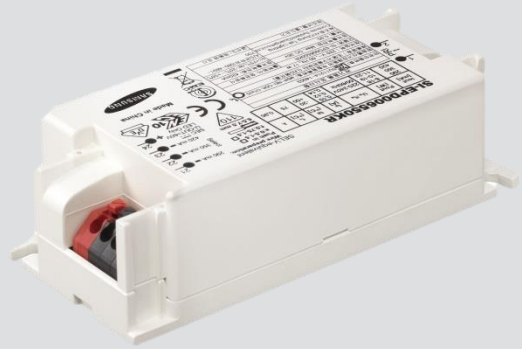


LED Driver

Indoor 15 W Non-Dimmable SI-EPD006550KR



SELV Constant Current LED Driver Easy Current Selection – No Dimming

Features & Benefits

- Output Currents: 290 / 350 / 420 mA (fixed, selectable)
- Output Voltage Range: 27 ~ 54 Vdc (SELV equivalent)
- Output Power Range: 8 ~ 23 W
- Input Voltage: 220 ~ 240 Vac 50/60 Hz
- Protections: Overload, No Load, Short Circuit, Over Temperature, Over Voltage
- t_a Range: -20 ~ +50 °C
- Expected Lifetime: 50,000 hours at $t_c = 65$ °C
- Long lasting & high reliability
- Extra small compact housing
- Suitable for Class I and II luminaires



Applications

- Downlights, Spotlights and other Indoor Lighting Applications
- Office – Industry – Shop

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1. Characteristics

Article	Symbol	Specification			Unit	Note	
		Min.	Typ.	Max.			
INPUT SPECIFICATIONS							
Nominal Voltage	V _{in}	220 ~ 240			V _{ac}		
Nominal Frequency	f _{in}	50 / 60			Hz		
AC Voltage Range		198		264	V _{ac}		
DC Voltage Range		n/a			V		
Maximum Voltage				275	V _{ac}	2 hours max.	
Nominal Current	I _{in}	140			mA	At 230 V (see section 2e)	
Total Harmonic Distortion	THD				15	%	At full load, 230 V, 50 Hz (see graph)
Power Factor	PF	0.95				-	At full load, 230 V, 50 Hz (see graph)
Efficiency	η	85				%	At full load, 230 V, 50 Hz (see graph)
Power Losses					4	W	At 230 V, input power 27 W max. (see section 2e)
No-load Power		n/a				W	Load switching on output side is safe but not permitted
Stand-by Power		n/a				W	Unit is not dimmable/controllable
Protection Class		II				-	Suitable for class I and II luminaires
In-rush Current					16	A _{pk}	t _{width} = 100 μs typ. (at 50% I _{pk})
Units per Circuit Breaker					B16: 50 B10: 30	-	I _{max} = 16 A, t _{width} = 100 μs
OUTPUT SPECIFICATIONS							
Nominal Voltage	V _o	27 ~ 54			V _{dc}	With load	
Max. Voltage					60	V _{dc}	Open circuit, No-load protection
Nominal Current	I _o	290 / 350 / 420			mA	±5 %	
Current Ripple		±20			%	Ripple / average at 100 Hz	
Nominal Power	P _o	8 ~ 23	23		W	See section 2e	
Galvanic Isolation		SELV-equivalent					Output to mains – Touch current < 0.5 mA
Touch Current					0.5	mA	According to EN 60598-1 annex G and EN 61347-1 annex A

