

12W Constant Current – IP65



■ Approve



Features

- Class II, SELV, Built-in
- Input Voltage 100-240VAC
- Protections: SCP/OLP/OVP
- Power Factor : 0.85C-0.95
- Efficiency $\geq 81\%$
- IP65 Ingress protection
- 5 years warranty

Applications

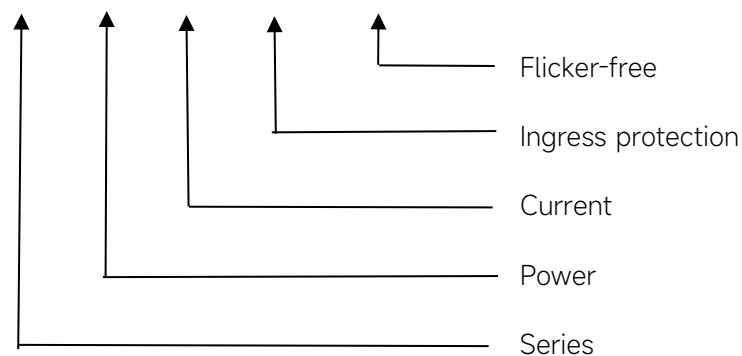
- Outdoor-Wall light
- Lawn light

◆ Description

CH-12-XXX IP65 LB1 is an 12W constant current LED driver that operates from 90-264Vac input with 250 to 700mA output current. With it's compact dimensions from $\Phi 55 \times 26\text{mm}$ it is easy to integrate in Outdoor-Wall light lights and Lawn lights. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

◆ Model code

CH-12-XXX IP65 LB1



◆ Specification

Output	Constant Current	250mA	350mA	500mA	...	700mA
	Voltage Range	29-48VDC	20-35VDC	14-24VDC	...	10.5-17.5VDC
	Unload voltage Max.	60VDC	45VDC	34VDC	...	28VDC
	Current Accuracy	±5%				
	Output HF current ripple(≥1KHz)	±5%				
	Output LF current ripple(≤120Hz)	±5%				
	SVM	≤0.4				
	Pst	≤1				
	Efficiency(Typ.)	≥81%				
Input	Rated input voltage	100-240VAC				
	Range of input voltage	90-264VAC				
	Frequency(Hz)	50/60 Hz				
	Displacement factor	≥0.9				
	Power Factor	0.85C-0.95				
	Input Current max	0.19A				
	Start-up time	< 0.5S				
	No Load Power	≤0.5W				
	THD (Typ.)	< 10%				
Protection	Over Load Protection	103-120%				
		YES/Auto Resume				
	Over Voltage Protection	> 60VDC	> 45VDC	> 34VDC	...	> 28VDC
		YES/Auto Resume				
	Short circuit Protection	YES/Auto Resume				
capability	Surge capability (L-N)	1KV				
	Surge capability (L/N-Ground)	NA				
Environment	Operating Temperature	-20℃~+50℃				
	Humidity	20%-90%RH				
	Tc	85℃				
	Storage Temperature	-25℃~+60℃				
	Life time	> 50000h@Tc=85℃,230VAC				
	Noise	≤20dB(A)@10cm				
Surface	Dimension	Φ55X26(DXH)mm				
standards	EN 61347-1; EN61347-2-13; EN62384; EN55015; EN61000-3-2 ; EN61000-3-3; EN 61547;					
Others	ErP	EU 2019/2020				
	RoHS	RoHS (2011/65/EU) (EU)2015/863				

Note

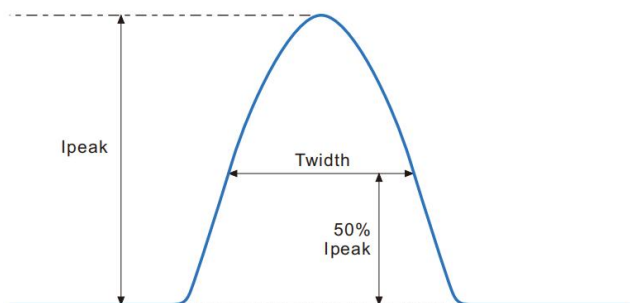
1.All parameters NOT specially mentioned are measured at 240VAC input , full load and 25°C of ambient temperature.
2.Ripple & Noise are measured at 20MHz of bandwidth by using a 300mm twisted pair-wire terminated with a 0.1uF & 47 uF parallel capacitor.

