

PRODUCT FAMILY DATASHEET

OT 2DIM IP64 Outdoor

0...10 V, AstroDIM – constant current LED drivers



AREAS OF APPLICATION

- Street and urban lighting
- Industry
- Suitable for luminaires of protection classes I and II

PRODUCT FAMILY BENEFITS

- 2DIM functionality in one device (AstroDIM, 0...10 V)
- High surge protection: up to 6 kV (in protection class I or II)
- Fast programming without mains voltage
- High efficiency
- Great flexibility due to wide operating temperature range of -40...55 °C
- Protection through double isolation between mains input and LED output
- IP rating: IP64

PRODUCT FAMILY FEATURES

- Available with different wattage: 50 W, 100 W, 110 W
- Input voltage: 120...277 V
- Available with output current range: up to 1,400 mA
- Flexible current setting with one additional wire (LEDset2)
- AstroDIM for autonomous dimming with five independent levels (astro mode)
- Isolated 0...10 V interface for unidirectional telemanagement systems
- Constant Lumen Output (CLO)
- Overtemperature protection with external NTC or LEDset2 interface

TECHNICAL DATA

Electrical data

Product description	Nominal voltage	Input voltage AC	Mains frequency	Power factor λ	Device power loss	Inrush current	Max. ECG no. on circuit breaker 10 A (B)
OT 50/120...277/800 2DIMLT2 P ¹⁾	120...277 V	108...305 V ²⁾	50...60 Hz	0.95/0.90 ³⁾	10 W ⁴⁾	30 A ⁵⁾	11 ⁶⁾
OT 50/120...277/1A2 2DIMLT2 P ¹⁾	120...277 V	108...305 V ²⁾	50...60 Hz	0.95/0.90 ³⁾	9.6 W ⁴⁾	30 A ⁵⁾	11 ⁶⁾
OT 100/120...277/800 2DIMLT2 P ¹⁾	120...277 V	108...305 V ²⁾	50...60 Hz	0.95/0.90 ³⁾	14 W ⁴⁾	55 A ¹⁰⁾	6 ⁶⁾
OT 110/120...277/1A4 2DIMLT2 P ¹⁾	120...277 V	108...305 V ²⁾	50...60 Hz	0.95/0.90 ³⁾	15.0 W ⁴⁾	55 A ¹⁰⁾	6 ⁶⁾

Product description	Max. ECG no. on circuit breaker 16 A (B)	Max. ECG no. on circuit breaker 25 A (B)	Surge capability (L/N-Ground)	Surge capability (L-N)	ECG efficiency
OT 50/120...277/800 2DIMLT2 P ¹⁾	17 ⁶⁾	28 ⁶⁾	6 kV ⁷⁾	6 kV ⁸⁾	86 % ⁹⁾
OT 50/120...277/1A2 2DIMLT2 P ¹⁾	17 ⁶⁾	28 ⁶⁾	6 kV ⁷⁾	6 kV ⁸⁾	86 % ⁹⁾
OT 100/120...277/800 2DIMLT2 P ¹⁾	10 ⁶⁾	16 ⁶⁾	6 kV ⁷⁾	6 kV ⁸⁾	90 % ⁹⁾
OT 110/120...277/1A4 2DIMLT2 P ¹⁾	10 ⁶⁾	16 ⁶⁾	6 kV ⁷⁾	6 kV ⁸⁾	90 % ⁹⁾

Product description	Nominal output voltage
OT 50/120...277/800 2DIMLT2 P ¹⁾	30...115 V
OT 50/120...277/1A2 2DIMLT2 P ¹⁾	20...55 V
OT 100/120...277/800 2DIMLT2 P ¹⁾	50...186 V
OT 110/120...277/1A4 2DIMLT2 P ¹⁾	35...85 V

¹⁾ No on/off switching of lamps possible via 0...10 V interface

²⁾ Permitted voltage range

³⁾ Minimum/Full load at 230 V/Half load at 230 V

⁴⁾ Maximum

⁵⁾ $t_{width} = 250 \mu s$ (measured at 50 % I_{peak})