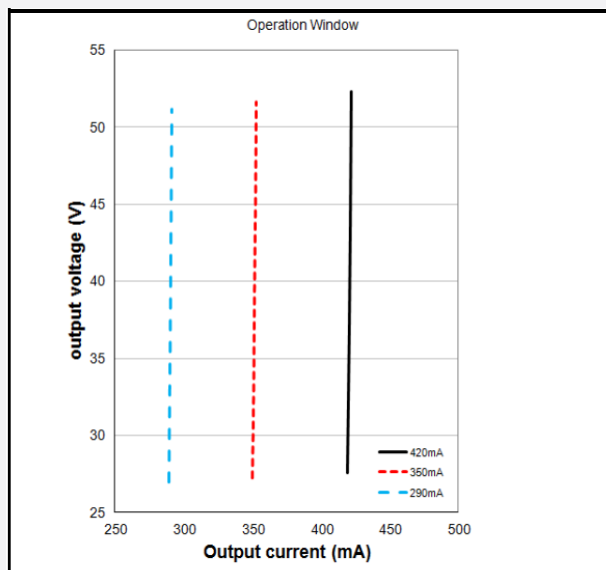
Article	Symbol	Specification			Unit	Note
		Min.	Typ.	Max.		
DIMMING SPECIFICATIONS						
Dimming Control			n/a			Unit is not dimmable
ENVIRONMENTAL SPECIFICATIONS						
Ambient Temperature	t_a	-20		50	°C	
Case Temperature	t_c			75	°C	Measured at t_c point as indicated on the product label
Case Temperature in fault condition				110	°C	
Storage Temperature	t_s	-25		75	°C	Cool down before operating
Relative Humidity		5		85	%	Not condensing
Surge Transient Protection	L / N			±1	kV	According to EN 61547-5.7
IP Rating			IP20		-	Suitable for indoor environment
Mains Switching cycles		100,000			-	
Expected Lifetime		35,000			h	$t_c = 75\text{ °C}$, 10 % failure rate (14 h on / 10 h standby per day)
		50,000			h	$t_c = 65\text{ °C}$, 10 % failure rate (14 h on / 10 h standby per day)
Dimensions	L x W x H		97 x 43 x 29.5		mm	
Net Weight			90		g	

Note:

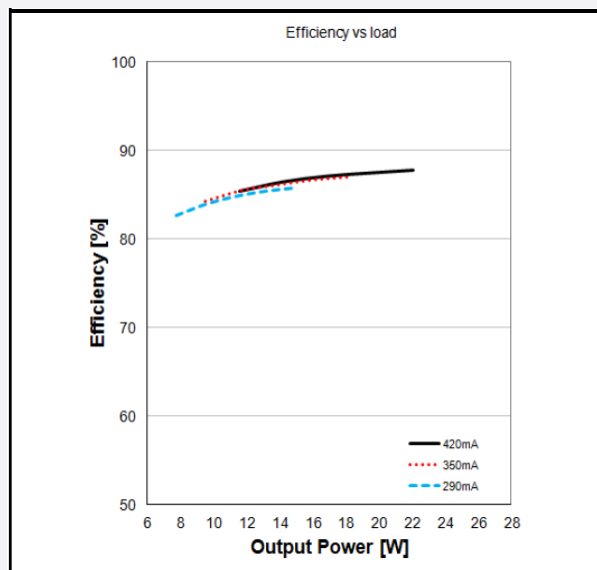
Standards: EN 61347-1, EN 61347-2-13, EN 55015, EN 61547, EN 61000-3-2, EN 62384

