

Technical Data

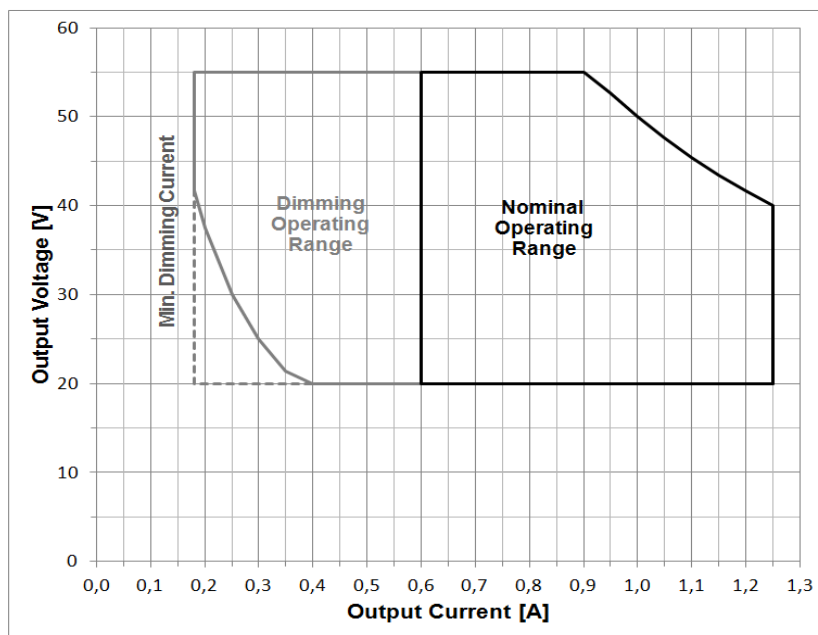
Nominal Input Voltage	220-240 V _{ac} 120/277 V _{ac}
Input Voltage (L/N)	108 – 305 V _{ac} ³⁾
Input Current	0,50A @ 120 V _{ac}
	0,26A @ 230 V _{ac}
Mains Frequency	50 / 60 Hz
Power Factor	≥ 0,95 @ 230 V _{ac}
Control Input / Dimming	0-10V / AstroDIM
0-10V Interface	< 1mA
Standby Power	No switch off possible
LED Interface	LEDset2 (LT2)
IP Rating	IP 64

Maximum Output Power P _{max}	50W @ 910-1250mA
Output Power Range	12 W – 50 W
Maximum Output Voltage U _{out}	60 V _{dc}
Rated Output Voltage	20 – 55 V _{dc} ¹⁾
Rated Output Current	600 – 1250 mA _{dc}
Rated Dimming Range	30 -100 %
Ambient Temperature	- 40°C to +55°C ²⁾
Max. Case Temperature at t _c	+ 80°C
Max. Cable Length (LED+/LED-)	10 m
Max. Cable Length (LT2/NTCset)	2 m
Version	AA68629

Remarks: 1) SELV
 2) 220-240 Vac: -40°C to +55°C and 120/277 Vac: -40°C to +50°C
 3) T_c < T_{c(max)}

Read latest datasheet and the related documents (e.g application notes) before using the unit.
The documents are available on the internet (www.osram.com).

Operating Window



General Notes

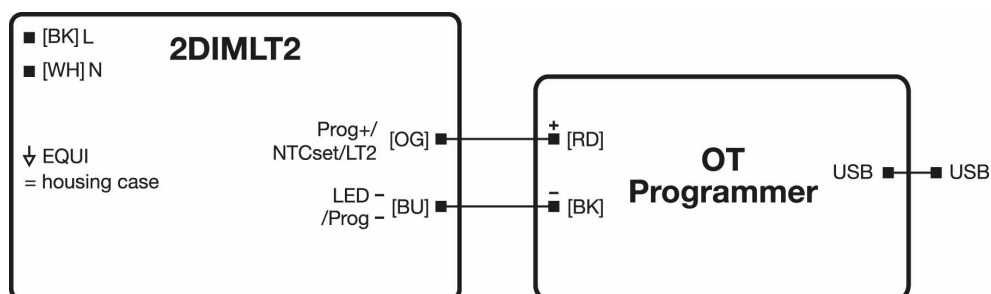
- The unit must be installed by a qualified electrician.
- Do not service the unit when the mains voltage is connected.
- Do not use damaged or defective contacts or housings.
- Do not use damaged units.
- The unit is intended for built-in use. The luminaire manufacturer is responsible to prevent direct exposure for example to sunlight, water, snow, ice.
- The luminaire manufacturer is responsible for its own luminaire design, this has to comply with all relevant safety standards.
- The maximum temperature should never exceed T_{c(max)} at the case temperature point (t_c).
- Cap off all unused wires to prevent accidental contact with other parts of the luminaire and driver.
- Programmed parameters needs to be verified before usage (see restrictions: 0-10V/AstroDIM Features).

