

**OTe 35/220-240/700 CS S**

Constant Current LED Power Supply

500mA - 600mA - 700mA

OPTOTRONIC® LED Power Supply with high efficiency and reliability in small compact housing. Equips with 3 selectable currents functionality fits in light fixtures for office and shop lighting.

**Benefits**

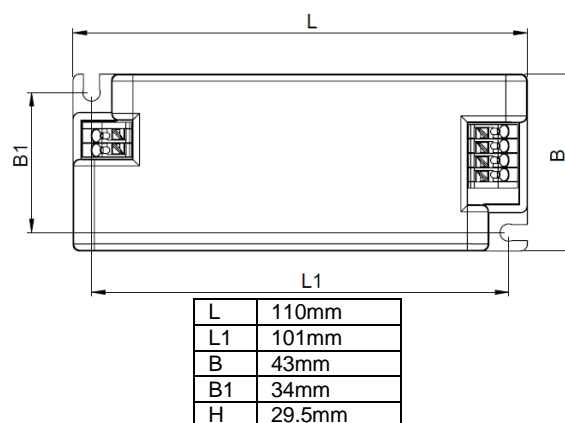
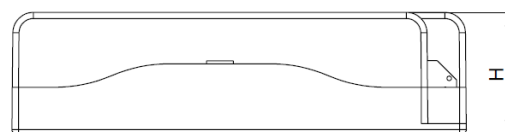
Three fixed selectable output currents  
Easy current selection  
Long lasting and high reliability  
Extra small compact housing

**Applications**

Downlights, Spotlights and other Indoor LED applications

**Approval marks**

Under preparation

**Product Features**

- Output currents : 500/ 600/700mA
- Output voltage :  $27V_{DC} - 54V_{DC}$
- Output power : 13W - 37W
- Input voltage : 220 – 240  $V_{AC}$
- Typ. Efficiency :  $\geq 87\%$
- Fixed Output (i.e. no dimming)
- Ambient temp range,  $t_a$ :  $-20^{\circ}C$  to  $+50^{\circ}C$
- Max. case temperature at  $t_c$  point :  $80^{\circ}C$
- Galvanic isolation : 3.75kVrms
- Suitable for class I and II luminaires
- 50'000 h lifetime at  $t_c = 70^{\circ}C$

## 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	200	mA	230V @ 35W load, Refer to Table 1 for details
	Total Harmonic Distortion (THD)	< 20	%	Full load, 230 V, 50 Hz / see graphs
	Power factor	0.95		Full load, 230 V, 50 Hz / see graphs
	Efficiency	> 87	%	Full load, 230 V, 50 Hz, typical / see graphs
	No-load power	< 1.5	W	230V, typical
	Stand-by power	NA	W	
	Power loss	5.3	W	230V @ 35W load, Refer to Table 1 for details
	Protection class	II		Suitable for class I and class II luminaires
	Inrush current	<16	A	t <sub>width</sub> = 100 µs typical (measured at 50% I <sub>peak</sub> )
	Max. units per circuit breaker	B16: 44; B10: 28		I <sub>max</sub> = 53 A Th = 230 µs
OUTPUT	Leakage current	< 0.7	mA	Output floating
	Nominal voltage range	27 – 54	V <sub>DC</sub>	Refer to Table 1 for details
	Maximum voltage	60	V <sub>DC</sub>	Open circuit
	Nominal current range	500 / 600 / 700	mA	
	Current accuracy	+/- 5	%	
	Current ripple	< 40	%	V <sub>out</sub> =50-54V, Ripple / average @ 100 Hz
	Nominal power range	13 – 37	W	Partial Load. Refer to Table 1 for details
	Maximum power	35	W	T <sub>a</sub> ≤ 50°C, Refer to Table 1 for details
	Maximum power	37	W	T <sub>a</sub> ≤ 45°C, Refer to Table 1 for details
	Galvanic isolation	SELV-equivalent		3,75 kVrms . Output to mains - Touch current < 0.7 mA
DIMMING	Dimming control	No		Not Dimmable
	Dimming range	NA	%	
	Dimming technique	NA		
	Frequency	NA	Hz	
	Galvanic isolation	NA		
ENVIRONMENT	Ambient temperature range t <sub>a</sub>	-20 ...+50	°C	Refer to Table 1 for details
	Maximum case temperature t <sub>c</sub>	80	°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	-25 ...+75	°C	Cool down before operating
	Relative humidity	5 ... 85	%	Not condensing
	Surge transient protection	1   1	kV	L/N   LN/PE acc. IEC 61000-3-2 (ANSI C62.41 Cat.A ...)
	Environmental rating	Indoor		
	IP rating	IP 20		
	Mains switching cycles	> 100'000		
	Expected lifetime	35'000 50'000	hrs	t <sub>c</sub> = 80°C, 10% failure rate t <sub>c</sub> = 70°C, 10% failure rate Refer to Table 2 for details