◆ Model list

NO.	Model number	Output			Max.Prated (W)
		Constant current (mA)	Normal working voltage (VDC)	No load working voltage (VDC)	
1	CH-12-250 IP65 LB1	250	29-48	60	12
2	CH-12-300 IP65 LB1	300	24-40	50	12
3	CH-12-350 IP65 LB1	350	20-35	45	12.3
4	CH-12-400 IP65 LB1	400	18-30	40	12
5	CH-12-450 IP65 LB1	450	16-27	37	12.2
6	CH-12-500 IP65 LB1	500	14-24	34	12
7	CH-12-550 IP65 LB1	550	13-22	32	12.1
8	CH-12-600 IP65 LB1	600	12-20	30	12
9	CH-12-650 IP65 LB1	650	11-18.5	28	12
10	CH-12-700 IP65 LB1	700	10.5-17.5	28	12.3

◆ Inrush Current

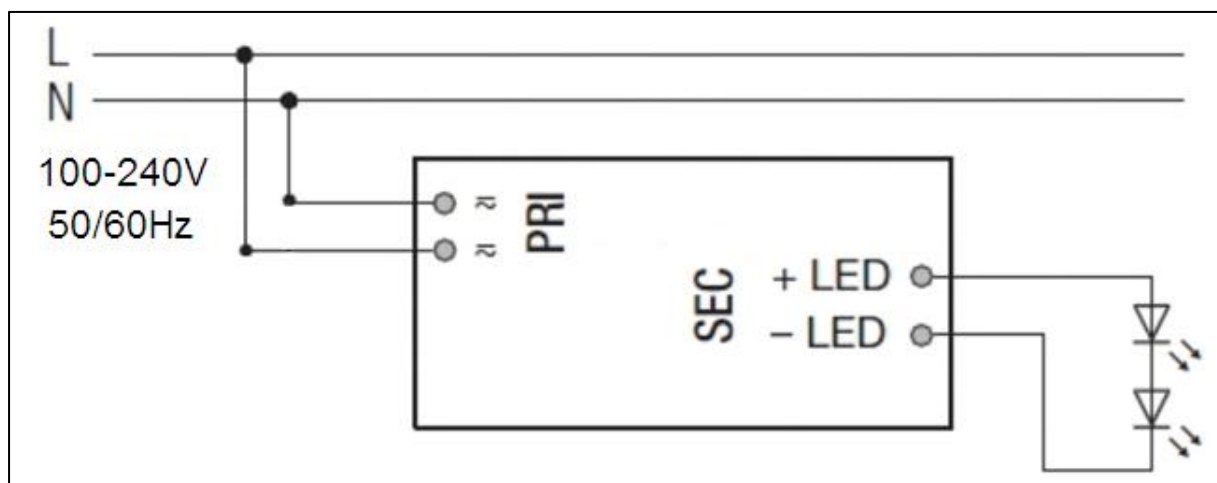
I _{peak}	T _{width}	B10	B16	B20	C10	C16	C20
15.5A	63.9μs	42pcs	67pcs	84pcs	42pcs	67pcs	84pcs