Default Parameter Settings

Dimming Mode	0 -10 V
Output Current	1000 mA
Temperature Protection	Enabled; Resistor based; Start: 6,3 kOhm; End: 5,0 kOhm; Level 50%
Constant Lumen	OFF
Lamp Operating Time	0 khrs
End of Life	OFF
0-10V	Minimum Dimming Level 30 %

Programming

This unit is fully programmable via OSRAM OT Programmer with the help of the Tuner4TRONIC® software. Programming of the driver via Prog+ and Prog- is only allowed **without powering it via L/N**.



The new programmed parameters would get valid with the next power on cycle. Further details are available in the application guide for the 2DIMLT2 family.

Thermal Protection

This unit offers resistor based mode to set the thermal protection of the LED module or the luminaire. An external temperature sensor (e.g. NTC) must be connected between LED- and NTCset. This feature is recommended to guarantee long lifetime of the LED luminaire.

Resistor based

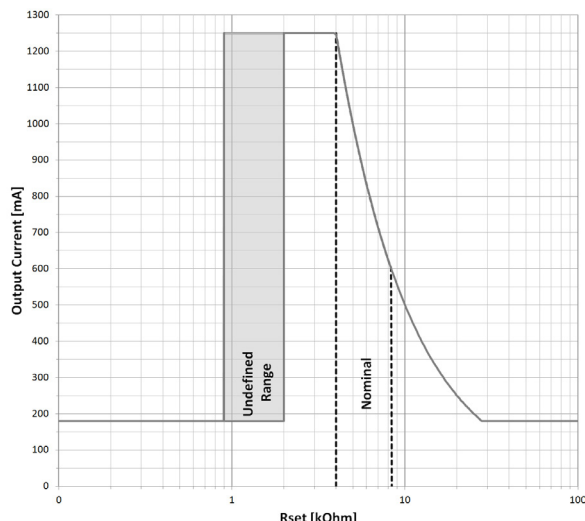
If the NTC value falls below the “start derating” resistance value, the unit starts derating down to set “derating level” at the “end derating” value.

NTC Type	Start Derating Temperature [6,3 kOhm]	End Derating, Switch On Temperature [5,0 kOhm]
22K	56 °C	62 °C
33k	66 °C	72 °C
47k	75 °C	83 °C
68k	85 °C	92 °C

The temperature threshold would vary on the used NTC component and tolerance.

LEDset2 (LT2)

The unit offers two operating modes: “Fixed Current” or “LEDset2”. By default the “Fixed Current” Mode is enabled. In case the LEDset2 interface is activated the external thermal protection feature is disabled. With the Tuner4TRONIC® it is feasible to set one of those two modes.



$$I_{OUT[A]} = \frac{5V}{R_{set[\Omega]}} \times 1000$$

I_{out} [mA] reference	Rset [kOhm]	I_{out} [mA] nominal
Open Circuit	> 27.7	180
600	8,25 (E192)	606
700	7,15 (E192)	699
1050	4,75 (E192)	1052
1250	4,02 (E192)	1243
Undefined	< 2,00	1250/180
Short Circuit	< 900	180

Refer to the LEDset2 application note for further details.

0-10V/AstroDIM

Dimming down to 10% of the maximum rated output current could be enabled through the Tuner4TRONIC® software, but the compliance with EN61000-3-2 must be checked below 30% dimming level.

The device will follow the dimming scheme of each feature. When the output level in the dimming scheme is below the minimum physical dimming level (minPHY), the minimum physical dimming level will be used.

Insulation

The unit has double/reinforced insulation from primary to the secondary side and double/reinforced insulation between all electronic parts and the chassis.

