

## Element LD 30W

### Constant Current LED Power Supply

700mA

Element LED Power Supply with high efficiency and reliability in small compact housing fits in light fixtures for office and shop lighting.

#### Benefits

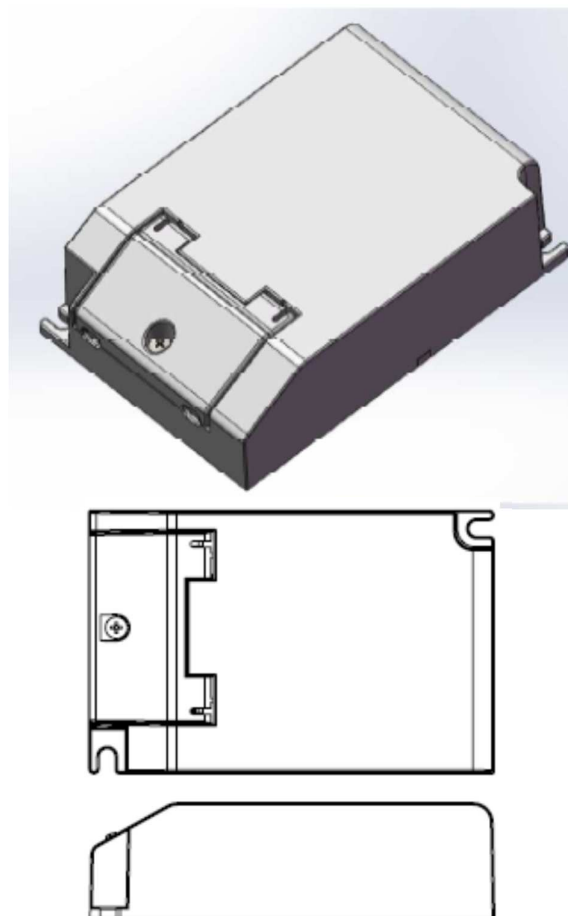
High compatibility with COBs and discrete LEDs;  
High efficiency and reliability  
Simple to use with easy installation and LED connection

#### Applications

Spotlight;  
Downlight;  
Other Indoor LED luminaires

#### Approval marks

(Under preparation if not shown on label)



### Product Features

- Output currents :700mA
- Output voltage :  $21V_{DC} - 42V_{DC}$
- Output power : 15W - 30W
- Input voltage : 220 – 240  $V_{AC}$
- Typ. Efficiency :  $\geq 90\%$
- 30'000 h lifetime at  $t_c = 75^{\circ}C$
- Ambient temp range,  $t_a$ :  $-10^{\circ}C$  to  $+50^{\circ}C$
- Max. case temperature at  $t_c$  point :  $75^{\circ}C$
- SELV ( $< 60V$ )
- Suitable for class I and II luminaires
- Fixed Output (i.e. no dimming)

