

OT Wi 50/220-240/24 4CH CA OT Wi 80/220-240/24 4CH CA

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

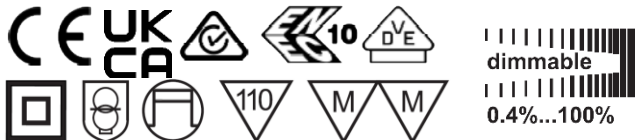
Benefits

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

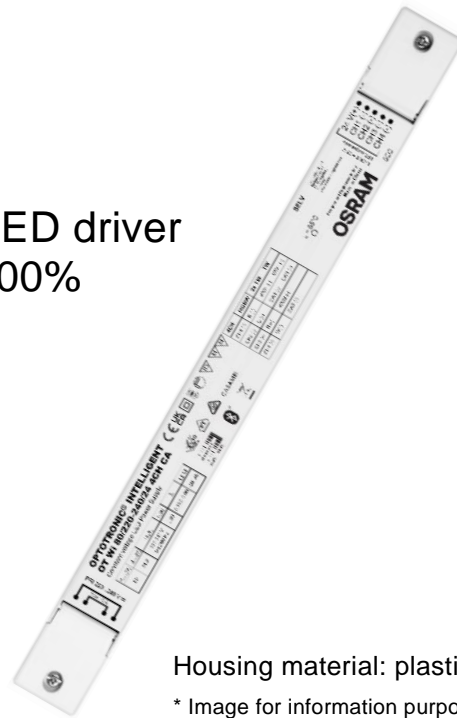
Applications

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	346 mm	Total length
B	32 mm	Width
H	22 mm	Height



