



■ **Features**

- s Constant current design
- s Universal AC input (90-305Vac)
- s Current adjustable: (0.6-1.0)I_o
- s Protections: SCP, OVP, OTP, OPP
- s Class 2 power units (for V_o ≤ 36V models only)
- s High Efficiency (Up to 90%)
- s Active power factor correction (0.99 typ.)
- s Lightning protection
- s Waterproof (IP67)
- s Comply with UL8750 & EN61347 safety regulations
- s 5 years warranty

■ **Application**

- s Suitable for LED street lights, tunnel lights, landscape lights.

General Description

The document detail the electrical, mechanical and environmental specifications for LSC-050V(B) series LED driver, these driver are single channel output and can provide 50 W max. continuous output power.

Models & Key parameters

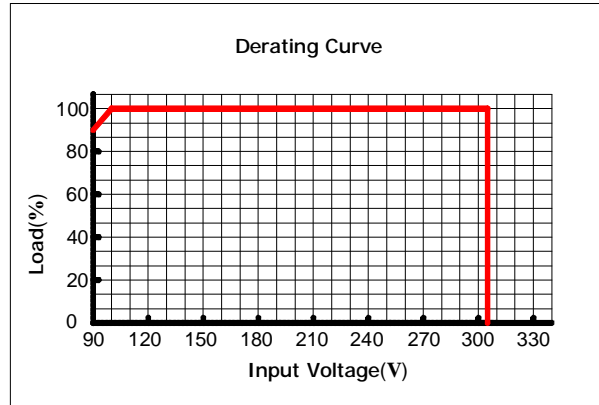
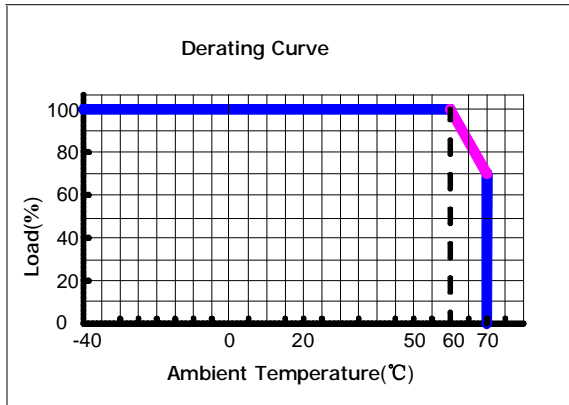
Model	Output Power (W)	Rated Output Voltage(Vdc)	Output Current (A)	Typ. Efficiency ※1	Power Factor	
					110Vac	230Vac
LSC-050V(B)012 ※3	50W	12	4.20	86.0%	>0.98	>0.92
LSC-050V(B)015	50W	15	3.30	88.0%	>0.98	>0.92
LSC-050V(B)020	50W	20	2.50	88.0%	>0.98	>0.92
LSC-050V(B)024	50W	24	2.00	90.0%	>0.98	>0.92
LSC-050V(B)030	50W	30	1.60	90.0%	>0.98	>0.92
LSC-050V(B)036	50W	36★ ※2	1.40	90.0%	>0.98	>0.92
LSC-050V(B)042	50W	42★	1.20	90.0%	>0.98	>0.92
LSC-050V(B)048	50W	48★	1.05	90.0%	>0.98	>0.92
LSC-050V(B)054	50W	54	0.90	90.0%	>0.98	>0.92
NOTE	※1: Typ. Efficiency are measured at full load and 230 Vac input. ※2: ★ means the popular models, we will keep sufficient stock for prompt delivery. ※3: V means the current of this model is adjustable, B means the current is fixed.					

