

OPTOTRONIC®
OT 45/220-240/700 LTCS
700mA Constant Current LED Power Supply
with **LEDset** and DIPswitch

Technical
Information
Edition: Sept 2011
subject to change

Technical data

Reference:	OT 45/220-240/700 LTCS
For LED modules:	350 - 700 mA LED
Nominal Voltage:	220 – 240 V _{AC}
Line Current, nominal:	230 mA @ 230V
Mains Frequency:	50/60 Hz
Protection Class:	II
Output Current:	100 - 700 mA _{DC}
(Remark)	+/- 5% (350-700mA)
Output voltage:	38 - 120 V _{DC}
(Remark)	maximum 120V _{DC}
Interface:	LEDset and DIPswitch
Output Power:	45 W
(Remark)	Partial Load 11W .. 45W, see load diagramm
Rated Power factor:	> 0,95 (full load) @ 230V > 0,85 (half load) @ 230V
Power Loss:	6 W max.
ECG efficiency:	89%
(Remark)	full load at 230V
Power Loss in standby mode	< 1,5 W
(Remark):	LEDset turned off
Input Voltage:	195 – 264 VAC
(Remark)	Permitted voltage range
DC Voltage:	No
Internal Control	LEDset and DIPswitch
No-load proof:	Yes
Hot plug functionality:	Yes
(Remark)	Max turn-on delay after hot-plug = 25s
Short circuit protection:	Automatic, reversible
Overload protection:	Automatic, reversible
Overtemperature protection:	Automatic, reversible
Ambient temperature range, t _a :	-25 °C to +50 °C
Max. case temperature at t _c point:	90 °C
ECG Lifetime:	50.000h
(Remark)	at t _{case} = 80 °C at t _c point and 10% failure rate
Maximum casing temperature in case of fault	110°C

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Inrush current: (Remark)	8 A $t_{width} = 55 \mu s$ (measured at 50% I _{peak})
Max. no. of ECG @ circuit breakers 10 A (B type):	40
Max. no. of ECG @ circuit breakers 16 A (B type):	60
Max. no. of ECG @ circuit breakers 16 A (B type): in combination with EBN-OS	60
Terminal:	Mains (grey) Functional earth (grey) LEDset (grey [GNDset], purple [Vset], blue [+12Vset]) LEDModule ([+] red/ [-] black)
Cable cross section input side (Remark)	0,2 mm ² – 1,5 mm ² Solid and flexible
Wire preparation length Input side:	8,5 – 9,5 mm
Cable cross section output side: (Remark)	0,2 mm ² – 1,5 mm ² Solid and flexible, LEDset only 0,2mm ² – 0,5mm ²
Wire preparation length output side:	8,5 – 9,5 mm
Max. cable length - system:	2 m
Geometry (l x b x h):	123 x 79 x 33 mm (K3)
Weight:	240 g
IP Code: (Remark)	IP20
Safety:	IEC 61347-1, IEC 61347-2-13
Performance:	IEC 62384
Radio interference:	EN 55015:2006+A1:2007+A2:2009
Harmonic content:	IEC 61000-3-2
Immunity:	IEC 61547:1995+A1:2000
Surge capability:	L-N: 1kV, L/N – Functional Earth: 2kV
Galvanic isolation primary/secondary : (Remark)	3,75 kVrms SELV-equivalent
Approvals:	 ,in preparation  

Remark:

An optional cable clamp is available. This cable clamp can be snapped onto the ECG and thus converts it into an ECG suitable for independent installation. Suitable cables are listed in cable clamp datasheet.

	EAN 10 (1 pc)	EAN 40 (10 pcs)
QT Cable Clamp K3	4008321190741	4008321190758
OTp Cable Clamp	4008321966155	4008321966162

