

OT 100/220-240/700 P7

Constant Current LED Driver

OPTOTRONIC® LED Power Supply is the reliable choice for outdoor lighting applications. This driver offers constant current for outdoor application at input voltage range 220V – 240V.



Benefits

- High surge protection up to 10 kV;
- High efficiency and reliability;
- Fix current for optimized fixture design
- Over temperature protection;
- IP67 (Independent installation)
- Long life time

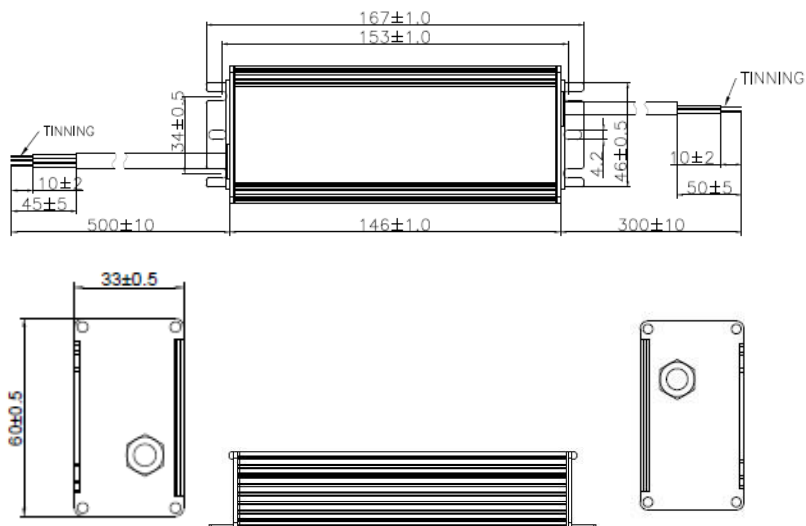
Applications

- Street and Urban lighting
- Industrial lighting
- Suitable for luminaries of protection class I

Approval Marks



In preparation, if not already printed on product label



Housing material: Aluminum Color: Silver

Product Features

- Fix output current 700mA
- Output power up to 100 W
- Uout: 100 – 143 Vdc
- High surge capacity up to 6kV/10kV
- Over temperature protection
- Mains voltage 220 – 240 V
- IP67 (Independent installation)
- Wide t_a range $-40^{\circ}\text{C} \dots +55^{\circ}\text{C}$
- 50'000 h lifetime at $t_c 80$
- 5 years guarantee

