

OT 150/220-240/4A2 P7**Constant Current LED Driver**

OPTOTRONIC® LED Power Supply is the reliable choice for outdoor lighting applications. This driver offers adjustable current (3.1A – 4.2A) for outdoor application with constant power at input voltage range 220V – 240V.

Benefits

- Easily current adjustment by potentiometer
- High surge protection up to 10 kV
- High efficiency and reliability
- Adjustable and wide output current range
- Constant power
- Double isolation between primary/secondary sides (SELV)
- Over temperature protection
- IP67 (Independent installation)
- Long life time

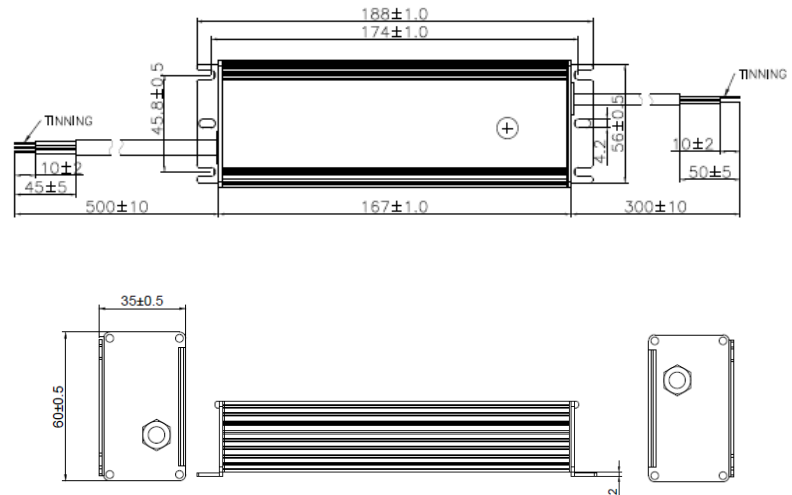
Applications

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

Approval Marks

In preparation, if not already printed on product label

Housing material: Aluminum Color: Silver

**Product Features**

- Adjustable output current 3.1A – 4.2A
- Output power up to 150 W
- Uout: 36 – 48Vdc (SELV)
- High surge up to 6kV/10kV
- 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 $t_c = 80^{\circ}\text{C}$
- 5 years guarantee

