



100 + 500mA
Software
configurable



RIPPLE FREE



FLICKER FREE

Ripple and
Flicker free
IEEE1789
Analog Modulation
I > 100mA
PWM Modulation
I < 100mA



MULTISTANDARD BUS

- 0-10V / 1-10V
- 100KΩ Pot.
- PWM
- Push-Dim
- Digital Control

With External Interface
(isolated):

- DALI
- CASAMBI
- 0-10V/1-10V



Deep &
Smooth
to 0,4%



Wide
output
range for
flexible led
selection



Overheating;
Short-circuits;
Voltage spikes;
Overloads;
Polarity
inversion;



Special Thermal
Protection with
safety dimming
threshold



DEVELED SUITE
• Iout setting;
• Max Power Setting;
• Dimming Curve
Linear/Logarithm
setting
• Thermal Protection
• Threshold setting
• Diagnostics Info



DESCRIPTION

DC/DC LED Driver for Track Lighting, featuring Constant Current output.

Driver for built in use, ultra compact size, suitable for 48V (Low Voltage) Stucchi Track Adapter series "9500".

FEATURES

- Constant Current mode output
- 20W output driver
- Class 2 power unit
- Ripple Free
- Flicker Free, IEEE 1789
- Smooth dimming from 100% to 0.4%
- High efficiency: 95% at full load
- Protection against output short circuits, input polarity inversion
- Wise Programming with SW **DEVELED SUITE**
- Dimensions (L x W x H): 125 x 14.5 x 11 mm; (inch: 4.92 x 5.7 x 0.43)
- Standard safety: UL 8750 - EN 61347-1 - EN 61347-2-13
- Standard EMC: EN 55015 - FCC part 15, EN 61547
- Typical lifetime > 50.000 hours
- 5 years warranty

ELECTRICAL

Nominal Vin Voltage Range	48V DC \pm 5%
Max. Efficiency	> 90% @ full load
Max. Output Power	20W
Output Current	5 mA \div 500mA (configurable with SW "DEVELED SUITE")
Output Voltage Range	9 \div 40V DC (@ Pout max)
Channel Output	N° 1
Maximum Output Current Ripple	< 3%
Current Regulation	<ul style="list-style-type: none"> • I < 100mA Digital • I > 100mA Analogic • Custom configurable with SW "DEVELED SUITE"
Start-Up Time	< 100ms
MULTIFUNCTION BUS (not isolated)	<ul style="list-style-type: none"> • 0-10V • 1-10V • 100KΩ Potentiometer • PWM (*) • Push-Dim • Digital Control
With External ISOLATED COMPACT CONTROLLER MODULE	<ul style="list-style-type: none"> • 0-10V • 1-10V • 100KΩ Potentiometer • PWM (*) • Push-Dim • Digital Control • DALI • CASAMBI
Dim to Off	Yes
Minimum Dim Level	2mA
Dimming Curve	Linear/Logarithm (configurable with SW "DEVELED SUITE")
Hot Pluggable Output	Yes

PROTECTION

Short Circuit	On Output Port; recovers automatically after fault condition is removed in 10sec with slow fade time
Against Mains Voltage Spikes	Yes, on Input Port
Against Polarity Inversion	Yes, on Input and Dimming Port

ENVIRONMENT

Working Temperature	-25° \div +50°C
Max Temperature	110°C on Tc Point
Storage Temperature/Humidity	-20° \div +60°C; 10 \div 95%RH
Lifetime	50.000hrs
Warranty	5 years

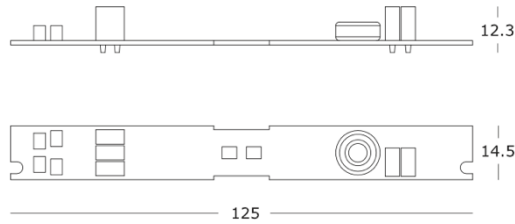
(*) Minimum voltage value for logical high level: 14V

MECHANICAL

Dimensions Dimensions (L x W x H): 125 x 14.5 x 12.3 mm; (inch: 4.92 x 0.57 x 0.48)

Electrical Connections

- 2 Wires (Input): No Polarity
- 2 Wires (Bus): BUS+, BUS-
- 2 Clamps (LED): A+, K-