2. Typical Characteristics Graphs

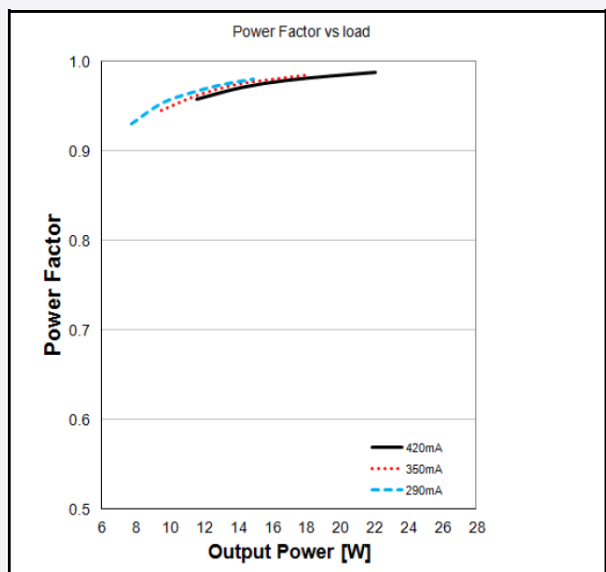
a) Operating Window



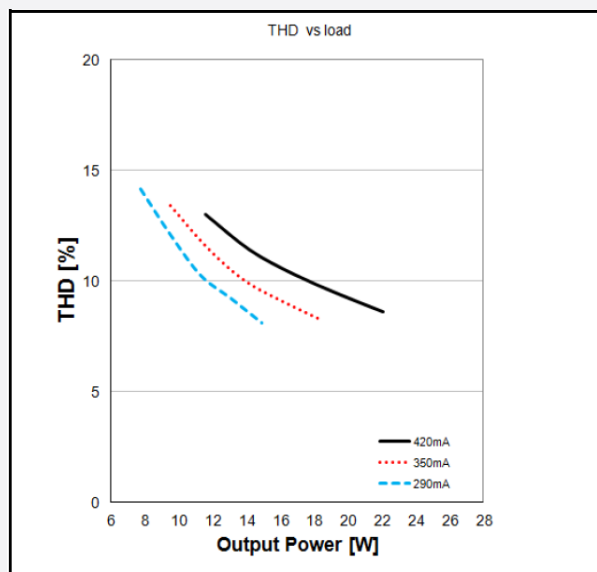
b) Efficiency vs. Load



c) Power Factor vs. Load



d) Total Harmonic Distortion vs. Load



e) Typical Output / Input

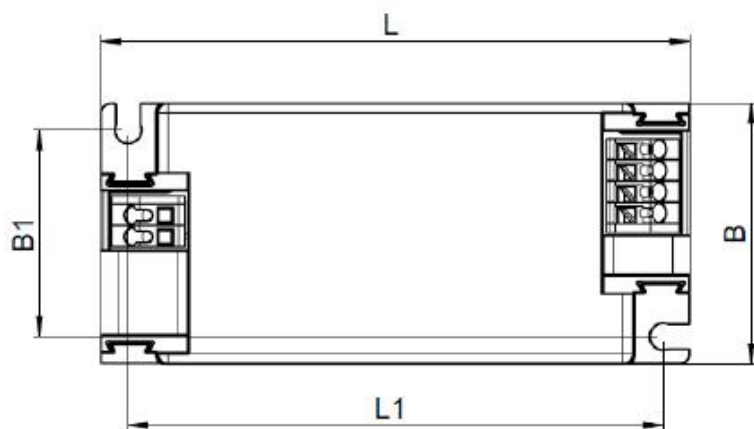
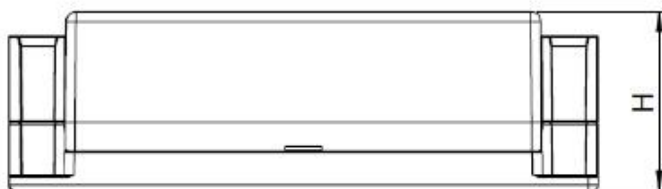
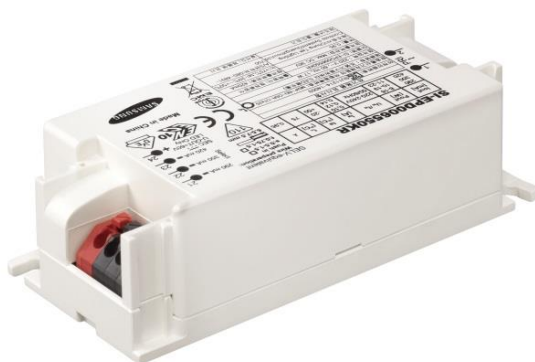
Output / Input Rating	Unit	Output Current Setting (mA)		
		290	350	420
Output Voltage, Min.	V	27	27	27
Output Voltage, Max.	V	54	54	54
Output Power, Min.	W	8	10	11
Output Power, Max.	W	16	19	23
Power Loss Max. (@ 230 V)	W	2.8	3.4	4
Line Input Power (@ 230 V)	W	18.8	22.4	27.0
Line Input Current (@ 230 V)	mA	100	120	140