## Protections

### Overtemperature

Automatic, reversible

### Overload

Automatic, reversible

### No load

Yes

### Short-circuit

Automatic, reversible

### Input overvoltage

Maximum allowed input voltage 275V AC

### Output overvoltage

Yes , Limitation of Output voltage &lt; 60V

### Output undervoltage

NA

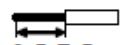
### LED load protection

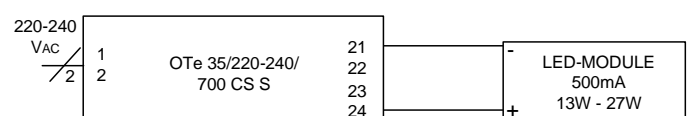
NA

## Wiring Diagram

Terminal: Push in terminals  
 Max. cable length - system: 2 m  
 Geometry (l x b x h): 110 x 43 x 29.5 mm  
 Weight: 135 g

### Wire preparation:

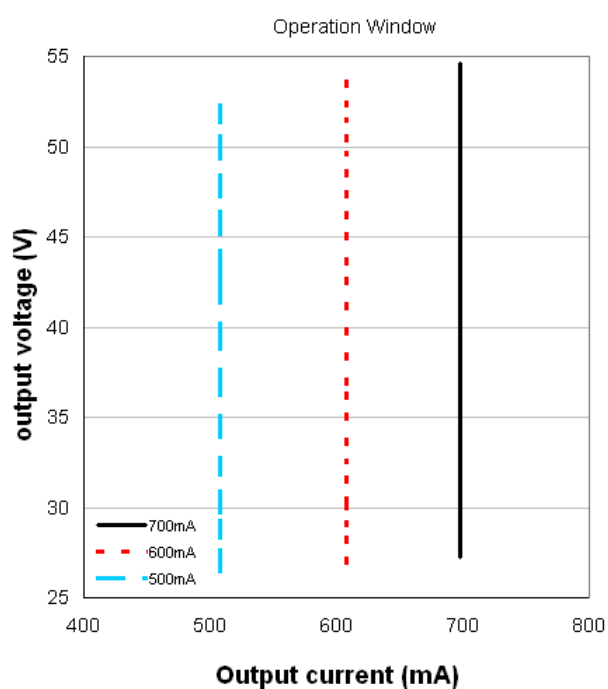
Push in  
 s: 0.5-1.5 mm  
 f: 0.75-1.5 mm  
  