## Electrical Specifications

	Item	Value	Unit	Remarks
INPUT	Nominal voltage	220 – 240	V <sub>AC</sub>	
	Nominal frequency	50 - 60	Hz	
	AC voltage range	198 – 264	V <sub>AC</sub>	Permitted voltage range
	DC voltage range	NA	V	
	Maximum voltage	275	V	2hrs
	Nominal current	160	mA	230V, Refer to Table 1 for details
	Total Harmonic Distortion (THD)	< 20	%	Full load, 230 V, 50 Hz / see graphs
	Power factor	0.98		Full load, 230 V, 50 Hz / see graphs
	Efficiency	> 90	%	Full load, 230 V, 50 Hz, typical / see graphs
	No-load power	< 1.5	W	230V, typical
	Stand-by power	NA	W	
	Power loss	4.4	W	at 230V, Input power 34.5 W max. Refer to Table 1 for details
	Protection class	I/II		Suitable for class I and class II luminaires
	Inrush current	<16	A	t <sub>width</sub> = 50 µs typical (measured at 50% I <sub>peak</sub> )
	Max. units per circuit breaker	B16: 40; B10: 25		
OUTPUT	Leakage current	< 0.7	mA	Output floating
	Nominal voltage range	21 – 42	V <sub>DC</sub>	Refer to Table 1 for details
	Maximum voltage	60	V <sub>DC</sub>	Open circuit
	Nominal current range	700	mA	
	Current accuracy	±10 %		
	Current ripple (typical)	± 40%		Ripple / average @ 100 Hz
	Nominal power range	15 – 30	W	Partial Load. Refer to Table 1 for details
	Maximum power	30	W	Ta ≤ 50°C, Refer to Table 1 for details
DIMMING	Galvanic isolation	SELV		3,75 kVrms . Output to mains - Touch current < 0.7 mA
	Dimming control	No		Not dimmable
	Dimming range	NA	%	
	Dimming technique	NA		
	Frequency	NA	Hz	
Cable clamp	Galvanic isolation	NA		
	Tested cable types: according to IEC60598			
	Input side	H03VV-F 2x0.75		Cable type
		H03VV-H2F 2x0.75		
	Output side	H03VV-F 2x0.75		Cable type
		H03VV-H2F 2x0.75		
	Ambient temperature range t <sub>a</sub>	-10 ...+50	°C	Refer to Table 1 for details
	Maximum case temperature t <sub>c</sub>	75	°C	Measured on t <sub>c</sub> point indicated of the product label. Refer to Table 1 for details
	Max. case temp. in fault condition	110	°C	
	Storage temperature range	-10 ...+75	°C	Cool down before operating
	Relative humidity	5 ... 85	%	Not condensing
	Surge transient protection	1   2	kV	L/N   LN/PE acc. IEC 61000-3-2 (ANSI C62.41 Cat.A ...)
ENVIRONMENT	Environmental rating	Indoor		
	IP rating	IP 20		
	Mains switching cycles	> 100'000		
	Expected lifetime	30'000	hrs	t <sub>cmax</sub> = 75°C, 10% failure rate

## Protections

## Over temperature

Automatic, auto reversible

## Overload

Automatic, auto reversible

## No load

Yes

## Short-circuit

Automatic, auto reversible

## Input overvoltage

Maximum allowed input voltage 275V AC

## Output overvoltage

Yes, Limitation of Output voltage &lt; 60V

## Output under voltage

NA

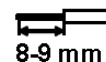
## LED load protection

NA

## Wiring Diagram

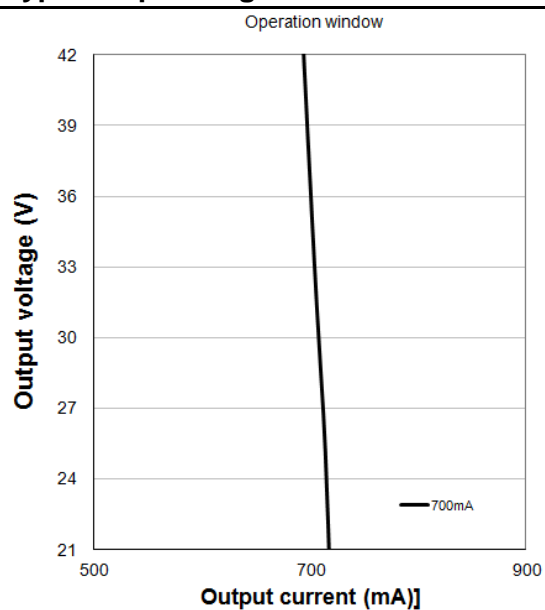
Terminal: Push in terminals  
 Max. cable length - system: 2 m  
 Geometry (l x b x h): 103 x 67 x 29.5 mm  
 Weight: 150 g

Wire preparation (Push in)	
Built in	Independent
s: 0.5 - 1.5 □	0.75 - 1.5 □
f: 0.75 - 1.5 □	

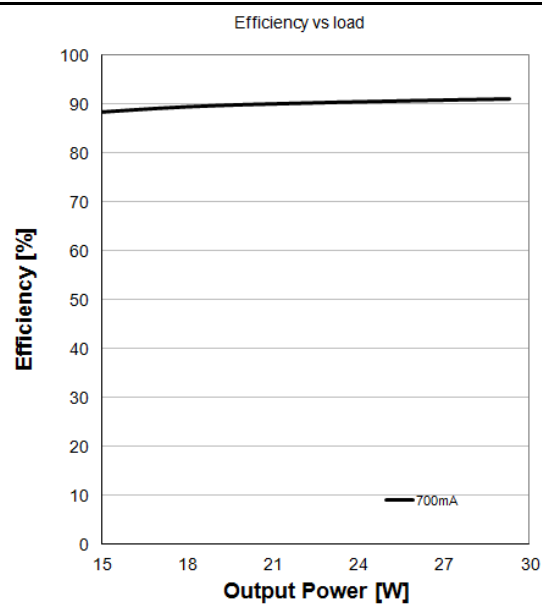


Hot plug-in or secondary switching of LEDs is not permitted and may cause a very high current to the LEDs.