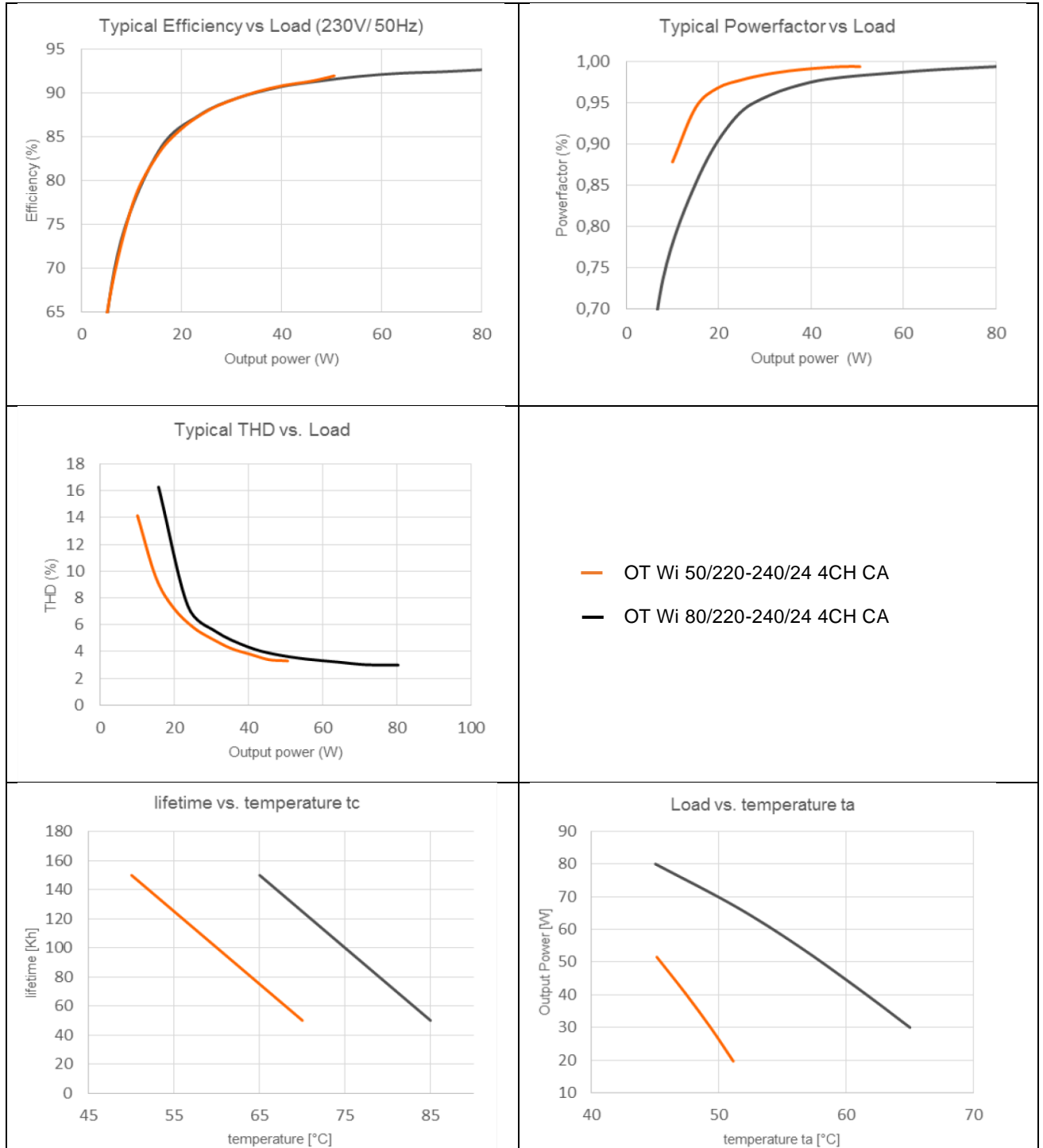
Product Features

- 24 V constant output voltage
- CASAMBI controlled
- SELV, U_{out}: 24,2 V
- 4 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 100'000 h lifetime at t_c max -10 °C
- 5 Year guarantee

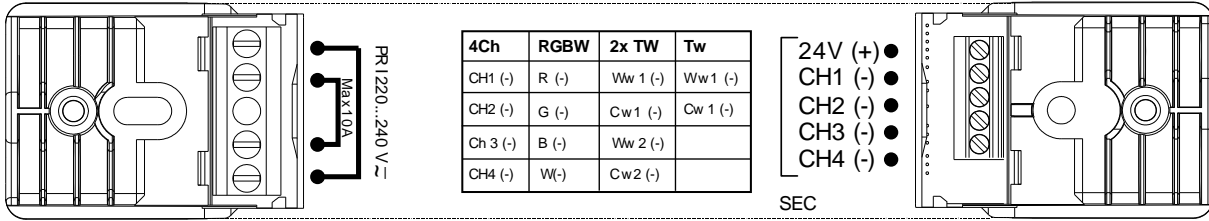
Electrical specifications

	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	50 W: 0,24 80 W: 0,39	A	Typical @ full load, 230 V _{ac} , 50 Hz
	Total Harmonic Distortion (THD)	< 5	%	Full load, 230 V _{ac} , 50 Hz, 3 % typ. See graphs
	Power factor λ	50 W: 0.82-0.99 80 W: 0.95-0.99		Full load, 230 V _{ac} , 50 Hz, 0,99 typ. See graphs
	Efficiency in full load	50 W: 92 80 W: 93	%	Typical, Full load, 230 V _{ac} , 50 Hz, see graphs
	Device power loss	50 W: 4 80 W: 6	W	Full load, 230 V _{ac} , 50 Hz, Typical
	Networked stand-by power	< 0,30	W	230 Vac, 50 Hz. Typical 240 mW
	Protection Class	II		
	Suitable for fixtures with prot. Class	I / II		
	Inrush current	50 W: 41 A _{pk} / 150 μ s 80 W: 46 A _{pk} / 190 μ s		Full Load, 240 V _{ac} , Cold Start Duration = 50 % / 50 % I _{pk}
	Max. units per circuit breaker:	50 W 80 W	Model	
	Max. ECG no. on circuit breaker 10 A (B)	13 9		B-Type is underusing thermal protection
	Max. ECG no. on circuit breaker 16 A (B)	21 15		
	Max. ECG no. on circuit breaker 25 A (B)	33 23		
	Max. ECG no. on circuit breaker 10 A (C)	22 15		C-Type is the preferable MCB choice
Max. ECG no. on circuit breaker 16 A (C)	36 25			
Max. ECG no. on circuit breaker 25 A (C)	56 39			
Max. ECG no. on circuit breaker 10 A (D)	29 17		D-Type is underusing short-circuit protection	
Max. ECG no. on circuit breaker 16 A (D)	46 28			
OUTPUT	Nominal voltage	24,2	V	
	Voltage accuracy	\pm 2	%	
	Voltage ripple	< 1	V _{pp}	@ 100 Hz, full load. Typical < 500 mV _{pp}
	Nominal output power	50 W: 0 – 50 80 W: 0 – 80	W	Power factor, harmonics and EMI guaranteed between: 50 W: 18 – 50 80 W: 30 – 80
	Maximum output power (at steady state)	50 W: 50 80 W: 80	W	Smart Power to manage up to P _{out_max} + 25% Full load on one channel only is allowed
	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 t _c test point	50 W: 70 80 W: 85	°C	Measured on t _c point of the housing stamp, t _a not exceeded
	Max. case temperature in fault condition	115	°C	
	Storage temperature range	-40...+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	> 100000	cycles	
	Expected ECG lifetime	30000	h	@ t _a = 45 °C, t _c MAX and 10 % failure rate, always ON
		50000	h	@ t _a = 45 °C, t _c MAX and 10 % failure rate, 14 h ON and 10 h stand-by per day
		100000	h	@ t _c -10 °C and 10 % failure rate, 14 h ON and 10 h stand-by per day
	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	22	mm	
	Length	346	mm	Overall including fixing brackets
	Width	32	mm	
	Weight	191	g	
	Mounting holes interaxis	303	mm	
	Casing material	Plastic		White
	Type of connection	Screw terminals		0,75 – 2,5 mm ² Input / 0,2 – 1,5 mm ² Output
	Wire preparation length	6 / 5	mm	Input / Output terminals



