

90w 1-10v Dimmable Driver



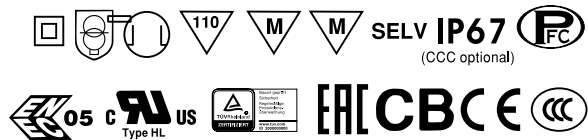
Product Description

The 90W 1-10v Dimmable Driver from Mirrorstone has a 24VDC voltage and a constant current mode output.

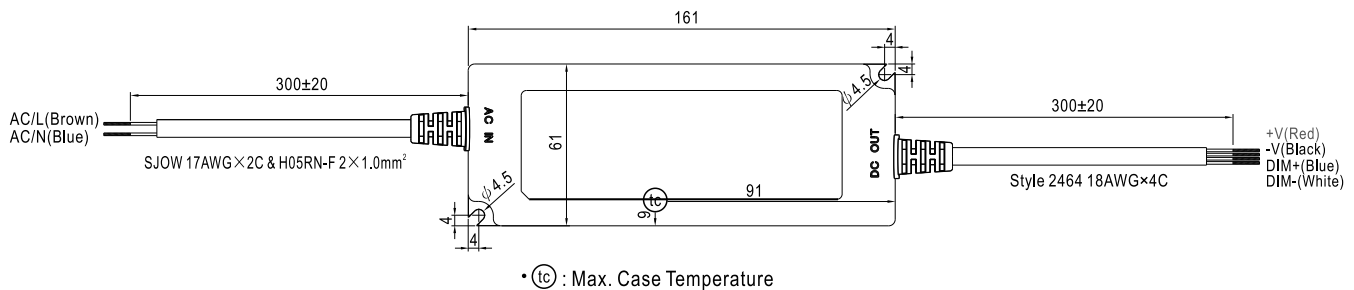
Built from solid plastic housing, it is IP67 rated for outdoor and indoor usage. It is often used alongside Panel Lighting, Downlights and more.

Product Features

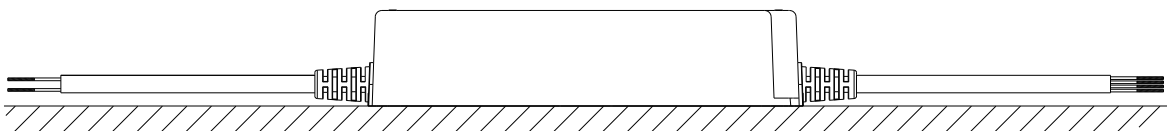
- Built-in 3 in 1 dimming function (1~10VDC, PWM signal or resistance)
- Built-in active PFC function
- Protections: Short circuit/ Overload/ Over voltage/ Over temperature
- Universal AC input (up to 305VAC) / Full Range
- Fully isolated plastic case with IP30 level
- Isolation class II, no F.G.
- Class 2 power unit
- IP67
- 5 years warranty



Technical Dimensions



Recommended Mounting Direction



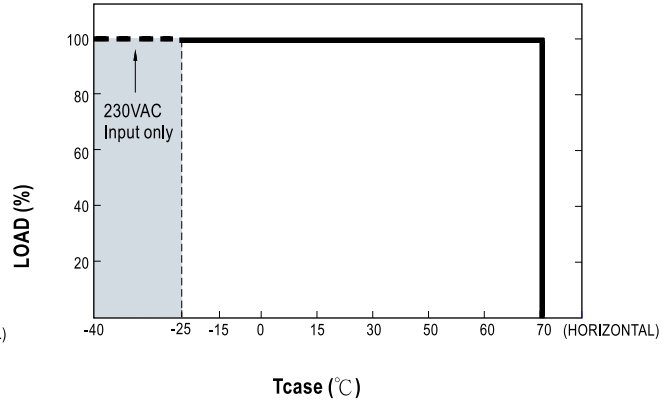
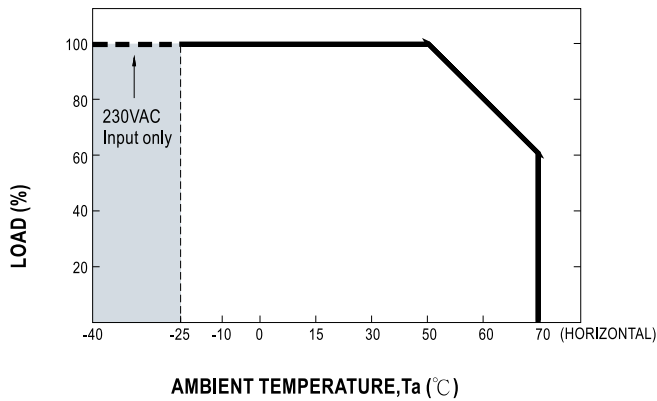
90w 1-10v Dimmable Driver