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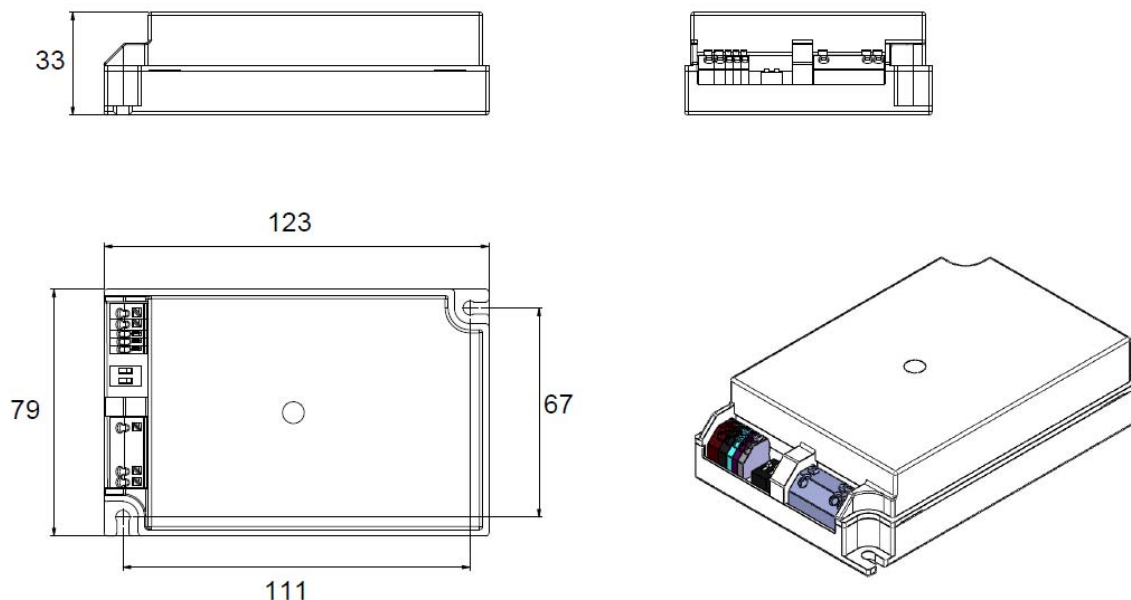
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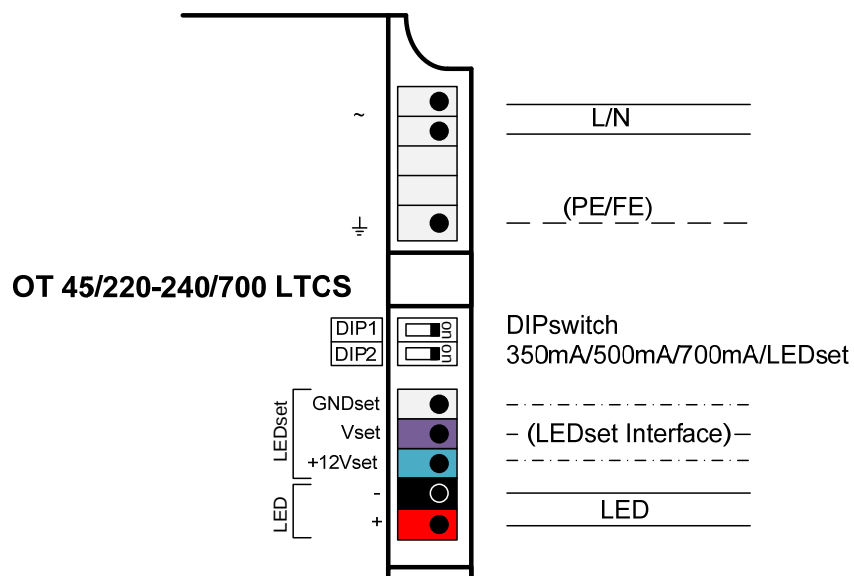
Geometry