STANDARD

Safety Standards EN 61347-1 - EN 61347-2-13
UL8750

EMC Interference EN 55015 - FCC part 15

EMC Immunity EN 61547

Environmental Rohs and reach compliant

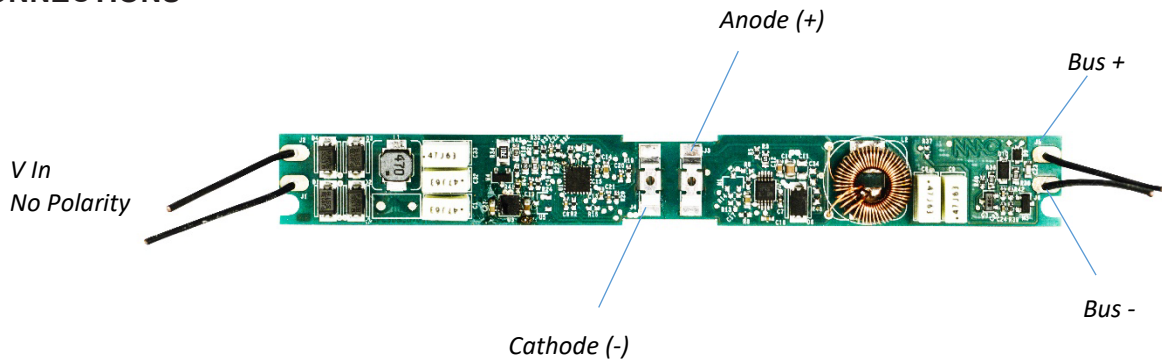
DIAGNOSTIC and PERFORMANCE FUNCTION

DEVELED SUITE SOFTWARE

- Set any lout value from the Nominal Range
- Select Linear or Logarithm dimming curve
- Select Dimming Protocol
- Set Fade Time value
- Set Minimum Dimming lout Value
- Set Thermal Thresholds of Thermal Protection Algorithm
- Read tc Realtime Temperature
- Read SN, FW/HW version, OEM
- It is possible to create and download custom configuration profile

REQUIREMENTS

CONNECTIONS



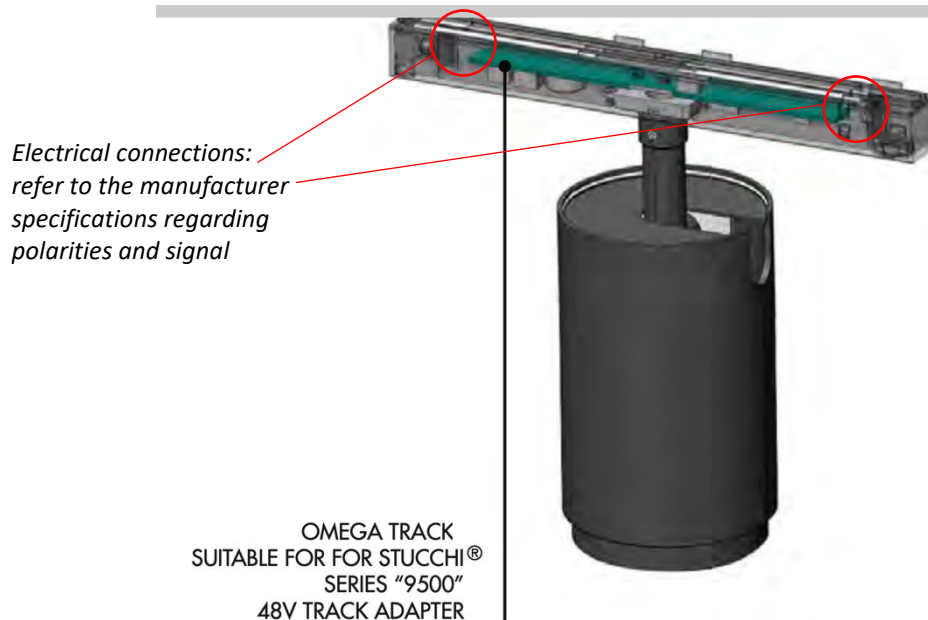
POWER SUPPLY

An European SELV class I & II or US NEC class 2 or Isolated low-voltage limited output of 48Vdc (limited 25A) must be used to power the Led Driver TRACK 20. Maximum output voltage should not exceed 55Vdc. Input signal needs to be applied to wires Bus+ and Bus-