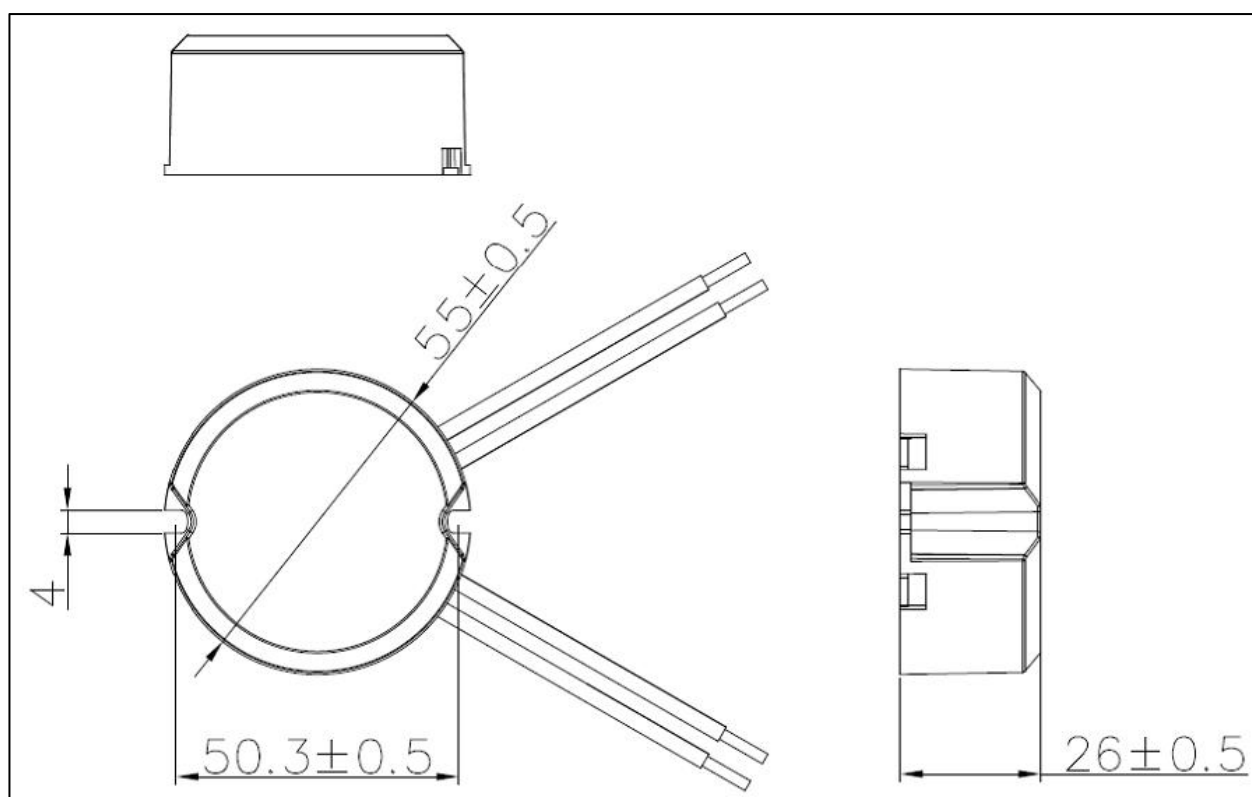
Remarks:

- 1.The number of drives mounted under different MCBs in the table is the maximum value. Please do not exceed this number during installation.
- 2.Different brands and models of miniature circuit breakers, the number of drives mounted will be slightly different.