Electrical Specifications

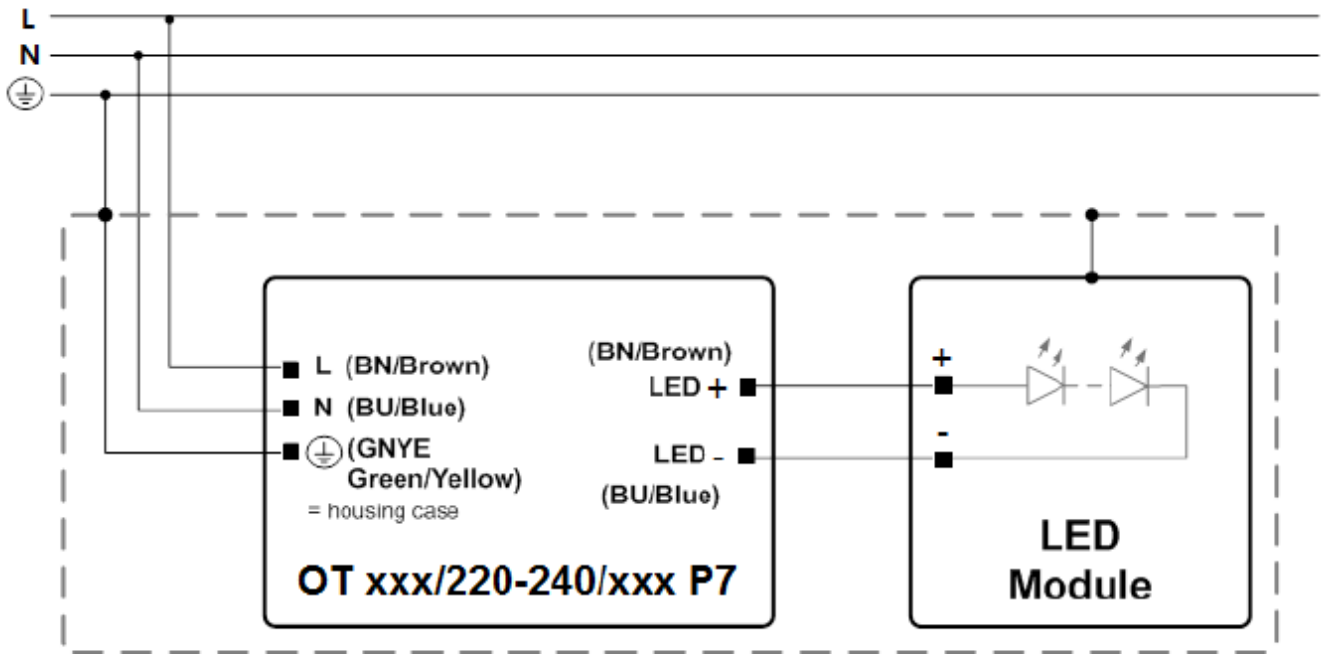
	Item	Value	Unit	Remarks	
INPUT	Nominal voltage	220 – 240	Vac		
	Nominal frequency	50 / 60	Hz		
	AC voltage range	198 – 264	Vac		
	DC voltage range	NA	Vdc		
	Maximum voltage	320	Vac	For 2h maximum, see remark	
	Nominal power	110	W		
	Nominal current	0.6	A	Vin 230v 50Hz	
	Total Harmonic Distortion (THD)	< 5	%	≥70% load	
	Power factor	≥ 0.95		≥70% load	
	Efficiency	91.5	%	Vin 230v 50Hz	
	Power losses	9.2	W	Vin 230v 50Hz	
	No-load power	NA	W	Load switching on the LED output is safe but not permitted	
	Stand-by power	NA	mW		
	Protection class	I		Housing must be connected to PE	
	Touch current	< 0.7	mA pk	according to EN 60598-1 Annex G and EN 61347-1 Annex A	
	Inrush current	55	A pk	Max, th = 400 µs	
Max. units per circuit breaker	B25:	12			
	B16:	7			
	B10:	4			
OUTPUT	Nominal output voltage range	100 - 143	Vdc	Refer to operation window	
	Maximum output voltage	160	Vdc	Abnormal load protection, constant output voltage	
	Nominal current range	0.7	A		
	Current accuracy	± 5	%		
	Ripple current	< 5	%	Low frequency < 100Hz	
	Nominal power range	70 – 100	W		
	Maximum power	100	W		
	Galvanic isolation	Basic			
DIMMING / INTERFACE	Dimming control	NA			
	0-10V	NA			
	AstroDIM	NA			
	Dimming range	NA			
	Dimming technique	NA			
	Galvanic isolation Interface	NA			
	LEDset2	NA			
	NTC input	NA			
Constant Lumen Function	NA				
ENVIRONMENT / DIMENSIONS	Ambient temperature range t_a	-40 ... +55	°C	Nominal Input Voltage: 220-240Vac	
	Max. case temperature at t_c point	85	°C		
	Max. case temp. in fault condition	110	°C		
	Storage temperature range	-40...+85	°C		
	Relative humidity	5 ... 95	%	Not condensing, Absolute humidity: 36g/m ³	
	Surge transient protection	6 10	kV	L/N L/PE, N/PE acc to. EN 61547-5.7	
	Environmental rating	Outdoor			
	IP rating	IP 67		Potted	
	Mains switching cycles	> 100'000			
	Expected lifetime	50'000		$t_c = 80^\circ\text{C}$ with max. 10% failure rate	@ 220...240V input
		100'000	h	$t_c = 70^\circ\text{C}$, with max. 10% failure rate	
	Dimensions	167X60X33	mm	LxWxH	
Weight	560	g			

Protections

Over temperature, Overload, No load, Short-circuit, Input overvoltage, Output Overvoltage