DIMMING FUNCTION

To regulate the LED light intensity, a signal needs to be applied to wires White Bus+ and Bus-. If no signal is applied to BUS, the output current is at maximum level

INSTALLATION

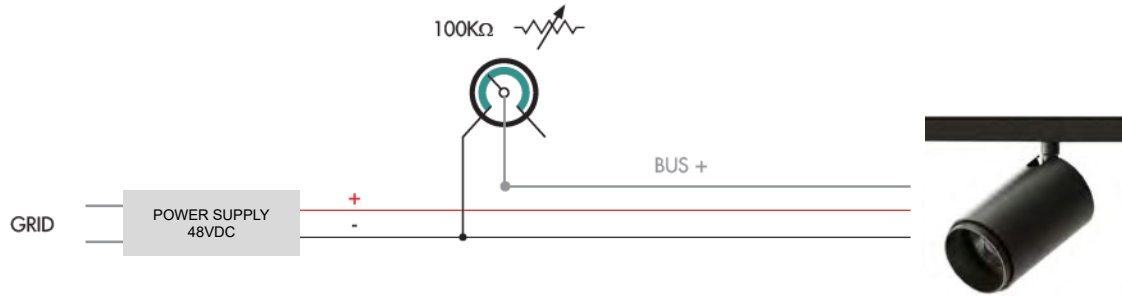


ARCHITECTURE

STAND ALONE APPLICATION WITH POTENTIOMETER

LED Driver TRACK 20 built into a track adaptor with 100kΩ trimmer potentiometer

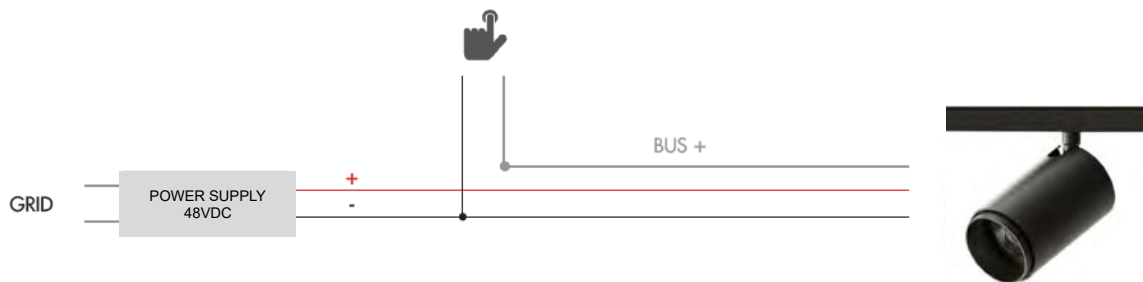
- 0-10V ANSI E1.3, Entertainment Technology
- 1-10V IEC 60629 (Annex E) (100kΩ)



STAND ALONE APPLICATION WITH PUSH DIM

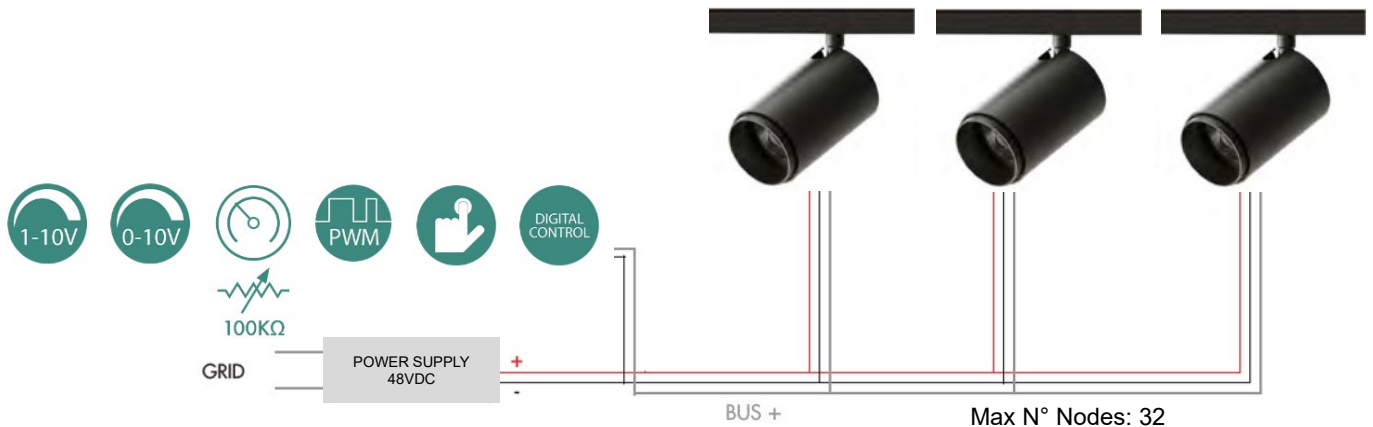
LED Driver TRACK 20 built into a track adaptor with PUSH-DIM