Wiring



– Input wires cross section: 0,75 – 2,5 mm².

Screwdriver tip size: 3,5 mm

Recommended cable types:

- NYM-J 3x1,5
- H05 VV-F 3x1,5
- H05 VV-F 3x1
- H05 VV-F 2x1
- H05 VV-F 3x0,75
- H03 VV-F 3x0,75

Remark: input through loop max current

limitation according to cable cross section:

0,75 mm ² :	1,0 mm ² :	1,5 mm ² :
4 A	6 A	10 A

– Wire peeling: input 6 mm, output 5 mm

– Output wires cross section 0,2 – 1,5 mm².

Screwdriver tip size: 2,5 mm

Recommended cable types:

- NYM-J 5x1,5
- NYM-J 4x1,5
- NYM-J 3x1,5
- H05 VV-F 3x1,5
- H05 VV-F 3x1
- H05 VV-F 2x1
- H05 VV-F 3x0,75
- H03 VV-F 3x0,75

LED wire length

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

Below matrixes show 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 condition.

V _{out} 24,2 V / nominal 50 W			Cable length [m]					
	AWG	mm ²	5	10	20	30	40	50
Cable section	18	0,75	50 W	50 W	29 W	19 W	15 W	12 W
	17	1	50 W	50 W	39 W	26 W	19 W	16 W
	16	1,5	50 W	50 W	50 W	39 W	29 W	23 W
	14	2,5	50 W	50 W	50 W	50 W	48 W	39 W
	12	4	50 W	50 W	50 W	50 W	50 W	50 W

V _{out} 24,2 V / nominal 80 W			Cable length [m]					
	AWG	mm ²	5	10	20	30	40	50
Cable section	18	0,75	80 W	58 W	29 W	19 W	15 W	12 W
	17	1	80 W	78 W	39 W	26 W	19 W	16 W
	16	1,5	80 W	80 W	58 W	39 W	29 W	23 W
	14	2,5	80 W	80 W	80 W	64 W	48 W	39 W
	12	4	80 W	80 W	80 W	80 W	77 W	62 W
	10	6	80 W	80 W	80 W	80 W	80 W	80 W

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

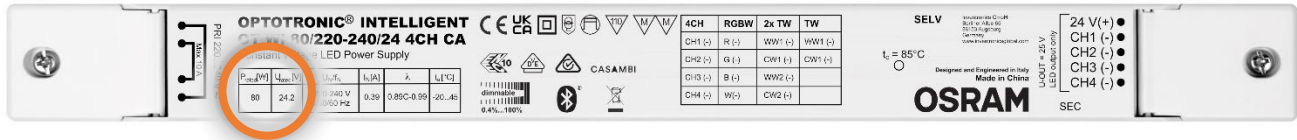
Protection

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

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

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 (18 W for OT Wi 50 and 30 W for OT Wi 80, 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 50 W (for OT Wi 50) or 80 W (for OT Wi 80) 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.
- **Intended for use with LED modules only.** Separated 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 centers 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.
- **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 Store.** For the correct operation of the CASAMBI App refer to the CASAMBI website: <http://www.casambi.com>.
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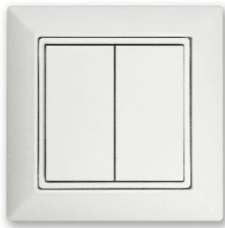
Standards

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 50/220-240/24 4CH CA	4052899632066	4052899632097	20
OT Wi 80/220-240/24 4CH CA	4052899632059	4052899632080	20

Accessories



EASYFIT EWSDB by EnOcean
4062172082044



EASYFIT EWSSB by EnOcean
4062172082068

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