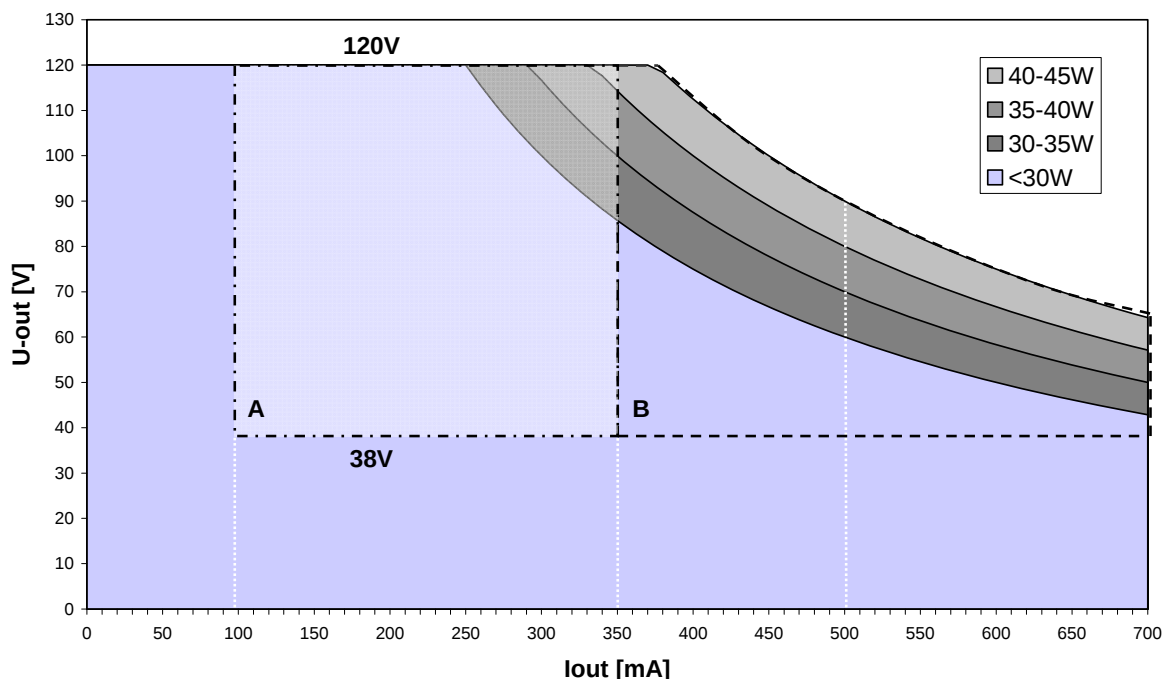
Ordering information

	EAN 10 (1 pc)	EAN 40 (20 pcs)
OT 45/220-240/700 LTCS	4008321664433	4008321664440

Wiring diagram



Output Characteristics



[B] Nominal Operating Range, [A] + [B] LEDset Current Range

DIPswitch

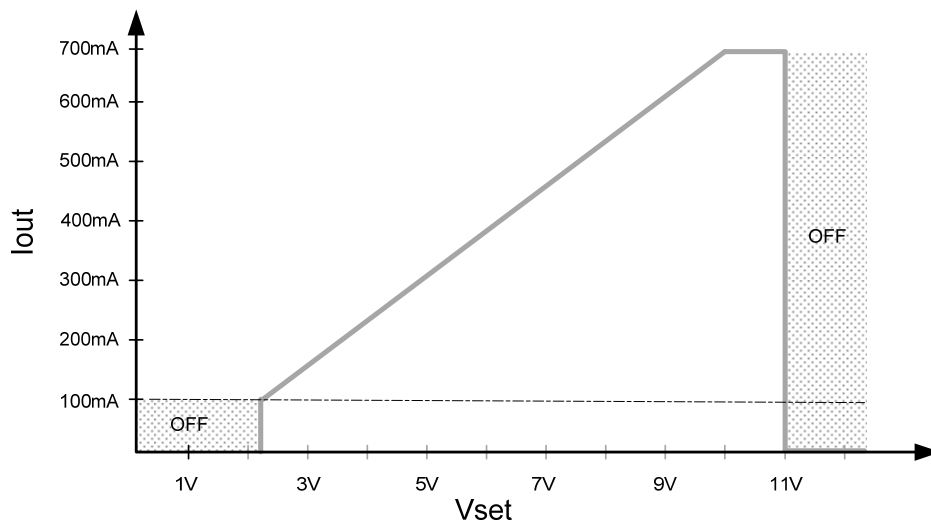
DIP1	DIP2	Current
Off	Off	LEDset
Off	On	700mA
On	Off	500mA
On	On	350mA

LEDset interface

LEDset allows to control the output current of the control gear (ref. to LEDset application note). The input voltage of the Vset pin defines the output current relative to the maximum nominal current of the control gear. LEDset interface is not isolated to the secondary side of the LED driver output.

+12Vset	Auxiliary supply 12V +/-10%, 15mA max.
Vset	Signal input, included current source 274µA 0V < Vset < 12V +10%
GNDset	Reference ground for +12Vset and Vset

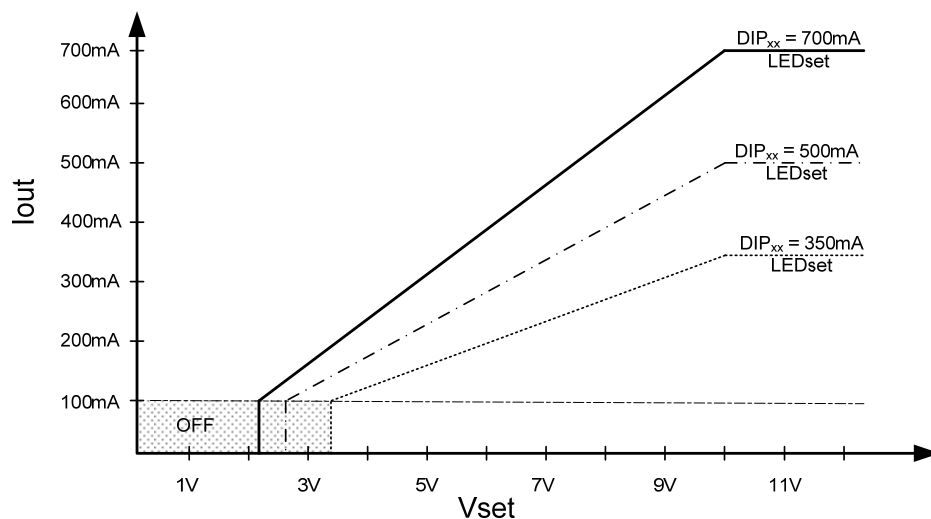
The relation between input voltage and output current is as following:

