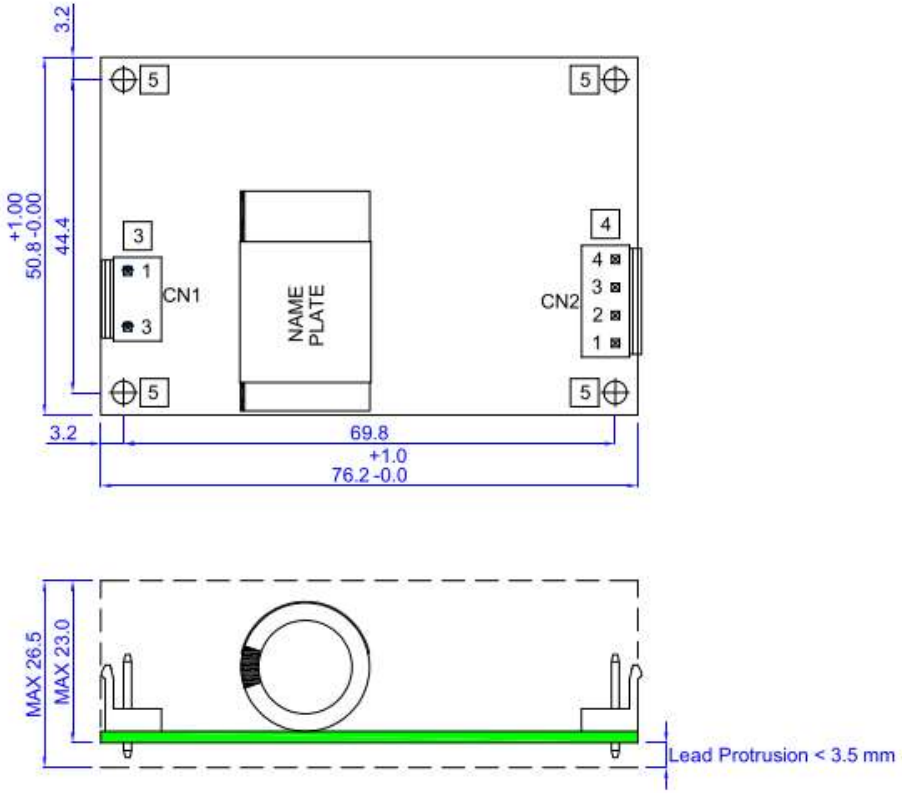
MECHANICAL SPECIFICATION: OLV60S-XX



Notes:

1. All dimensions in mm.
2. Tolerances unless otherwise specified:
   .x (±0.50)
   .xx (±0.25)

[3] Input Connector (CN1):
JST B3P-VH or equivalent.

Pin no	Pin Assignment
1	L
3	N

Mating: JST VHR-3N Housing or equivalent.
Mating: JST SVH-21T-P1.1 Contact or equivalent.
Min. 18AWG cable (UL approved 300V 85°C).

[4] Output Connector (CN2):
JST B4P-VH or equivalent.

Pin no.	Pin Assignment
1	+V
2	+V
3	-V
4	-V

Mating: JST VHR-4N Housing or equivalent.
Mating: JST SVH-21T-P1.1 Terminal or equivalent.
Min. 18AWG cable (UL approved 300V 85°C).

[5] 4x Ø3.3mm Customer mounting hole for M3 screw.
Recommended torque: 0.49 N.m (5kgf.cm) max.