Electrical Specifications

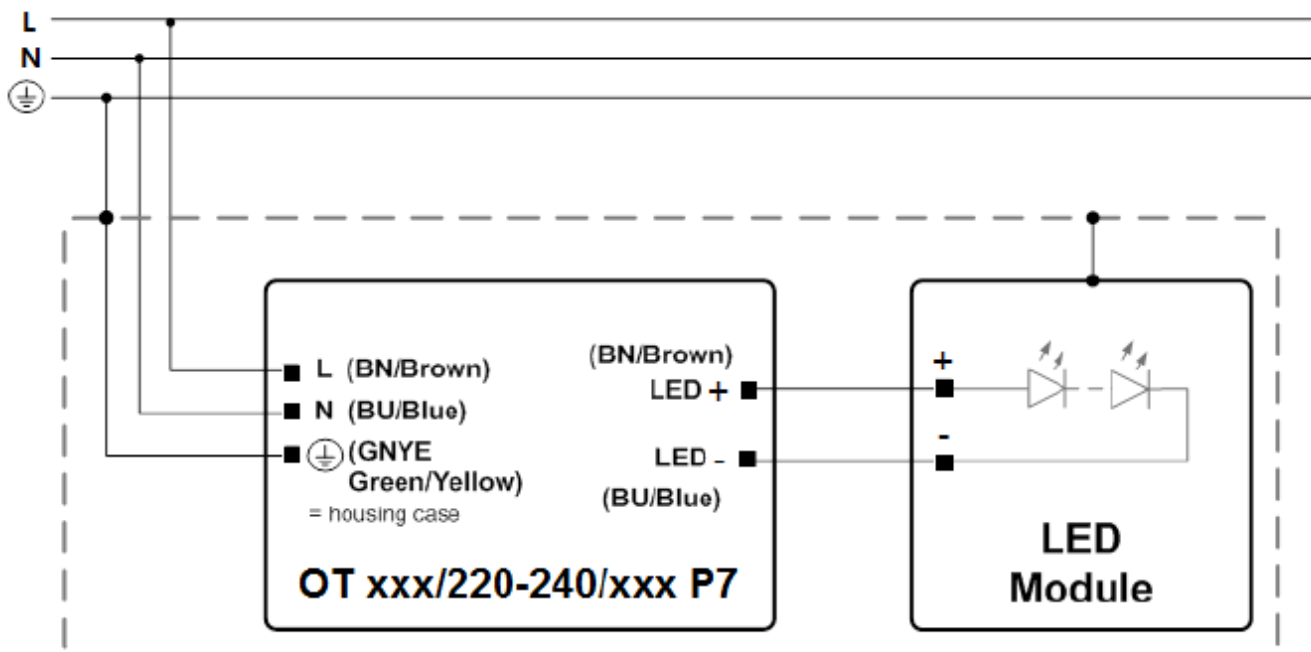
	Item	Value	Unit	Remarks
INPUT	Nominal voltage	220 – 240	Vac	
	Nominal frequency	50 / 60	Hz	
	AC voltage range	198 – 264	Vac	
	DC voltage range	NA	Vdc	
	Maximum voltage	320	Vac	For 2h maximum, see remark
	Nominal power	161	W	Vin 230V 50Hz
	Nominal current	0.85	A	Vin 198V 50Hz
	Total Harmonic Distortion (THD)	< 5	%	≥70% load
	Power factor	> 0.95		≥70% load
	Efficiency	93.5	%	Vin 230v 50Hz @ 3.1A
	Power losses	10.5	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	60	A pk	Max, th =400µs
Max. units per circuit breaker	B25:		9	
	B16:		6	
	B10:		3	
OUTPUT	Nominal output voltage range	36 – 48	Vdc	27V – 54V workable. Refer to operation window
	Maximum output voltage	60	Vdc	Abnormal load protection, constant output voltage
	Nominal current range	3.1 - 4.2	A	2.2A – 4.2A Adjustable
	Current accuracy	± 5	%	
	Ripple current	< 5	%	Low frequency ≤100Hz, full load @ 230V
	Nominal power range	105 – 150	W	
	Maximum power	150	W	
Galvanic isolation	Reinforced / Double			
DIMMING / INTERFACE	Dimming control	NA		
	0-10V	NA		
	AstroDIM	NA		
	Dimming range	NA		
	Dimming type	NA		
	Sourc/sink current	NA		
	Control method	NA		
	Galvanic isolation from output circuits	NA		
	Galvanic isolation from input circuits	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	90	°C	
	Max. case temp. in fault condition	120	°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	50'000 100'000	h	$t_c = 80^\circ\text{C}$ with max. 10% failure rate @ 220...240V input $t_c = 70^\circ\text{C}$, with max. 10% failure rate
	Dimensions	188 x 60 x 35	mm	
Weight	720	g		

Protections

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

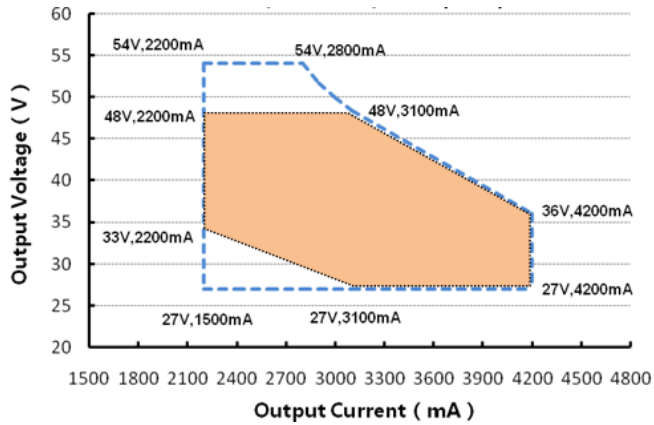
See remarks on page 5.

