

OT Wi 160/220-240/24 2CH CA

24 V Multi-channel Constant Voltage LED driver
CASAMBI Dimmable range 0/0,4% - 100%

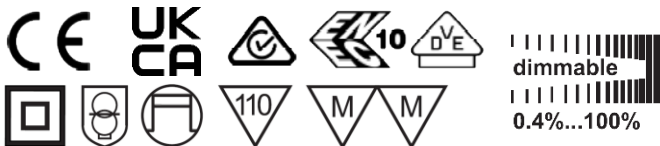
Benefits

Long lasting and high reliability.
High efficiency in slim form factor.
2 independent channels.
Patented flicker-free dimming.
Wireless controlled.

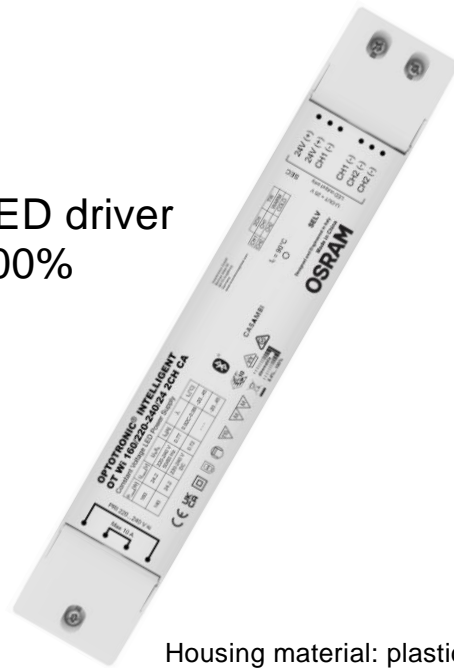
Applications

Hospitality, cove lighting, shops,
stretch ceilings.
Suitable for indoor CLASS I and CLASS II luminaires.

Approvals



When not printed on product label, they are under evaluation.



Housing material: plastic, white

* Image for information purpose only

L	300 mm	Total length
B	50 mm	Width
H	35 mm	Height



Product Features

- 24 V constant output voltage
- CASAMBI controlled
- SELV, U_{out}: 24,2 V
- 2 independent output channels
- Minimum dimming level 0,4%
- High efficiency up to 93%
- PF 0,99 at full load
- Screw terminals
- Overload protection
- Over temperature protection
- Short circuit protection
- Class II independent housing
- Output wire length up to 50 m
- t_a range -20... +45 °C
- Up to 50'000 h lifetime at t_c max
- 5 Year guarantee