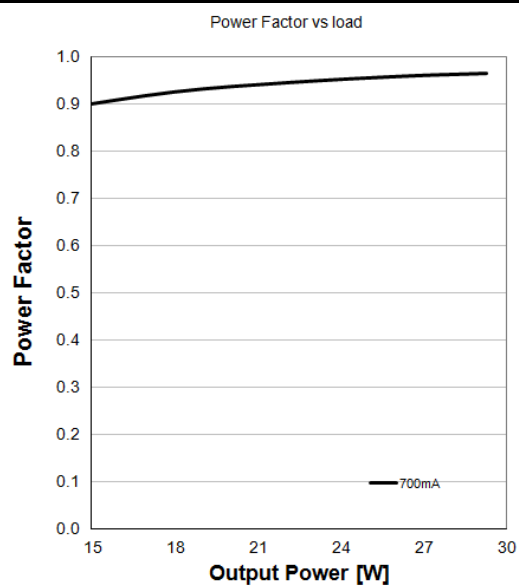
## Typical Operating window



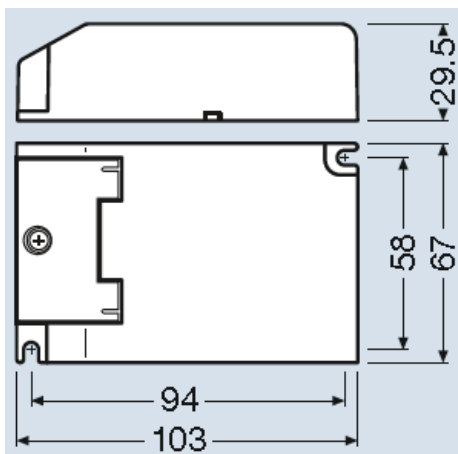
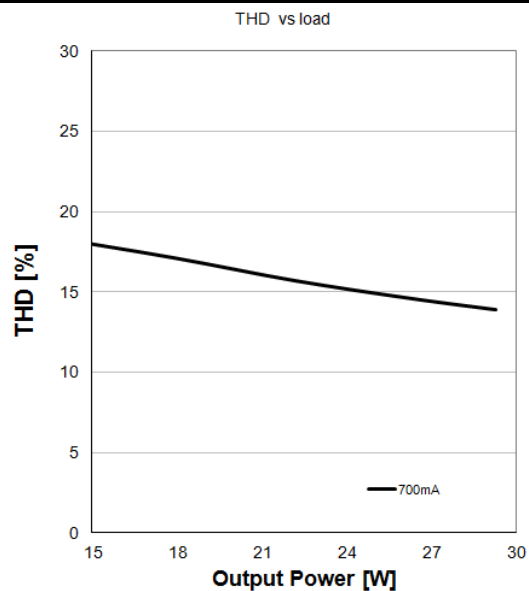
## Typical Efficiency over load



## Typical Power factor over load



## Typical THD over load



L x W x H: 103 x 67 x 29.5 mm

Table 1 - Rated output power and current sets

I <sub>out</sub> (mA)	700
U <sub>min</sub> [V]	21
U <sub>max</sub> [V]	42
P <sub>min</sub> [W]	15
P <sub>max</sub> [W]	30
T <sub>a</sub> [°C]	50
T <sub>c</sub> [°C]	75
Line Current, nominal @ 230V mA	160
Max Power Loss @ 230V [W]	4.5
Input Power @ 230V [W]	34.5

Table 2 - Expected lifetime

T <sub>a</sub> = 50°C, T <sub>c</sub> [°C], All I <sub>out</sub>	75°C
Lifetime	30'000h

**Standards**

Safety: IEC 61347-1, IEC 61347-2-13

Performance: IEC 62384

Harmonic content: IEC 61000-3-2

Radio interference: CISPR 15

Immunity: IEC 61000-3-3

IEC 61547

Product name	EAN10	EAN40	Pieces / box
Element LD 30W	4052899947108	4052899947177	20

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