3. Protection

- **Input over voltage protection**
Mains up to 275 Vac for two hours maximum.
- **Output short circuit protection**
Automatic and reversible.
- **Output overload protection**
Automatic and reversible.
- **Output over voltage protection**
Output voltage is limited to below 60 V.
- **No load operation**
Available.
- **Over temperature protection**
Automatic and reversible.
- **Load hot plug protection**
Hot plug-in or secondary switching of LEDs is not permitted and may cause a very high current to the LEDs.
- **Output under voltage protection**
n/a

4. Outline Drawing & Dimension

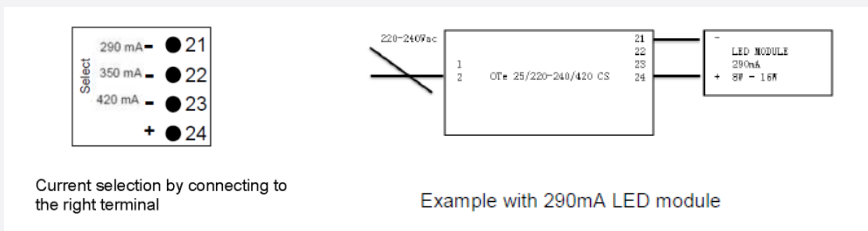
a) Dimension



L	L1	B	B1	H	Unit
97	88	43	34	29.5	mm

Housing material: plastic, white

b) Wiring Diagram



- Connectors type (input and output): Push-in terminals
- Wire cross-section: solid: 0.5 - 1.5 mm² flexible: 0.75 - 1.5 mm²
- Wire peeling length: 6.5 - 7.5 mm
- Load wire length: Max. 2 m

5. Label Structure

SI-EPD006550KR

SELV-equivalent

I _{out} [mA]	P _{out} [W]	U _N /f _N	I _N [A]	t _a [°C]	t _c [°C]	λ
290	8-16	220-240V	0,10	-20	75	0,95
350	10-19	50/60Hz	0,12	+50		
420	11-23		0,14			

Wire preparation: Push in s:0.5-1.5 f:0.75-1.5 6.5-7.5 mm

Select: 290 mA ● 21, 350 mA ● 22, 420 mA ● 23, + ● 24

SEC --- U-OUT=60V LED Only

전기용품 표시사항

안전인증번호: SU11214-14003

방송통신기자재등의 적합등록번호: MSIP-REI-OSR-OTe25

제품명칭: 조명기구용컨버터 (LED램프용)

정격입력: 220 V~, 60 Hz, 17 W

모델명: SI-EPD006550KR 출력방식: 정전류방식

정격출력전압: Max. DC 36V 정격출력전류: 420mA

역률: 0.95 tc:+75°C, ta:-20°C~+50°C

제조회사: Chung Tak Lighting Controls System(Guangzhou)Ltd A/S연락처:080-4891-700

제조년월: 별도표기 결선도: 제품에 표시

110, EMC, EN10, DVE, Made in China, SAMSUNG

6. Packing Structure

Packing material	Max. quantity (pcs)
Outer Box	20

7. Precautions in Handling & Use

- 1) To prevent the LED Driver from any defect, please handle and store it with care
 - Do not drop or give shock
 - Do not store in very humid location or at extreme temperature
 - Do not open or disassemble the product
- 2) Static electricity or surge voltage may damage the components inside LED Driver, as such please observe proper anti-electrostatic working process
 - People handling the Driver should be well grounded (e.g. using ESD wrist band) and wear anti-static working clothes and gloves
 - All related devices and instruments in the production line should be well grounded (e.g. working table, measuring equipment, assembly jigs)
- 3) Observe the correct polarity of output terminal
- 4) Avoid input voltage exceeds the maximum rating, which will cause damage to the circuit and result in malfunction

Legal and additional information.

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