Electrical specifications

	Item	Value	Unit	Remarks / Condition
INPUT	Nominal line voltage	220 – 240	V	
	Mains line frequency	0 / 50 / 60	Hz	
	AC voltage range	198 – 264	V	Max 350 V for 2 h. Auto switch off >280 V _{ac}
	DC voltage range	176 – 276	V	
	Nominal current	0,77	A	Typical @ Full load, 230 Vac, 50 Hz
	Total Harmonic Distortion (THD)	< 5	%	Full load, 230 V _{ac} , 50 Hz, 3 % typ. See graphs
	Power factor λ	> 0,98		Full load, 230 V _{ac} , 50 Hz, 0,99 typ. See graphs
	Efficiency in full load	93	%	Typical, Full load, 230 V _{ac} , 50 Hz, see graphs
	Device power loss	11	W	Full load, 230 Vac, 50 Hz, Typical
	Networked stand-by power	< 0,30	W	230 V _{ac} , 50 Hz. Typical 240 mW
	Protection class	II		
	Suitable for fixtures with prot. Class	I / II		
	Inrush current	57	A _{pk}	Full Load, 230 V _{ac} , Cold Start Duration = 280 μs 50 % / 50 % I _{pk}
	Max. units per circuit breaker:			
	Max. ECG no. on circuit breaker 10 A (B)	4		B-Type is underusing thermal protection
	Max. ECG no. on circuit breaker 16 A (B)	7		
	Max. ECG no. on circuit breaker 25 A (B)	12		
	Max. ECG no. on circuit breaker 10 A (C)	8		C-Type is the preferable MCB choice
Max. ECG no. on circuit breaker 16 A (C)	13			
Max. ECG no. on circuit breaker 25 A (C)	20			
Max. ECG no. on circuit breaker 10 A (D)	9		D-Type is underusing short-circuit protection	
Max. ECG no. on circuit breaker 16 A (D)	14			
OUTPUT	Nominal voltage	24,2	V	
	Voltage accuracy	± 3	%	
	Voltage ripple	< 1	V _{pp}	@ 100 Hz, full load. Typical < 500 mV _{pp}
	Nominal output power	0 – 160	W	Power factor, harmonics and EMI guaranteed between 60 – 160 W
	Max output power in AC (at steady state)	160	W	Smart Power to manage up to P _{out_max} + 25 %
	Max output power in DC (at steady state)	140	W	
	Galvanic isolation	SELV		When using for PELV, do connect the “+” to PE
DIMMING	Dimming interface	CASAMBI		Via Bluetooth Low Energy
	Dimming range	0,4 – 100	%	
	Dimming method	PWM		Average PWM frequency: 2 kHz
	TLA (Flicker and strobe effects)	P _{ST} < 1 SVM < 0,4	-	For every dimming condition (n.a. < 1 %) Extended SVM metrics (10 kHz).
ENVIRONMENTAL	Ambient temperature range	-20...+45	°C	
	Max. temperature at tc test point	90	°C	Measured on tc point of the housing stamp, ta not exceeded
	Max. case temperature in fault condition	115	°C	
	Storage temperature range	-25...+85	°C	
	Permitted rel. humidity during operation	5 – 85	%	Not condensing
	Surge capability	1	kV	L to N according to EN 61547
		2		L+N to GND plane
	Environmental rating	Indoor		
	IP protection class	IP 20		
	Mains switching cycles	> 200000	cycles	@ ta = 25 °C
	Expected ECG lifetime	50000	h	@ tc 90 °C – 0,2 % / 1000 h failure rate
		50000	h	@ tc 85 °C – 0,1 % / 1000 h failure rate
	Intended for no-load operation	No		
	Overheating protection	Yes		Auto recovery
Overload protection	Yes		Auto recovery + Smart Power	
Short-circuit protection	Yes		Auto recovery	

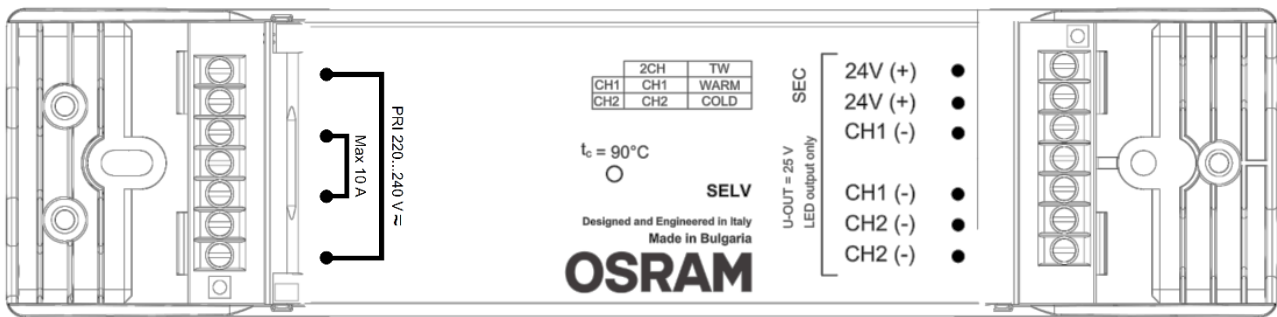
	Item	Value	Unit	Remarks / Condition
DIMENSIONS	Height	35	mm	
	Length	300	mm	Overall including fixing brackets
	Width	50	mm	
	Weight	380	g	
	Mounting holes interaxis	258	mm	
	Casing material	Plastic		White
	Type of connection	Screw terminals		0,5 – 2,5 mm ²
	Wire preparation length	6	mm	Input and output terminals

Protection

Over temperature, Overload, Short-circuit, Input overvoltage, Output overvoltage. Reversible.

