

## ALC/ALV Series

12W IP66  
LED Drivers

- Small Size
- Light Weight
- Double Insulated Input & Output Wires
- Wide AC Input Range 90 ~ 277 VAC (47 ~ 63 Hz)
- Constant Current and Constant Voltage Models
- Splash Proof, IP 66
- Conservative Component Ratings for Long Life
- Excellent E-CapLife Values: 6.4Y ALC, 7.5Y ALV

### Key Market Segments & Applications

Channel Letter & Contour Lighting, Architectural Lighting, Retail / Theme Lighting, Orientation / Path Lighting, Entertainment Lighting, Emergency & Security Lighting, LED Street Light, Car Park Signage, Railway Lighting Systems, Damp Environments

### AL12 Features and Benefits

#### Features

- IP66 Rated
- Vacuum Encapsulated
- Wide range AC Input

#### Benefits

- Can be used in wet applications
- Robust
- Supports global use

#### Specifications

MODEL		ALC12	ALV12
ITEMS			
AC Input	VAC/Hz	90 - 277VAC, 47 - 63Hz	
Inrush Current (100/200VAC)	A	25 / 50A, 25°C ambient, cold start	
Input Current (110/200VAC)	A	0.28 / 0.18A	
Temperature Coefficient	-	<0.02%/°C (0 - 50°C)	
Overcurrent Protection	-	Automatic Recovery	> 105% of rated power
Overvoltage Protection	%	> 110%	
Turn on time	ms	< 200ms	
Leakage Current (265VAC 60Hz)	mA	0.25mA	
Efficiency	%	82% typical at full load	
Output Accuracy	%	ALC +/- 5%	ALV +/- 3%
Operating Temperature	°C	-10°C to +60°C (Guaranteed start up at -20°C)	
Storage Temperature	-	-30°C to +85°C	
Operating Humidity (1)	-	15 - 90% RH	
Storage Humidity (1)	-	15 - 90% RH	
Cooling	-	Convection	
Withstand Voltage	-	Input to Output 3kVAC (Class II, no ground connection needed)	
Isolation Resistance	Ω	>100MΩ at 25°C & 70%RH, Input to Output at 500VDC	
Vibration (non operating)	-	10 - 55Hz: 19.6m/s <sup>2</sup> constant sweep 1 min X, Y, Z for 30 mins	
Shock	-	< 196.1 m/s <sup>2</sup> (20G)	
Immunity	-	IEC61000-4-2, -3, -4, -5, -6, -8, -11	
Safety Agency Approvals	-	UL1310 (Class 2); IEC61347-1; IEC61347-2-13; CE; DEN-AN 2	
Conducted & Radiated EMI	-	EN55015, EN55022, FCC Class B	
IP Class	-	IP66	
Weight (Typ)	g	84	
Size (LxWxH)	mm	90 x 34.5 x 21	
Warranty	yrs	3	