⁶⁾ Type B

⁷⁾ EQUI @ 12 Ohm acc. to EN 61547

⁸⁾ @ 2 Ohm, acc. to EN61547

⁹⁾ At full load, default current and 230 V

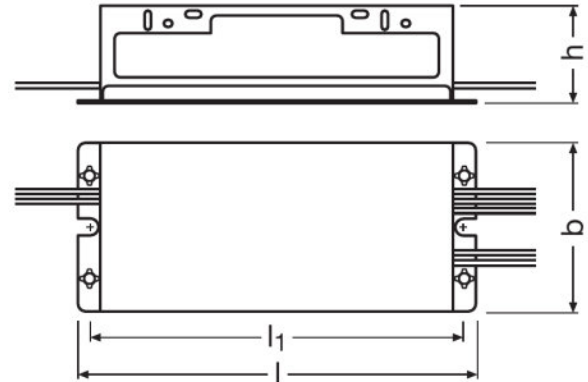
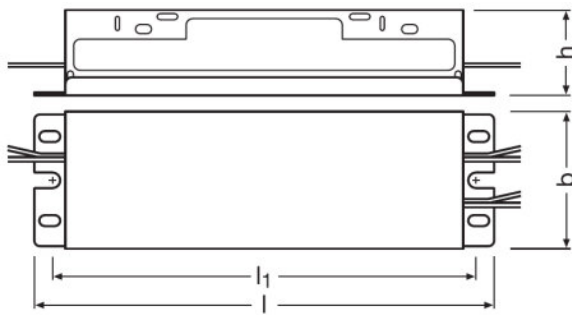
¹⁰⁾ $t_{width} = 230 \mu s$ (measured at 50 % I_{peak})

Dimensions & weight

Product description	Length	Width	Height	Wire preparation length, input side
OT 50/120...277/800 2DIMLT2 P ¹⁾	168.0 mm	50.0 mm	30.0 mm	
OT 50/120...277/1A2 2DIMLT2 P ¹⁾	168.0 mm	50.0 mm	30.0 mm	10 mm
OT 100/120...277/800 2DIMLT2 P ¹⁾	168.0 mm	68.0 mm	38.0 mm	
OT 110/120...277/1A4 2DIMLT2 P ¹⁾	168.0 mm	68.0 mm	38.0 mm	10 mm

¹⁾ No on/off switching of lamps possible via 0...10 V interface

Product line drawing



OT 50/120...277/800 2DIMLT2 P, OT 50/120...277/1A2 2DIMLT2 P

OT 100/120...277/800 2DIMLT2 P, OT 110/120...277/1A4 2DIMLT2 P

Temperatures & operating conditions

Product description	Ambient temperature range	Maximum temperature at tc test point	Max.housing temperature in case of fault	Permitted rel. humidity during operation
OT 50/120...277/800 2DIMLT2 P ¹⁾	-40...+55 °C	85 °C ²⁾	120 °C	5...85 % ³⁾
OT 50/120...277/1A2 2DIMLT2 P ¹⁾	-40...+55 °C	80 °C ²⁾	120 °C	5...85 % ³⁾
OT 100/120...277/800 2DIMLT2 P ¹⁾	-40...+55 °C	85 °C ²⁾	120 °C	5...85 % ³⁾
OT 110/120...277/1A4 2DIMLT2 P ¹⁾	-40...+55 °C	85 °C ²⁾	120 °C	5...85 % ³⁾

¹⁾ No on/off switching of lamps possible via 0...10 V interface

²⁾ Maximum at the Tc-point

³⁾ Non condensing, absolute humidity: 36g/m³

Lifespan

Product description	ECG lifetime
OT 50/120...277/800 2DIMLT2 P ¹⁾	80000 h ²⁾
OT 50/120...277/1A2 2DIMLT2 P ¹⁾	80000 h ³⁾
OT 100/120...277/800 2DIMLT2 P ¹⁾	80000 h ²⁾
OT 110/120...277/1A4 2DIMLT2 P ¹⁾	80000 h ²⁾