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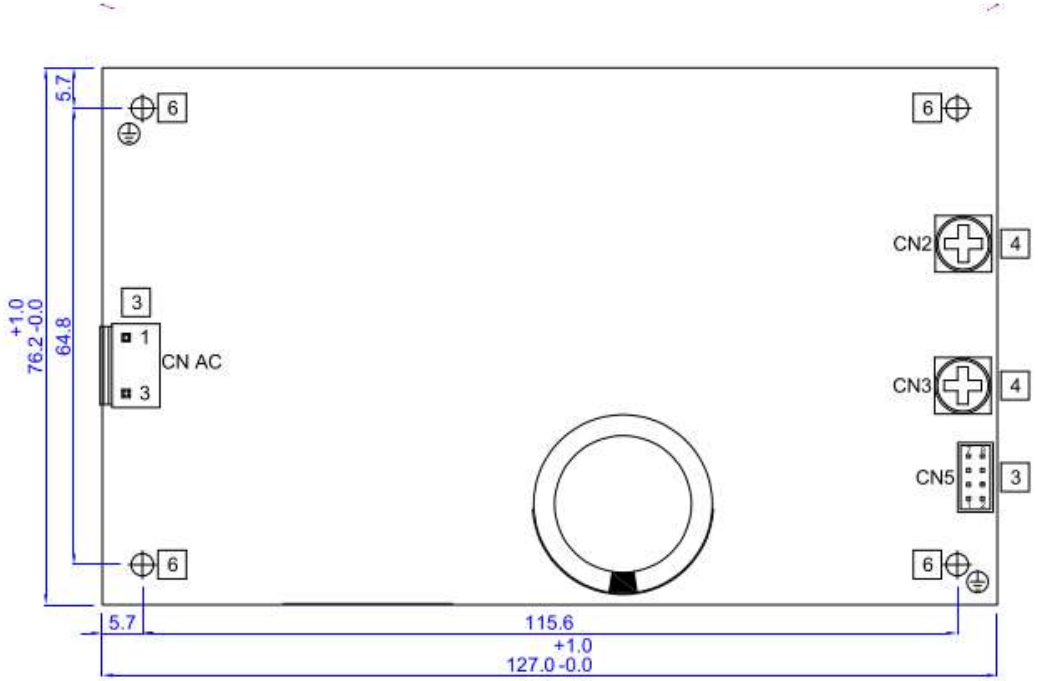
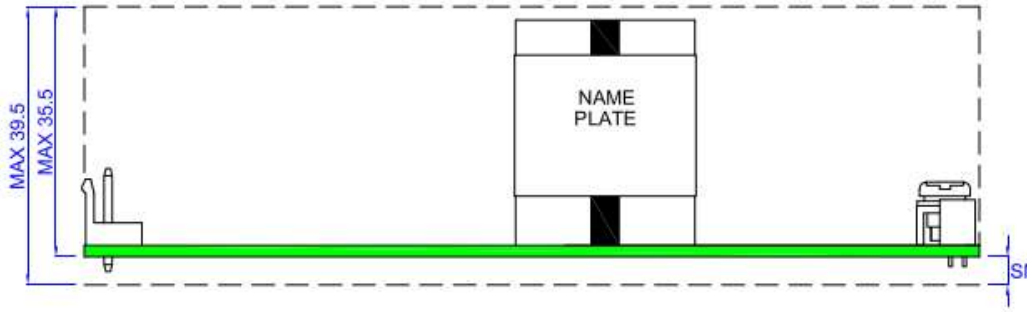
MECHANICAL SPECIFICATION: OLV350S-XX





Notes:

1. All dimensions in mm.
2. Tolerances unless otherwise specified:
   .x (±0.50)
   .xx (±0.25)
3. Input Connector (CN AC):
   JST B3P-VH or equivalent.

Pin no	Pin Assignment
1	L
3	N

   Mating: JST VHR-3N Housing or equivalent.
   Mating: JST SVH-41T-P1.1 Contact or equivalent.
   Min. 16AWG cable (UL approved 300V 85°C).
4. Output Connector: CN2 (+), CN3 (-)
   M4 Output Terminal
   Recommended torque: 1.18 N.m (12kgf.cm) max
   Min. 16AWG cable (UL approved 300V 85°C).
5. Function Connector: CN5
   JST B8B-PHDSS or equivalent.

Pin no.	Pin Assignment
1	STBY+: STANDBY 5V+
2	STBY-: STANDBY 5V-
3	NO CONNECTION
4	NO CONNECTION
5	NO CONNECTION
6	NO CONNECTION
7	R+: REMOTE ON/OFF+
8	R-: REMOTE ON/OFF-

   Mating: JST PHDR-08VS or equivalent
   Mating: JST SPHD-001T-P0.5 contact or equivalent
6. 4x Ø3.3mm Customer mounting hole for M3 screw.
   Recommended torque: 0.49 N.m (5kgf.cm) max.

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