Technical Specifications

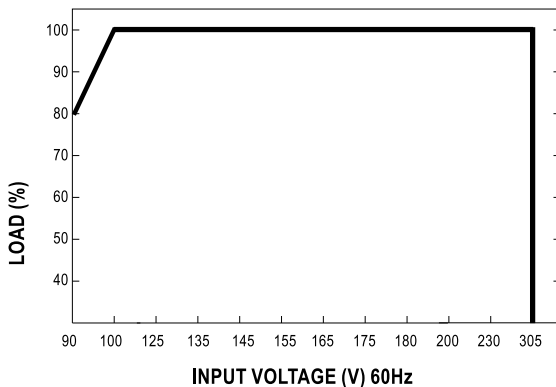
OUTPUT	DC VOLTAGE	24V
	RATED CURRENT	3.75A
	RATED POWER Note.5	90W
	CONSTANT CURRENT REGION Note.2	14.4 ~ 24V
	CURRENT RIPPLE	5.0% max. @rated current
	CURRENT TOLERANCE	±5.0%
	SETUP, RISE TIME Note.6	1200ms, 200ms / 115VAC 500ms, 200ms / 230VAC
	HOLD UP TIME (Typ.)	16ms/230VAC 16ms/115VAC
INPUT	VOLTAGE RANGE Note.5	90 ~ 305VAC 127 ~ 431VDC (Please refer to "STATIC CHARACTERISTIC" section)
	FREQUENCY RANGE	47 ~ 63Hz
	POWER FACTOR	PF ≥ 0.97/115VAC, PF ≥ 0.96/230VAC, PF ≥ 0.95/277VAC@full load (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)
	TOTAL HARMONIC DISTORTION	THD < 20% (@load ≥ 60%/115V, 230VAC; @load ≥ 75%/277VAC) (Please refer to "TOTAL HARMONIC DISTORTION(THD)" section)
	EFFICIENCY (Typ.)	90%
	AC CURRENT	0.95A / 115VAC 0.5A / 230VAC 0.4A / 277VAC
	INRUSH CURRENT(Typ.)	COLD START 70A(twidth=435µs measured at 50% Ipeak) at 230VAC; Per NEMA 410
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	4 units (circuit breaker of type B) / 6 units (circuit breaker of type C) at 230VAC
PROTECTION	LEAKAGE CURRENT	<0.75mA / 240VAC
	OVER CURRENT	95 ~ 108% Constant current limiting, recovers automatically after fault condition is removed
	OVER VOLTAGE	28 ~ 34V Shut down o/p voltage, re-power on to recover
ENVIRONMENT	OVER TEMPERATURE	Shut down o/p voltage, re-power on to recover
	WORKING TEMP.	Tcase=-40 ~ +70°C (Please refer to " OUTPUT LOAD vs TEMPERATURE" section)
	MAX. CASE TEMP.	Tcase=+70°C
	WORKING HUMIDITY	20 ~ 95% RH non-condensing
	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ~ 95% RH
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)
SAFETY & EMC	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes
	SAFETY STANDARDS Note.8	UL8750(type"HL"), CSA C22.2 No.250.13-12, TUV EN61347-1, EN61347-2-13, EAC TP TC 004, GB19510.1, GB19510.14, IP67 approved; Design refer to UL60950-1, TUV EN60950-1
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH
	EMC EMISSION Note.8	Compliance to EN55015, EN61000-3-2 Class C (@load ≥ 60%); EN61000-3-3, GB17743 and GB17625.1, EAC TP TC 020
OTHERS	EMC IMMUNITY	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11; EN61547, light industry level (surge immunity Line-Line 2KV), EAC TP TC 020
	MTBF	1036.4K hrs min. Telcordia SR-332 (Bellcore); 267.2Khrs min. MIL-HDBK-217F (25°C)
	DIMENSION	161*61*36mm (L*W*H)
NOTE	PACKING	0.7Kg; 20pcs/15Kg/0.73CUFT
	<p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25°C of ambient temperature.</p> <p>2. Please refer to "DRIVING METHODS OF LED MODULE".</p> <p>3. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.</p> <p>4. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>5. De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details.</p> <p>6. Length of set up time is measured at first cold start. Turning ON/OFF the driver may lead to increase of the set up time.</p> <p>7. The driver is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-quality EMC Directive on the complete installation again.</p> <p>8. To fulfill requirements of the latest ErP regulation for lighting fixtures, this LED driver can only be used behind a switch without permanently connected to the mains.</p> <p>9. This series meets the typical life expectancy of >50,000 hours of operation when Tcase, particularly (tc) point (or TMP, per DLC), is about 70°C or less.</p> <p>10. Please refer to the warranty statement on MEAN WELL's website at http://www.meanwell.com</p> <p>11. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).</p> <p>12. For any application note and IP water proof function installation caution, please refer our user manual before using. https://www.meanwell.com/Upload/PDF/LED_EN.pdf</p>	