Symbols: 

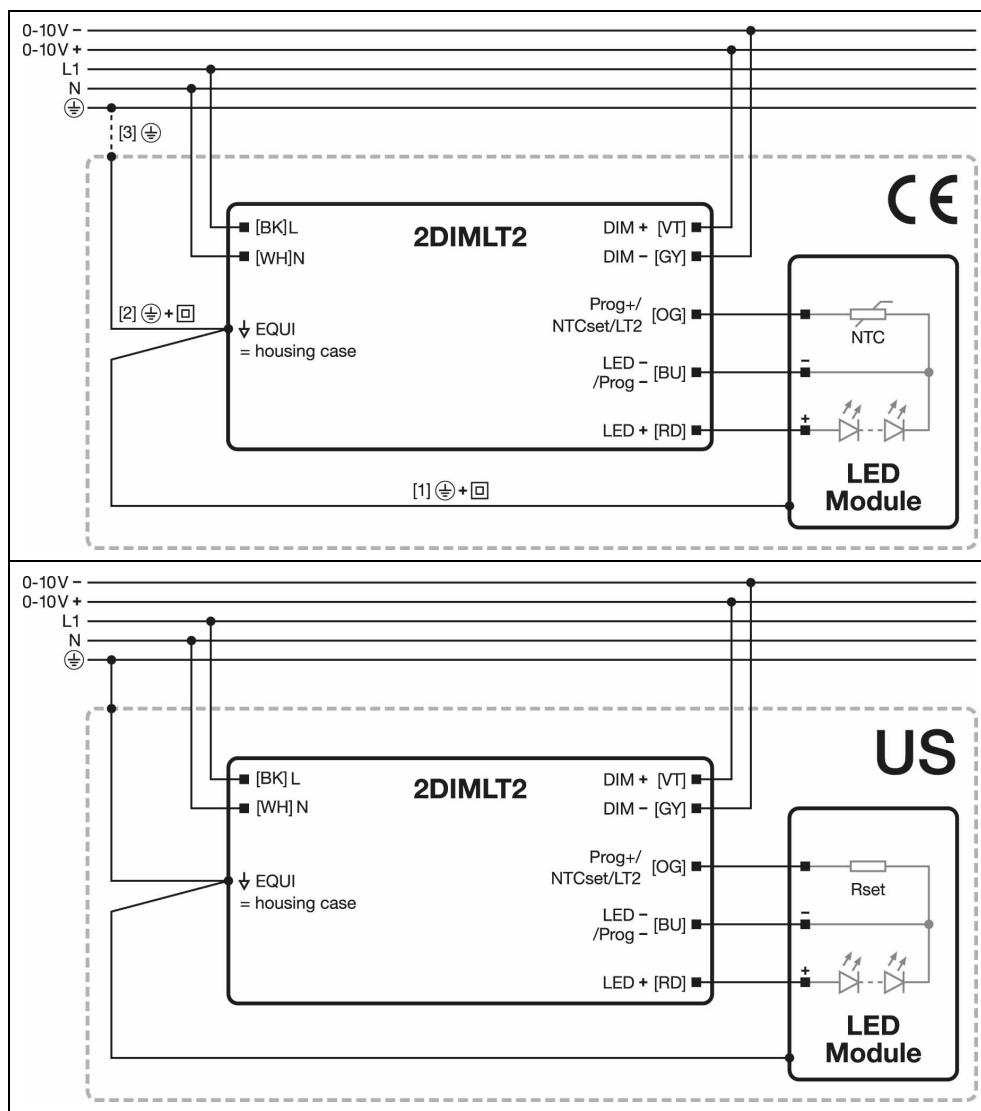
The equipotential connection / casing (EQUI) meets the requirements for double insulation versus primary side.

Port	L/N	EQUI/ housing	0-10V	LT2 NTCset Prog+	LED+ LED- Prog-
L/N	-	double	basic	double	double
EQUI / housing	double	-	supplementary	basic	basic
0-10V	basic	supplementary	-	supplementary	supplementary
LT2/NTCset/Prog+	double	basic	supplementary	-	-
LED+/LED-/Prog-	double	basic	supplementary	-	-

‘-’ no insulation

Wiring

- The EQUI (=housing) [2] shall be connected to the heat sink of the LED module [1] to improve the surge withstand capability of the system and EMI in critical luminaires.
- The unit is suitable for protection class I and II luminaires. The connection of the EQUI (=housing) to protective earth is only necessary in protection class I luminaires [3].
- The unit is suitable for supplying UL class 2 LED string according UL 8750. The connection of the EQUI (=housing) to Protective Earth is necessary to meet UL approbation in case of connection to dead metal parts.



- Maximum output cable length is limited by EMI and cross diameter.
- This control gear is not suitable to disconnect the LED load during normal operation.
- Input and Output Wire length: 280 mm +/- 20 mm
- This control gear is inherently protected against wrong wiring on the output side. The wrong connections between LED+ with LT2/NTCset could damage irreversibly the ECG. All the other wrong wirings on the output, once removed, make the ECG work regularly.
- The NTCset/LT2, LED+ and LED-, 0-10V cables are ESD protected up to 4kV according IEC 61000-4-2.
- The startup time to reach the set output current is less than 5 s.

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