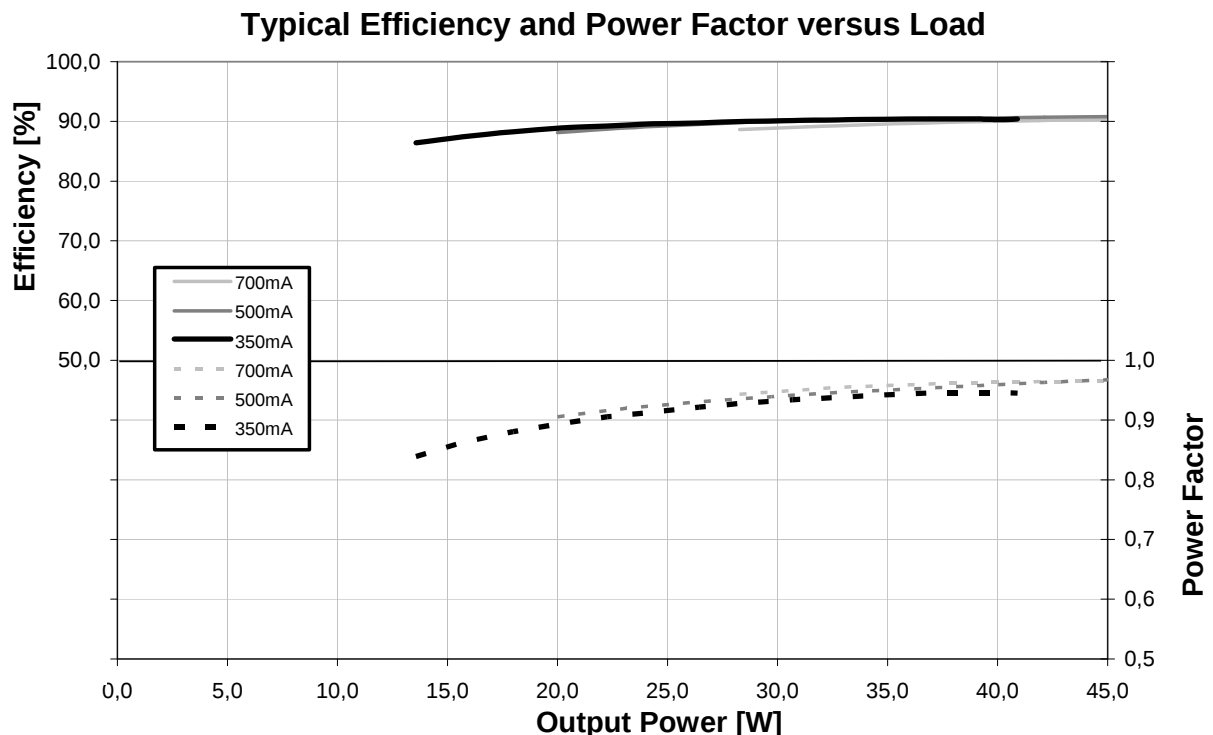


Output current relative to the nominal current
 $I_{out} [\% \text{ of } I_{max}] = (V_{set} - 1V) / (10V - 1V)$ between I_{min} and I_{max}

LEDset and DIPswitch

The output current could also be set in combination with the DIPswitch current pre-selection (350, 500 and 700mA) and the LEDset interface. In this three operation modes the ECG does not switch off as soon as V_{set} exceeds 11V.





Earth connection

Earth connection is not required but may be used to improve EMI performance of the installation

Wrong wiring

This control gear is inherently protected against wrong wiring. The wrong connections between LED+ with Vset and GNDset could damage irreversibly the ECG. All the other wrong wirings on the secondary side, once removed, make the ECG work regularly. LED- and GNDset terminals cannot be connected together.

Installation notes

The luminaire manufacturer is responsible for providing the required clearances and creepage distances and also for the protection against electrical shock, especially for the line and load wires according EN 60598.

Instruction sheet

Please consult the instruction sheet for further important information on e.g. wire stripping and wiring limitations in system installations. The instruction sheet is enclosed with the device or available upon request.