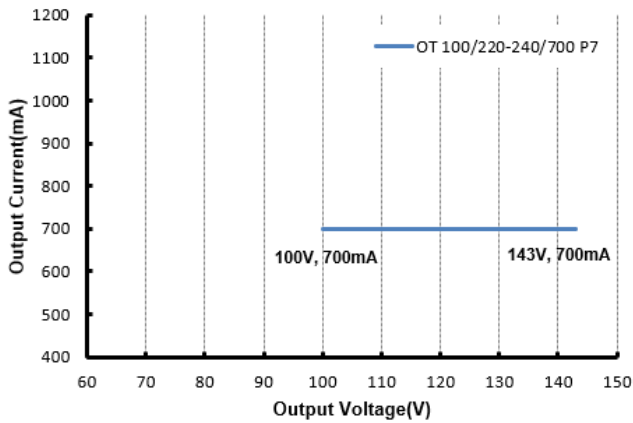
See remarks on page 5.

Wiring Diagram

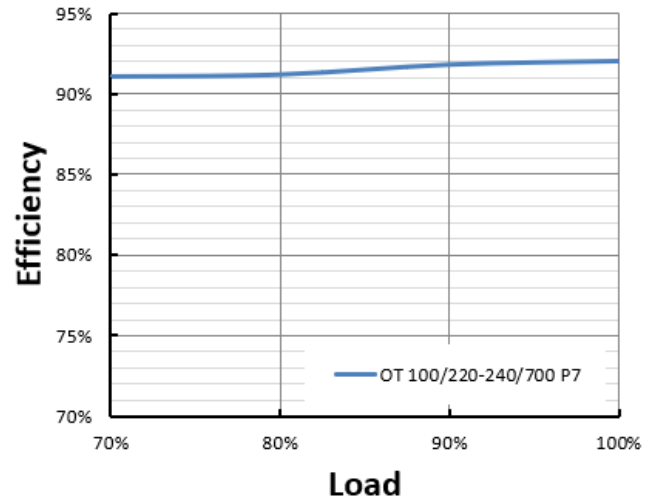


	Item	Value	Unit	Remarks
INPUT	Cable cross section	1.0	mm ²	L (Brown/BN), N (Blue/BU), PE(Green/Yellow, GNYE)
	Wire preparation length	10	mm	
	Type of wire	Flexible three core cable		
	Lead length	500 ± 20	mm	
OUTPUT	Cable cross section	1.0	mm ²	LED+ (Brown/BN), LED- (Blue/BU)
	Wire preparation length	10	mm	
	Type of wire	Flexible two Core cable		
	Lead length	300 ± 20	mm	
CABLE/ LENGTH	LED+/LED-	< 2	m	