 6.5-7.5mm



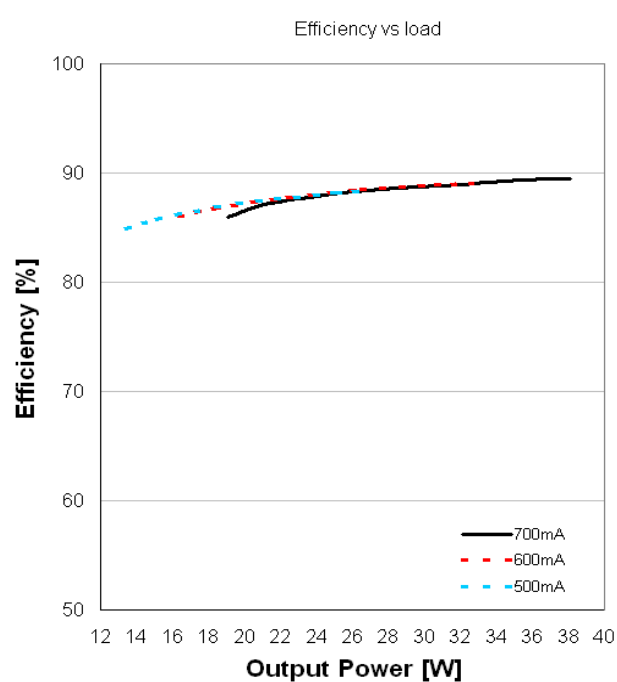
Example with 500mA LED module

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

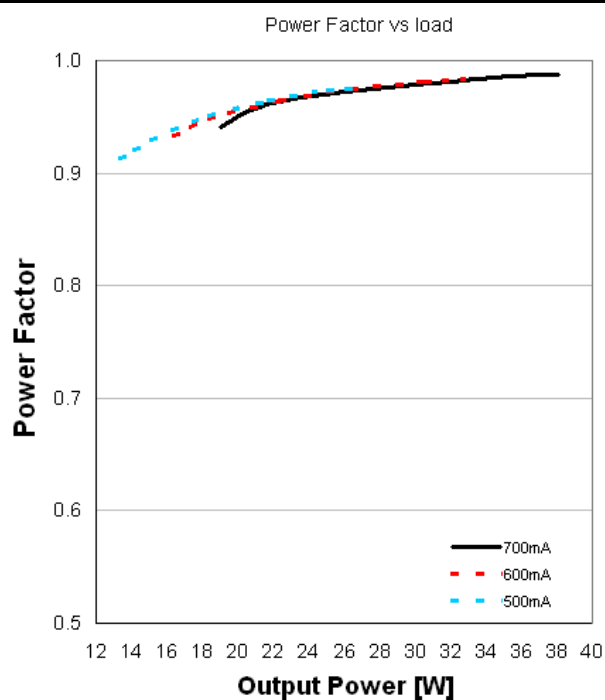
## Typical Operating window



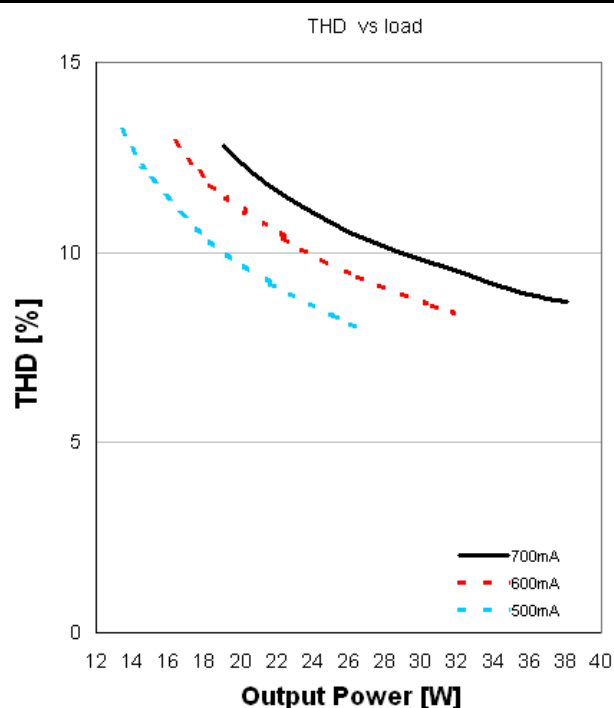
## Typical Efficiency over load



## Typical Power factor over load

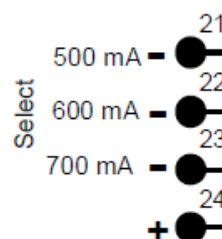


## Typical THD over load



**Table 1 - Rated output power and current sets**

<b>I<sub>out</sub> (mA)</b>	<b>500</b>	<b>600</b>	<b>700</b>	
<b>U<sub>min</sub> [V]</b>	27	27	27	
<b>U<sub>max</sub> [V]</b>	54	54	50	54
<b>P<sub>min</sub> [W]</b>	13	16	19	
<b>P<sub>max</sub> [W]</b>	27	32	35	37
<b>T<sub>a</sub> [°C]</b>	50	50	50	45
<b>T<sub>c</sub> [°C]</b>	80	80	80	80
<b>Line Current, nominal@230V mA</b>	150	180	200	220
<b>Max Power Loss@230V [W]</b>	4.2	4.8	5.3	5.5
<b>Input Power @230V [W]</b>	31.2	36.8	40.3	42.5



**Current selection by connect to right terminal**

**Table 2 - Expected lifetime**

<b>T<sub>a</sub> = 50°C , T<sub>c</sub> [°C]</b> <b>All I<sub>out</sub> @ 35W max</b>	<b>70°C</b>	<b>80°C</b>
<b>Lifetime</b>	50'000h	35'000h
<b>T<sub>a</sub> = 45°C , T<sub>c</sub> [°C]</b> <b>I<sub>out</sub> = 700mA @ 37W max</b>	<b>70°C</b>	<b>80°C</b>
<b>Lifetime</b>	50'000h	35'000h

**Standards**

Safety: IEC 61347-1, IEC 61347-2-13  
 Performance: IEC 62384  
 Radio interference: CISPR 15  
 Harmonic content: IEC 61000-3-2  
 Immunity: IEC 61000-3-3  
 IEC 61547

**Ordering information**

<b>Product name</b>	<b>Type</b>	<b>EAN10</b>	<b>EAN40</b>	<b>Pieces / box</b>
OTe 35/220-240/700 CS S	AA56806	4052899917552	4052899917613	20

**Disclaimer (Engineering Samples: B-Samples and C-Samples)**

This product is a demonstration model from our development laboratories made available for your information only.  
 The model is not binding in respect to its fitness for use, i.e. service life, luminous flux, color temperature and performance.  
 Prior to production the design, including dimensions, is subject to modification.  
 You will, therefore, appreciate that at this stage of development we are unable to assume any liability also for damages which may be caused by this product.  
 Should you urgently require binding information for the preparation of construction data for your applications, please contact our marketing department.

**Manufacturer's address:****OSRAM GmbH**

Steinerne Furt 62 D-86167 Augsburg  
 Germany

[www.osram.com](http://www.osram.com)

**Technical support:**

Kunden Service Center Germany  
 +49 (0)89-6213-60 00