90w 1-10v Dimmable Driver

Output Load vs Temperature



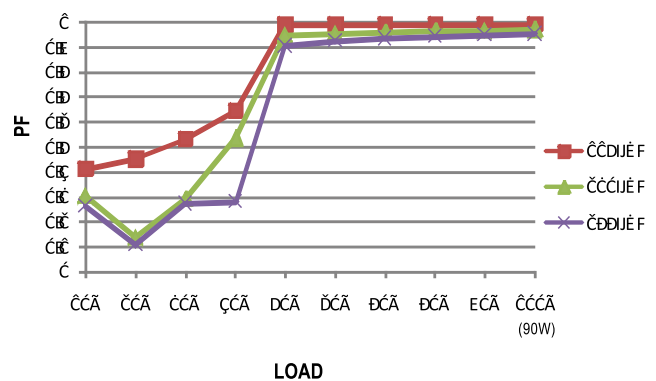
Static Characteristic



※ De-rating is needed under low input voltage.

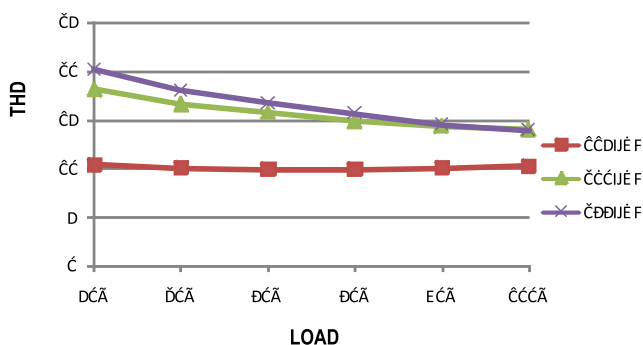
Power Factor(PF) Characteristic

※ T_{case} at 60°C



Total Harmonic Distortion

※ 48V Model, T_{case} at 60°C



Efficiency vs Load

LPF-90D series possess superior working efficiency that up to 90.5% can be reached in field applications.

※ 48V Model, T_{case} at 60°C