Specification

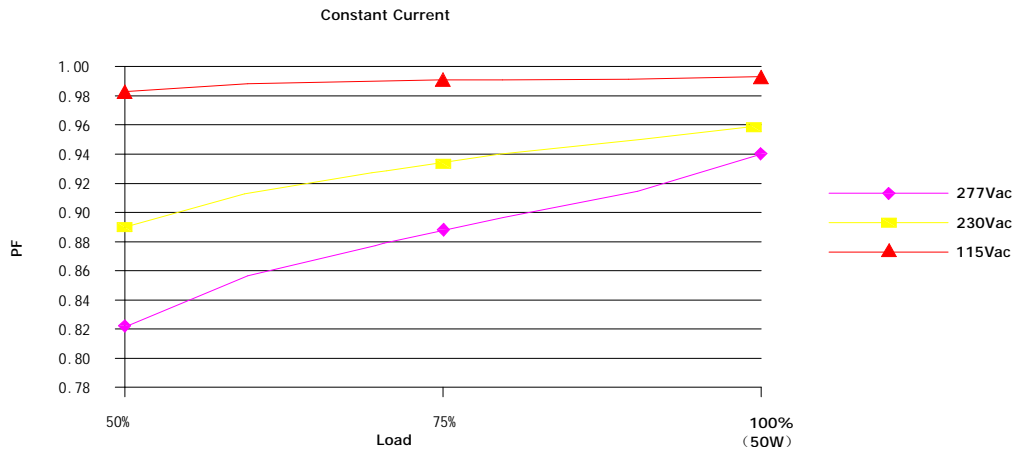
OUTPUT SPECIFICATION										
OUTPUT	Rated Output (Vdc)	12	15	20	24	30	36	42	48	54
	CONSTANT CURRENT RANGE(V)	3~12	3~15	3~20	3~24	3~30	3~36	3~42	3~48	3~54
	RATED CURRENT(A)	4.20	3.30	2.50	2.00	1.60	1.40	1.20	1.05	0.90
	CURRENT ADJUSTABLE RANGE(A)	2.5-4.2	1.36-3.3	1.5-2.5	1.2-2.0	0.96-1.6	0.84-1.4	0.72-1.2	0.7-1.05	0.54-0.9
	RATED POWER(W)	50	50	50	50	50	50	50	50	50
	RIPPLE & NOISE(max.)※4	10%Vo								
	VOLTAGE TOLERANCE	5%Vo								
	LINE REGULATION	1%Vo								

	LOAD REGULATION	3%Vo								
	HOLD UP TIME (Typ.)	8.5mS min. @ Full load &110Vac, 10mS min. @ Full load &230Vac								
NOTE	※4: Ripple & Noise: Measurement is done by 20MHz bandwidth oscilloscope and the output paralleled a 0.1uF ceramic- capacitor and a 10uF electrolysis capacitor. And the test under the condition of rated input and rated output)									
INPUT SPECIFICATION										
INPUT	VOLTAGE RANGE	90-305Vac								
	FREQUENCY RANGE	47-63Hz								
	EFFICIENCY (Typ.)	86.0%	88.0%	88.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%
	AC CURRENT (Typ.)	1.0Amax. @ 100-277Vac input & Full load.								
	INRUSH CURRENT	65Amax. @ 230Vac input,25℃.								
	LEAKAGE CURRENT	0.6mA max. at input 277Vac								
PROTECTION										
PROTECT ION	Input OVP ※5	315Vac								
	Output OVP ※6	(1.2-1.4)Vo								
	SCP	No damage shall occur when any output operating in a short circuit condition. The power supply shall be self-recovery when the fault condition is removed.								
NOTE	※5: The driver return to normal operation when voltage drop to operating voltage range. ※6: Latch mode. The power supply shall return to normal operation only after the power is turn-on again.									
ENVIRONMENT REQUIREMENTS										
ENVIRON MENT REQUIRE MENTS	Operating Temperature	-35℃ to +70℃								
	Operating Relative Humidity	10%RH to 100%RH								
	Storage Temperature	-40℃ to +85℃								
	Storage Relative Humidity	5% to 100%RH non-condensing @ Sea level shall be low 10,000 feet.								
	Vibration	10 to 300Hz sweep at a constant acceleration of 1.0G(Breadth: 3.5mm) for 1Hour for each of the perpendicular axes X, Y, Z.								
	Waterproof grade	IP67								
SAFETY&EMC										
SAFETY& EMC	SAFETY STANDARDS	UL8750, UL1310, UL1012, IEC61347,GB19510.								
	WITHSTAND VOLTAGE	L/N-GND:4KV, L-N:2KV								
	ISOLATION RESISTANCE	I/P-O/P: >100M Ohms / 500VDC / 25 / 70% RH								
	EMC IMMUNITY	Compliance to EN 61000-3-2, 3EN 61000-4-2, 3,4,5,6,8,11, EN 61547								
SAFETY APPROVAL										
CERTIFIED	UL,CB,CE,CQC ※7									
NOTE: ※7 The driver should not rely upon the luminaire enclosure to protect against electric shock, it shall be sufficiently protected against accidental contact with live parts when installed as in normal use.										
RELIABILITY REQUIREMENTS										
RELIABIL ITY REQUIRE MENTS	Burn-in	The power supply shall undergo a minimum of 4 Hours burn-in test at 40℃±5℃ under full load condition								
	Life Time	≥50,000 hours at 60℃ measured at 110Vac input and 80% load.								
	MTBF	≥342,000 hours at 25℃, measured at 110Vac input,and 80% load. (MIL-HDBK-217F)								