¹⁾ No on/off switching of lamps possible via 0...10 V interface

²⁾ At T_{case} = 75°C at T_c point / 10% failure rate

³⁾ At T_{case} = 70°C at T_c point / 10% failure rate

Expected Lifetime

Product name				
OT 50/120...277/800 2DIMLT2 P	ECG ambient temperature [ta]	55	45	40
	Temperature at tc-point [°C]	85	75	70
	Lifetime [h]	50000 ¹⁾	80000 ¹⁾	100000 ¹⁾
OT 50/120...277/1A2 2DIMLT2 P	ECG ambient temperature [ta]	55	45	40
	Temperature at tc-point [°C]	80	70	65
	Lifetime [h]	50000 ²⁾	80000 ²⁾	100000 ²⁾
OT 100/120...277/800 2DIMLT2 P	ECG ambient temperature [ta]	55	45	40
	Temperature at tc-point [°C]	85	75	70
	Lifetime [h]	50000 ³⁾	80000 ³⁾	100000 ³⁾
OT 110/120...277/1A4 2DIMLT2 P	ECG ambient temperature [ta]	55	45	40
	Temperature at tc-point [°C]	85	75	70
	Lifetime [h]	50000 ⁴⁾	80000 ⁴⁾	100000 ⁴⁾

- ¹⁾ Max. 10% failure rate at tc max and input voltage 230 V_{AC}
- ²⁾ Max. 10% failure rate at tc max and input voltage 230 V_{AC}
- ³⁾ Max. 10% failure rate at tc max and input voltage 230 V_{AC}
- ⁴⁾ Max. 10% failure rate at tc max and input voltage 230 V_{AC}

Capabilities

Product description	Dimmable	Overheating protection	Overload protection	Max. cable length to lamp/LED module
OT 50/120...277/800 2DIMLT2 P ¹⁾	Yes	Yes	Automatic reversible	10 m
OT 50/120...277/1A2 2DIMLT2 P ¹⁾	Yes	Yes	Automatic reversible	10 m
OT 100/120...277/800 2DIMLT2 P ¹⁾	Yes	Yes	Automatic reversible	10 m
OT 110/120...277/1A4 2DIMLT2 P ¹⁾	Yes	Yes	Automatic reversible	10 m

¹⁾ No on/off switching of lamps possible via 0...10 V interface

Certificates & standards

Product description	Type of protection	Standards
OT 50/120...277/800 2DIMLT2 P ¹⁾	IP64	Acc. to EN 61347-1/Acc. to EN 61347-2-13/Acc. to EN 62384/Acc. to EN 55015:2006 + A1:2007 + A2:2009/Acc. to EN 61547/Acc. to FCC 47 part 15 class A/Acc. to IEC 61000-3-2/Acc. to IEC 61000-3-3/UL-8750
OT 50/120...277/1A2 2DIMLT2 P ¹⁾	IP64	Acc. to EN 61347-1/Acc. to EN 61347-2-13/Acc. to EN 62384/Acc. to EN 55015:2006 + A1:2007 + A2:2009/Acc. to EN 61547/Acc. to FCC 47 part 15 class A/Acc. to IEC 61000-3-2/Acc. to IEC 61000-3-3/UL-8750
OT 100/120...277/800 2DIMLT2 P ¹⁾	IP64	Acc. to EN 61347/Acc. to EN 61347-2-13/Acc. to EN 62384/Acc. to EN 55015:2006 + A1:2007 + A2:2009/Acc. to EN 61547/Acc. to FCC 47 part 15 class A/Acc. to IEC 61000-3-2/Acc. to IEC 61000-3-3/UL-8750
OT 110/120...277/1A4 2DIMLT2 P ¹⁾	IP64	Acc. to EN 61347-1/Acc. to EN 61347-2-13/Acc. to EN 62384/Acc. to EN 55015:2006 + A1:2007 + A2:2009/Acc. to EN 61547/Acc. to FCC 47 part 15 class A/Acc. to IEC 61000-3-2/Acc. to IEC 61000-3-3/UL-8750