Full load on one-channel-only operation is allowed.

Wiring



- Input wires cross section: 0,5 – 2,5 mm². Screwdriver tip size: 3,2 mm
- Output wires cross section 0,5 – 2,5 mm². Screwdriver tip size: 3,2 mm
- Wire peeling length: input 6 mm, output 6 mm

LED wire length

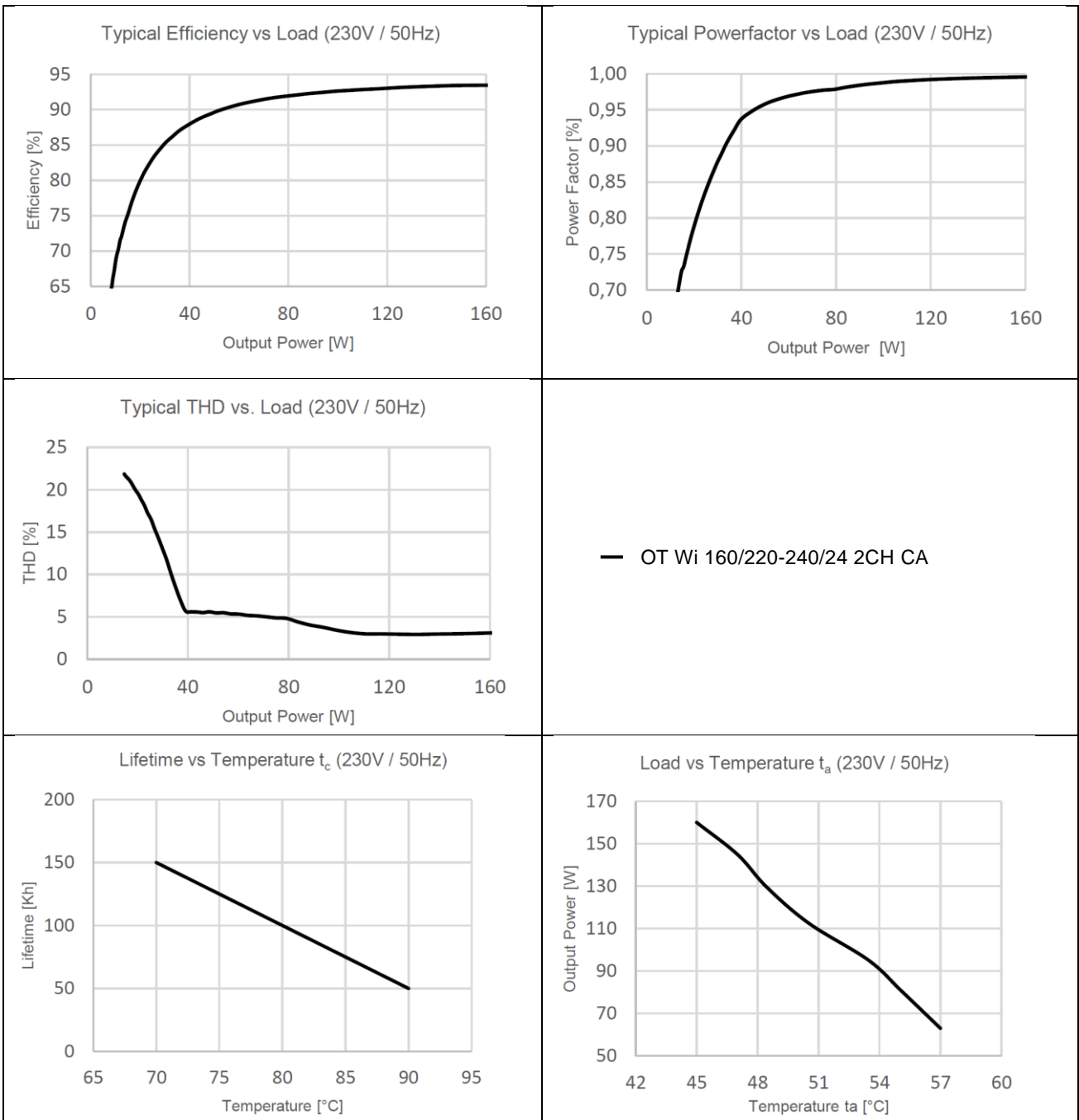
The wire length from the ECG to the LED module can reach 50 m with verified EMI compliance.