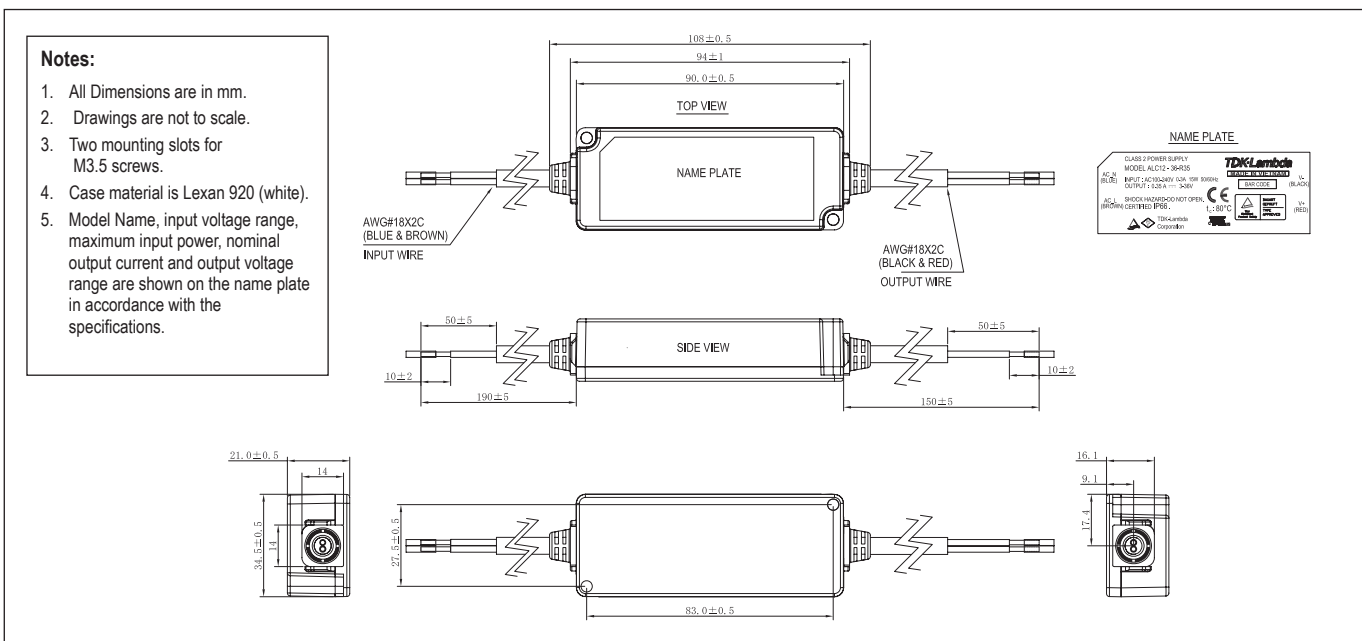
(1) Non condensing

60, 80 & 100W models also available - Please contact your local sales office

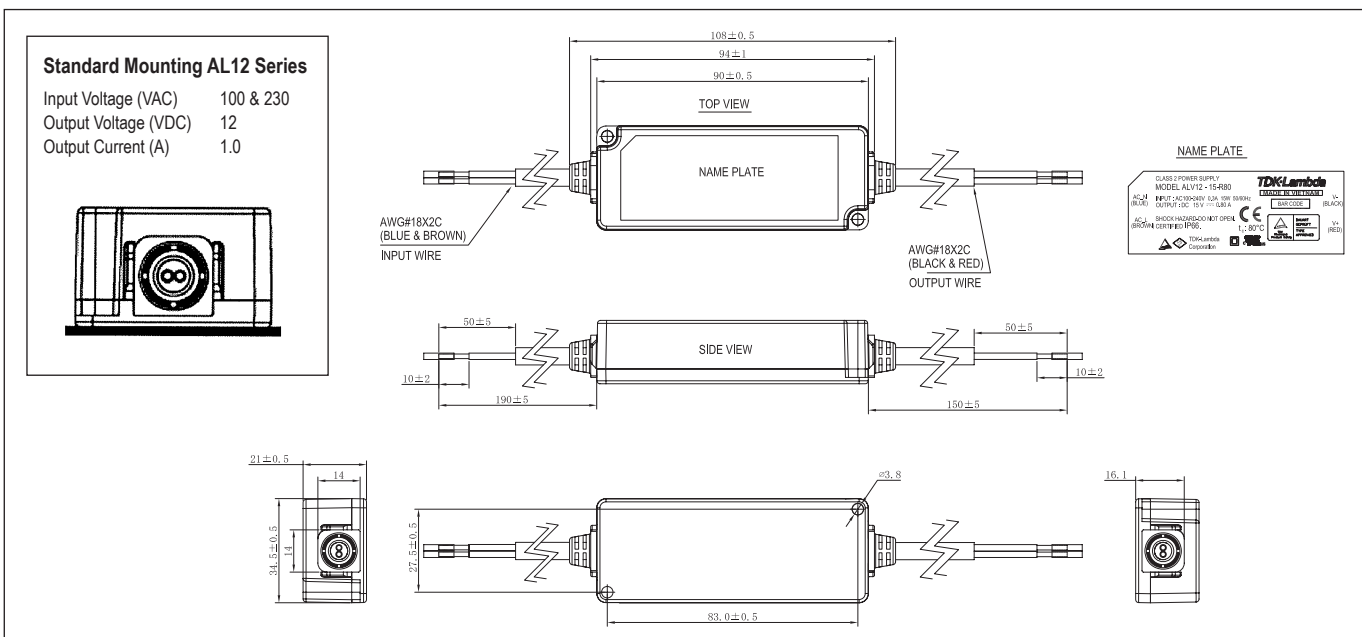
**Model Selector**

Model	CV/CC	Output Voltage (V)	Min. Output Current (A)	Output Current (A)	Maximum Average Power	Ripple & Noise	MTBF ref. JEITA (RCR-9102B) in hours
ALC12-36-R35	CC	3 - 36V	-	0.35A	12.6W	-	> 725,000
ALC12-18-R70	CC	3 - 18V	-	0.7A	12.6W	-	> 725,000
ALV12-12-1R0	CV	12	0.1A	1A	12W	100mV	> 950,000
ALV12-15-R80	CV	15	0.08A	0.8A	12W	100mV	> 950,000
ALV12-24-R50	CV	24	0.05A	0.5A	12W	150mV	> 950,000