Wiring Diagram

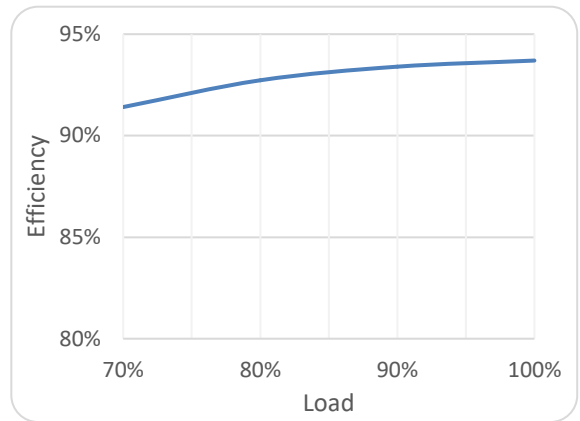


	Item	Value	Unit	Remarks
INPUT	Cable cross section	1.0	mm ²	L (Brown/BN), N (Blue/BU), PE(Green/Yellow, GNYE)
	Wire preparation length	10	mm	
	Type of wire	Flexible three core cable		
	Lead length	500 ± 20	mm	
OUTPUT	Cable cross section	1.0	mm ²	LED+ (Brown/BN), LED- (Blue/BU)
	Wire preparation length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

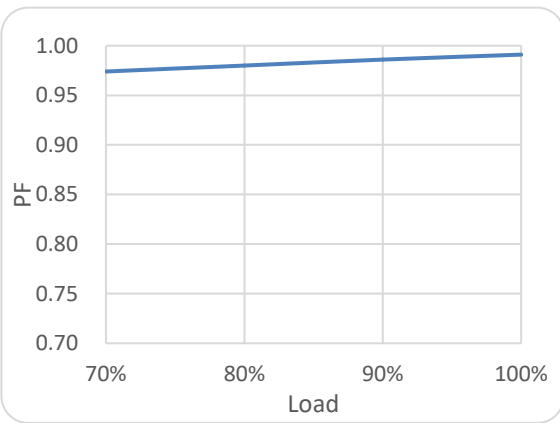
[1] Typical Operation Window



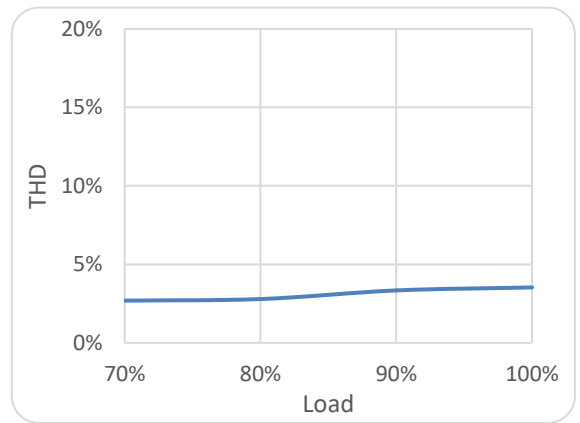
[2] Typical Efficiency vs. Load



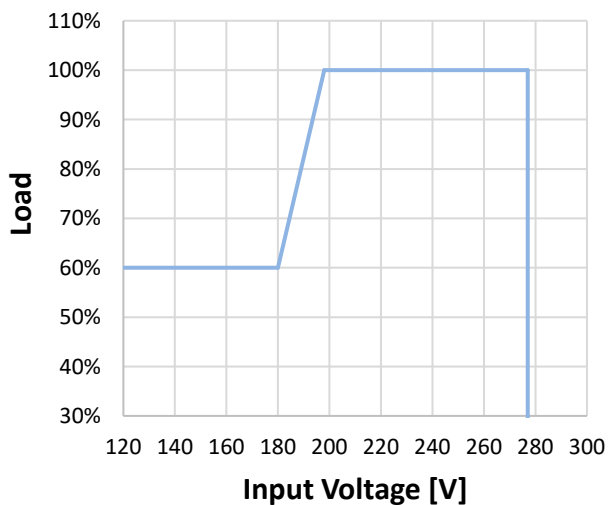
[3] Typical Power Factor vs. Load



[4] Typical THD vs. Load



[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 [5] 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
 EN 60598-1(ED.8)
 EN 62384

Product name	EAN10	EAN40	Pieces / box
OT 150/220-240/4A2 P7	4062172087193	4062172087209	

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