Below matrix shows the maximum LED load power according to cable length and section, at 25 °C.

The proper wire section will ensure that the LED module input voltage is at least 23 V in the single-load worst case condition.

V _{out} 24,2 V / nominal 160 W			Cable length [m]						
	AWG	mm ²	5	10	20	30	40	50	
Cable section	17	1	156	78	39	26	19	16	
	16	1,5	160	116	58	39	29	23	
	14	2,5	160	160	96	64	48	39	
	12	4	160	160	154	103	77	62	
	10	6	160	160	160	155	116	93	
	8	10	160	160	160	160	160	154	

Values are indicative. Each connection may increase total voltage drop.



Antenna location

Bluetooth antenna is located nearby the circle below.



Remarks

- **Product performances below minimal load condition:** the output power is still generated if the total load is below the minimum output power of 60 W (on single channel or distributed in different channels), without any safety risk, but performances regarding THD, EMI, etc. are not guaranteed. See typical operation window graph for details.
- **Output short circuit protection:** the short circuit current is limited without damaging the unit. The short circuit protection is self-restoring.
- **Output overload protection:** in case of overload (< 125 %), the device automatically dims down the output to keep the average power within 160 W and let the LED load warm-up. When the load exceeds the 125 % of maximum nominal output power, the LED load will blink to manifest a fault condition, till the short circuit limit (> 200%).
- **Input over voltage protection:** the ECG is capable of having input of max 350 V for 2 hours. To prevent damages to the unit, driver performs auto switch off when input voltage is > 280 V_{ac}, therefore driver operation in this abnormal condition is not guaranteed. The over voltage protection is self-restoring.
- **No load operation:** do not put a switch between ECG and load.
- **Over temperature protection:** the driver is protected against temporary overheating, so it automatically dims down when t_c is exceeded, and eventually turns off. The protection is self-restoring.
- **Ecodesign regulation information:**
Intended for use with LED modules. The forward voltage of the LED light source shall be within the defined operating window of the control gear in all operating conditions including dimming if applicable.
Separate control gear and light sources must be disposed of at certified disposal companies in accordance with Directive 2012/19/EU (WEEE) in the EU and with Waste Electrical and Electronic Equipment (WEEE) Regulations 2013 in the UK. For this purpose, collection points for recycling centres and take-back systems (CRSO) are available from retailers or private disposal companies, which accept separate control gear and light sources free of charge. In this way, raw materials are conserved and materials are recycled.
- **Download CASAMBI App from App store or Google play.** For the correct functioning of the CASAMBI App refer to the CASAMBI website: <http://www.casambi.com>.
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Standards

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

Ordering information

Product name	EAN 10	EAN 40	Pieces / Box
OT Wi 160/220-240/24 2CH CA	4052899632042	4052899632073	20

Accessories



EASYFIT EWSDB by EnOcean
 4062172082044



EASYFIT EWSSB by EnOcean
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