**Outline Drawing ALC12 Series**



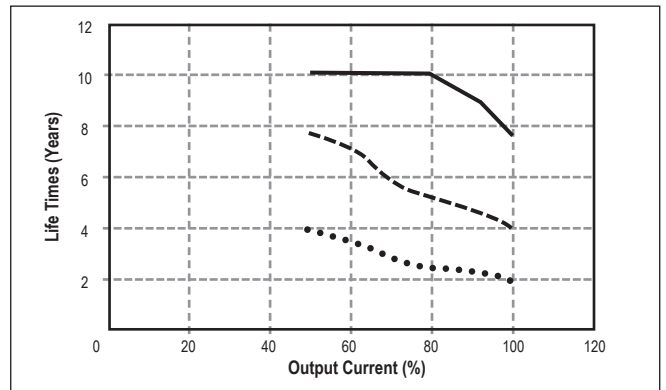
**Outline Drawing ALV12 Series**



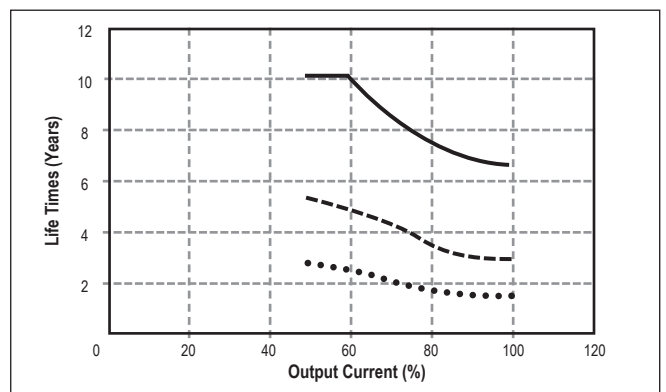
## Electrolytic Capacitor Lifetime ALC12 -18-R70

Ta = 40°C ——— = 50°C - - - - = 60°C ·····

Vin = 100VAC			
Load (%)	Life Time (Years)		
	Ta= 40°C	Ta= 50°C	Ta= 60°C
50	10.0	7.7	3.9
60	10.0	7.0	3.5
70	10.0	5.5	2.8
80	10.0	5.1	2.5
90	9.1	4.5	2.3
100	7.6	3.8	1.9



Vin = 230VAC			
Load (%)	Life Time (Years)		
	Ta= 40°C	Ta= 50°C	Ta= 60°C
50	10.0	5.5	2.7
60	10.0	5.0	2.5
70	8.4	4.2	2.1
80	7.1	3.6	1.8
90	6.6	3.3	1.6
100	6.4	3.2	1.6

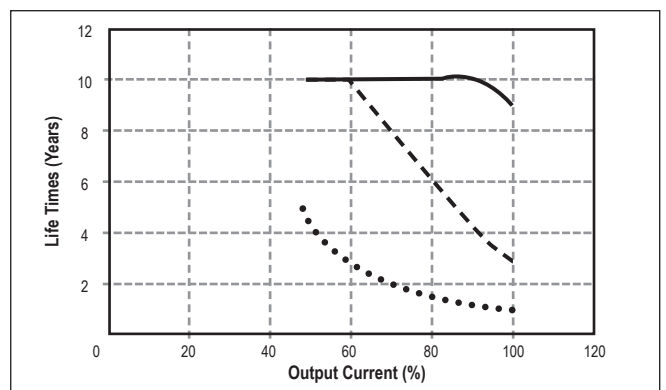


Note: E-cap life calculation is based on 24hrs/day operation

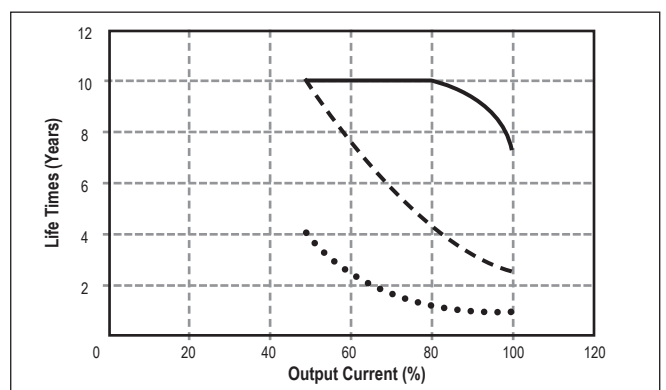
## Electrolytic Capacitor Lifetime ALV12 -12-1R0

Ta = 40°C ——— = 50°C - - - - = 60°C ·····

Vin = 100VAC			
Load (%)	Life Time (Years)		
	Ta= 40°C	Ta= 50°C	Ta= 60°C
50	10.0	10.0	4.8
60	10.0	9.9	3.1
70	10.0	7.6	2.4
80	10.0	5.1	1.6
90	10.0	3.8	1.2
100	9.1	2.9	0.9



Vin = 230VAC			
Load (%)	Life Time (Years)		
	Ta= 40°C	Ta= 50°C	Ta= 60°C
50	10.0	10.0	3.8
60	10.0	8.0	2.5
70	10.0	6.0	1.9
80	10.0	4.6	1.4
90	9.3	2.9	0.9
100	7.5	2.4	0.7



Note: E-cap life calculation is based on 24hrs/day operation

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