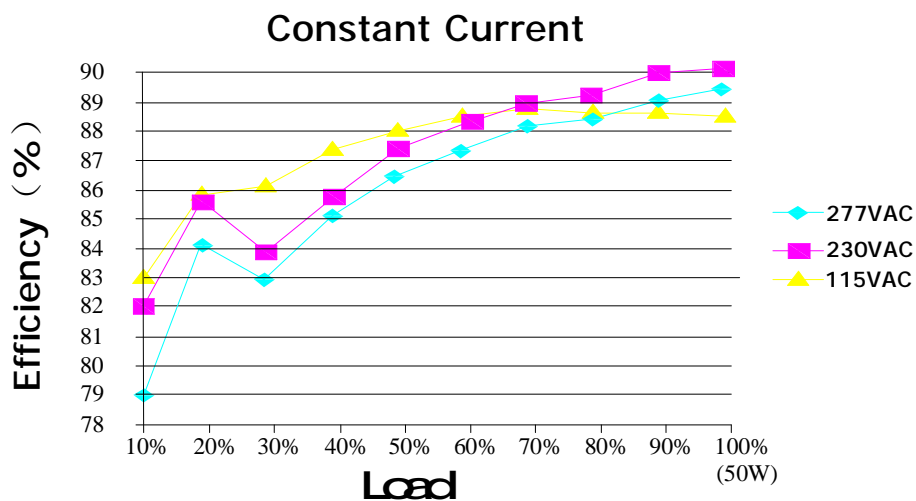
n Derating Curve



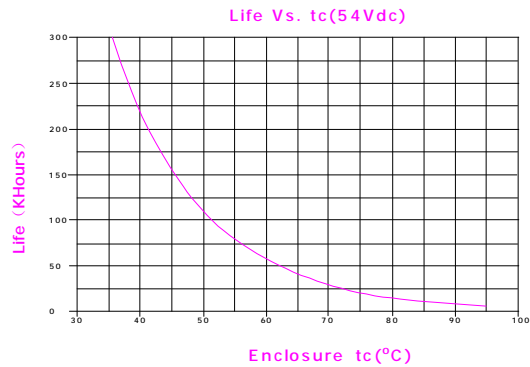
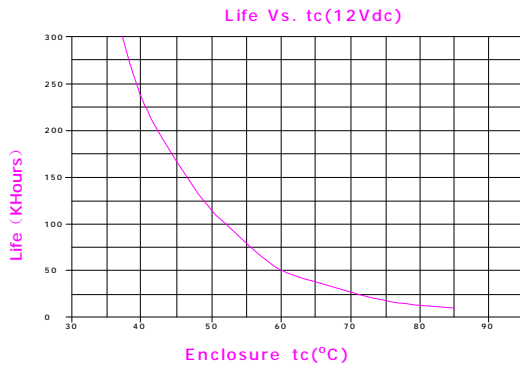
n Power Factor Characteristic



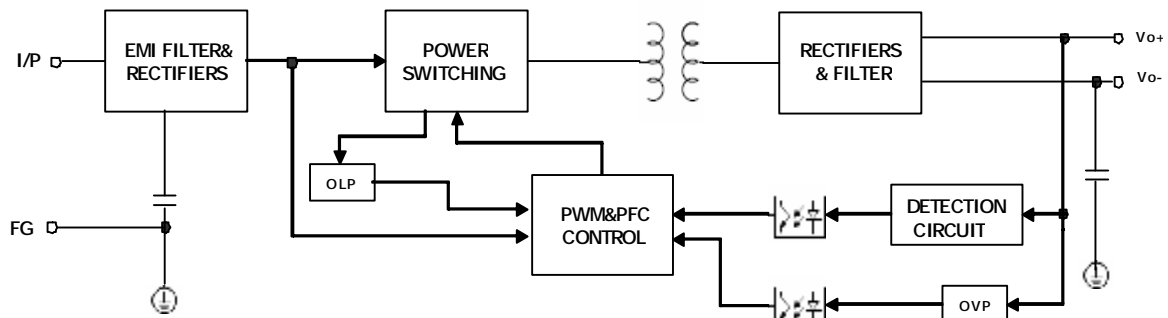
n Efficiency curve(Typ.Voltage 36V)



n Life vs tc curve



n Block Diagram



n Mechanical Specification