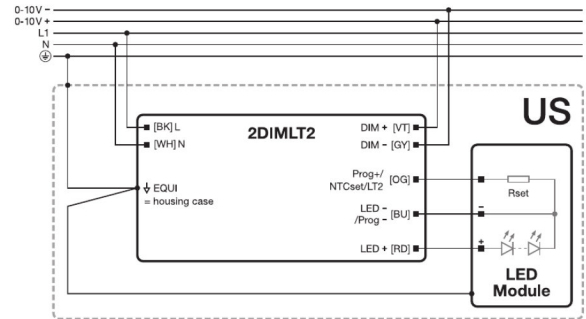
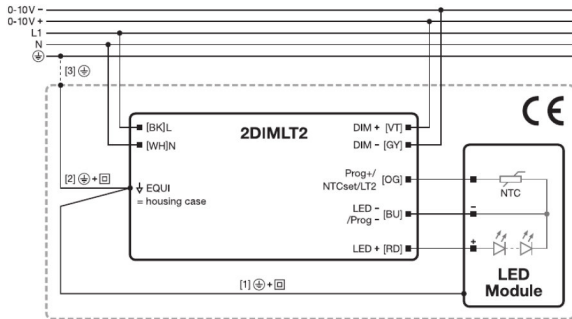
¹⁾ No on/off switching of lamps possible via 0...10 V interface

Logistical data

Product description	Temperature range at storage
OT 50/120...277/800 2DIMLT2 P ¹⁾	-25...80 °C
OT 50/120...277/1A2 2DIMLT2 P ¹⁾	-25...80 °C
OT 100/120...277/800 2DIMLT2 P ¹⁾	-25...80 °C
OT 110/120...277/1A4 2DIMLT2 P ¹⁾	-25...80 °C

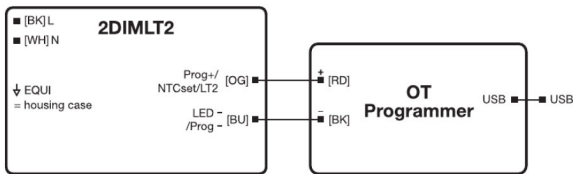
¹⁾ No on/off switching of lamps possible via 0...10 V interface

Wiring Diagram



OT 50/120...277/800 2DIMLT2 P, OT 50/120...277/1A2
2DIMLT2 P, OT 100/120...277/800 2DIMLT2 P, OT
110/120...277/1A4 2DIMLT2 P

OT 50/120...277/800 2DIMLT2 P, OT 50/120...277/1A2
2DIMLT2 P, OT 100/120...277/800 2DIMLT2 P, OT
110/120...277/1A4 2DIMLT2 P



OT 50/120...277/800 2DIMLT2 P, OT 50/120...277/1A2
2DIMLT2 P, OT 100/120...277/800 2DIMLT2 P, OT
110/120...277/1A4 2DIMLT2 P

EQUIPMENT / ACCESSORIES

- OT Programmer hardware for configuration of 2DIM ECGs necessary
- Programmable via Tuner4TRONIC software

APPLICATION ADVICE

For more detailed application information and graphics please see product datasheet.