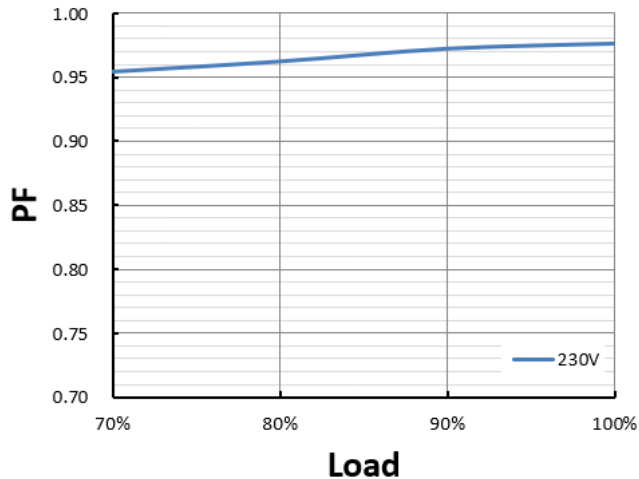
[1] Typical operation window



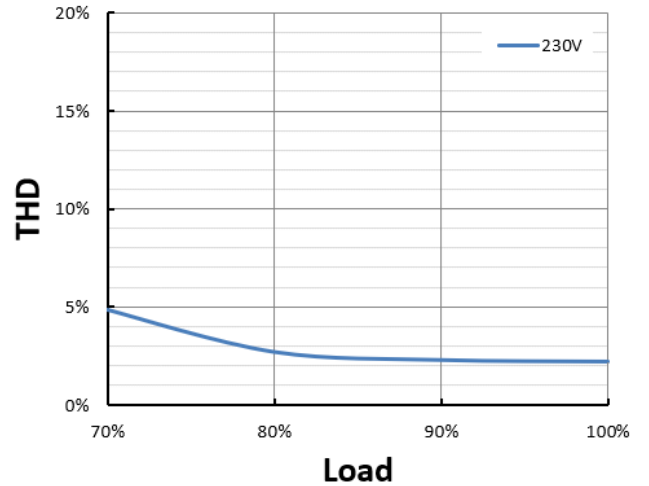
[2] Typical Efficiency vs Load at 230V 50Hz



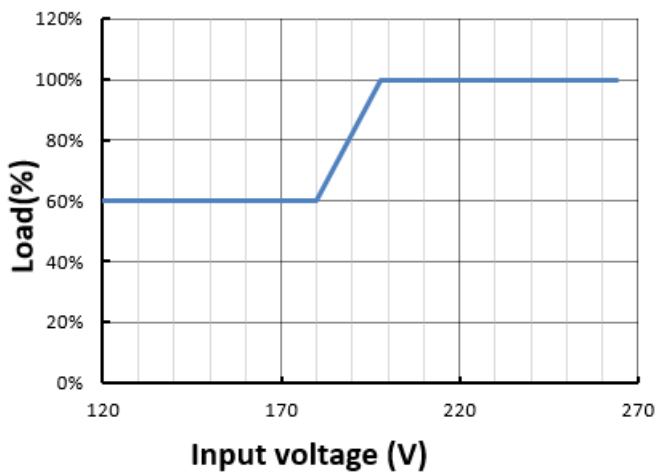
[3] Typical Power Factor vs Load at 230V 50Hz



[4] Typical THD vs Load at 230V 50Hz



[5] Typical Input Voltage vs. Load



Remarks

- **Input overvoltage protection:** the driver withstands an input voltage up to 320 Vac for a maximum of two hours, shut down of the output load might occur in case the supply voltage exceeds the declared input voltage range;
- **Output short circuit protection:** short circuit current protection without damage to the unit. See typical operating window graph for details;
- **Input voltage range:** Nominal operation at 198 – 264Vac. Workable at 120 – 277Vac (refer to [8] Typical Input Voltage vs. Load), but normal performance such as THD, EMI, lifetime etc are not guaranteed;
- **Output over load/voltage protection:** In case the input voltage of the load exceeds the output voltage range which is auto defined by output current setting of the driver ($V_o = P_o / I_o$), flicking of output will be occurred. Auto-reversible without mains power on/off.
- **No load protection:** The driver automatically adjusts the output voltage to the maximum output voltage. Auto-reversible with the correct load connected but there is possibility of damage to the LED load. Hot-plug is not allowed.
- **Over temperature protection:** the driver is protected against temporary overheating by flicking until the overheating eliminated; Auto-reversible when temperature back to normal;
- The protective earth (⊕ GNYE/PE) wire should be connected to the heat sink of the LED module to improve the surge withstand capability of the system and EMI in critical luminaries;
- Not suitable to be mounted in ceiling corner
- The LED control gear cannot be abutted against or covered by normally flammable materials or used in installations where building insulation or debris is, or may be, present in normal use.
- The external flexible cable or cord of this driver cannot be replaced; if the cord is damaged, the driver shall be destroyed.
- The startup time to reach the set output current is less than 2s;
- Disconnect the power before servicing. Terminal block is not included, installation must be performed by qualified person.
- For further details please consult the application note.

Standards

EN 61347-1
 EN 61347-2-13
 EN 55015
 EN 61547
 EN 61000-3-2
 EN 61000-3-3
 EN60598-1(ED.8)
 EN62384

Product name	EAN10	EAN40	Pieces / box
OT 100/220-240/700 P7	4062172087032	4062172087049	15

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