◆ Wiring diagram

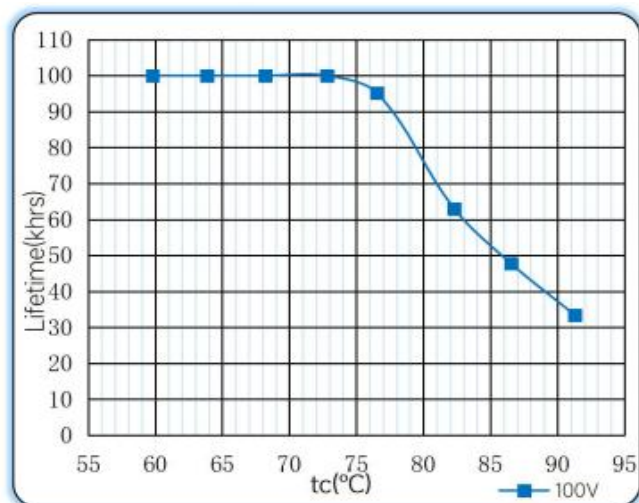


◆ 2D diagram

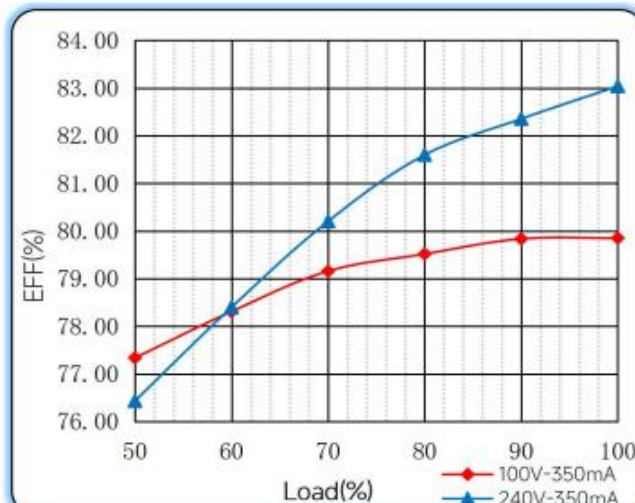


◆ Curve for CH-12-350 IP65 LB, $I_o=350\text{mA}$

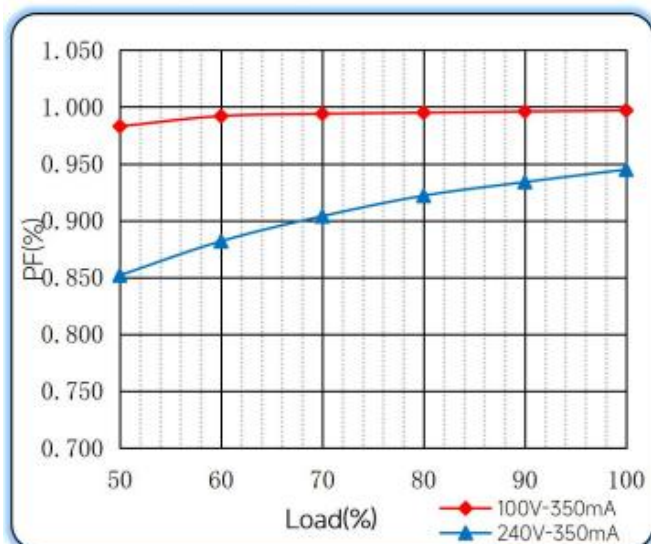
Lifetime vs. Temperature Curve



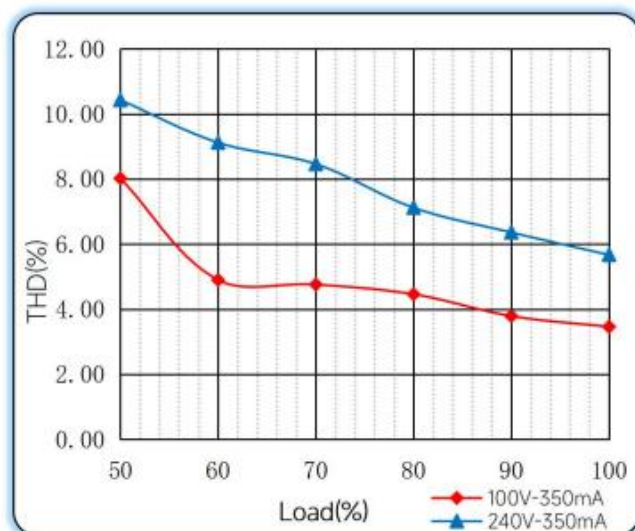
Efficiency vs. Load



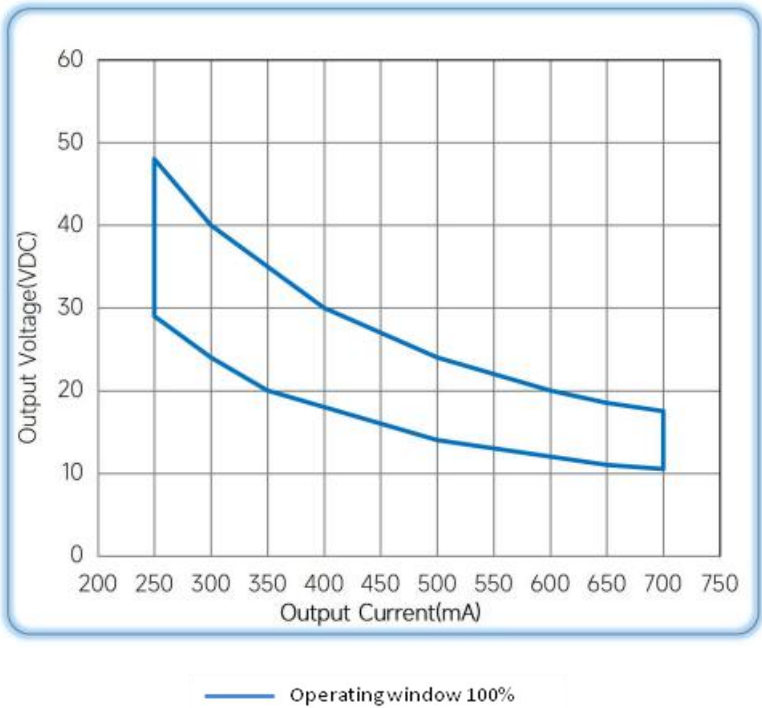
Power Factor Characteristics



THD vs. Load



◆ Operating window



◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2022/05/15
Inrush Current		Adding	B	2025/11/14

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Manual