ADDITIONAL PRODUCT INFORMATION

- 800 mA type: Default output current is 700 mA without any resistor connected to the LEDset port.
- 1250 mA type: Default output current is 1000 mA without any resistor connected to the LEDset port.
- 1400 mA type: Default output current is 1000 mA without any resistor connected to the LEDset port.
- The LEDset2 interface is disabled by default and needs to be activated by the programming software. In this case the LEDset2 interface is activated the external thermal protection feature is disabled.
- The driver withstands an input voltage of up to 350 Vac for a maximum of two hours.
- The driver may shut down the load if the input voltage of the load is below the allowed minimum output voltage until the short circuit is removed or the correct load is connected and a power off/on cycle is performed.
- In case the input voltage of the load exceeds the output voltage range of the driver, it automatically reduces the output current to keep the output voltage controlled to the maximum allowed output voltage.
- The driver automatically reduces the output current in case the maximum allowed output power is exceeded, as long as the input voltage of the load is within the declared output voltage range of the driver. In all other cases the driver may shut down the load.
- The driver may shut down in case no load is connected to the driver output until the correct load is connected and a power off/on cycle is performed. Hot-plug of the load or external switching on the secondary side is not allowed.
- The EQUI (housing) shall be connected to the heat sink of the LED module to improve the surge withstand capability of the system and EMI in critical luminaires.
- By default the LEDset / NTCset / Prog+ port is set as NTCset port in resistor based mode with following values: start derating: 6.3 kOhm, end derating 5.0 kOhm, derating level 50 %.
- The default dimming mode is 0...10 V, AstroDIM-PD is disabled.- 0...10 V: 30 % minimum dimming level
- The constant lumen feature is disabled by default.
- If any output level is below the physical min level, the physical min level will be used.
- Dimming down to 14 % of the maximum rated output current could be enabled through the programming software, but the compliance with EN 61000-3-2 must be checked below 30 %.
- The driver is intended for built-in use. The luminaire manufacturer is responsible to prevent direct exposure for example to sunlight, water, snow, ice.
- Time to reach the set output current upon start-up is less than 4 s.
- Programming of the driver via Prog+ and Prog- is only allowed without powering it via L/N.
- For further details please consult the 2DIMLT2 application guide.

SALES AND TECHNICAL SUPPORT

Sales and Technical Support www.ledvance.com

DOWNLOAD DATA

File

	Brochures 616680_Technical application guide 2DIMLT2 P LED drivers (GB)
	Certificates 617035_CCC Certificate OT 50120-277xxx 2DIMLT2 P
	Certificates 600316_CB certificate OT 50 2DIMLT2 E
	Certificates 600317_ENEC certificate OT 2DIMLT2 P
	Declarations of conformity 545682_EC-Conformity OT 50120-277xxx 2DIMLT2 P
	Declarations of conformity 725761_Certificate of analysis OT50
	Declarations of conformity 612485_UL Conformity OT 50120_277xxx 2DIMLT2 P
	Declarations of conformity 646953_CB ENEC Information
	Operating instructions 615705_Instruction sheet OT 50 800 2DIMLT2 P
	On-Pack-Info 615706_Instruction sheet OT 50 1A2 2DIMLT2 P
	Certificates 617033_CCC Certificate OT 100120-277800 2DIMLT2 P
	Certificates 664162_CB Zertifikat OT 100 800 2DIMLT2 P
	Declarations of conformity 725871_Certificate of analysis OT100
	Declarations of conformity 647100_ENEC Certificate OT 100 2DIMLT2 P
	Declarations of conformity 651655_UL Conformity OT 100_110120_277xxx 2DIMLT2 P
	On-Pack-Info 615707_Instruction sheet OT 100 800 2DIMLT2 P
	Certificates 617034_CCC Certificate OT 110120-2771A4 2DIMLT2 P
	Certificates 664161_CB Zertifikat OT 110 1A4 2DIMLT2 P
	Declarations of conformity 647099_ENEC Certificate OT 110 2DIMLT2 P
	On-Pack-Info 615708_Instruction sheet OT 110 1A4 2DIMLT2 P

LOGISTICAL DATA

Product code	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Gross weight	Volume
4052899173798	Shipping carton box 20	368 mm x 338 mm x 85 mm	10492.00 g	10.57 dm ³

Product code	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Gross weight	Volume
4052899173811	Shipping carton box 20	368 mm x 338 mm x 85 mm	10492.00 g	10.57 dm ³
4052899253421	Shipping carton box 20	358 mm x 188 mm x 220 mm	15346.00 g	14.81 dm ³
4052899253445	Shipping carton box 20	358 mm x 188 mm x 220 mm	15346.00 g	14.81 dm ³

The mentioned product code describes the smallest quantity unit which can be ordered. One shipping unit can contain one or more single products. When placing an order, for the quantity please enter single or multiples of a shipping unit.

DISCLAIMER

Subject to change without notice. Errors and omission excepted. Always make sure to use the most recent release.