- Push for on/off
- Keep pushed for dimming up and down



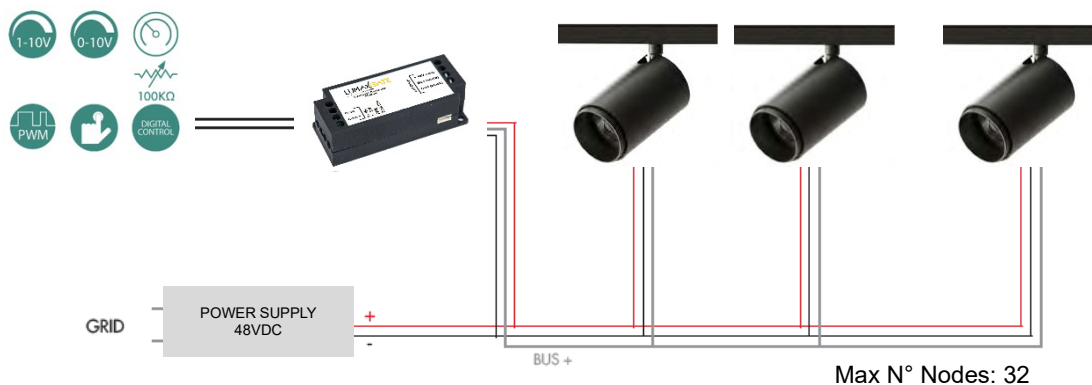
0-10V/1-10V/POTENTIOMETER/PWM/DIGITAL CONTROL ARCHITECTURE (NOT ISOLATED)

- It is possible to send broadcast command to Led Driver TRACK 20
- Every LED Driver TRACK 20 executes the same command



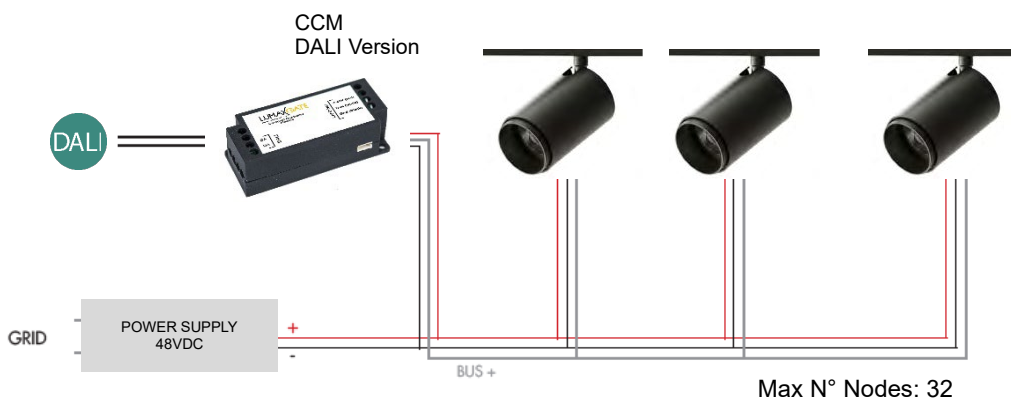
0-10V/1-10V/POTENTIOMETER/PWM/DIGITAL CONTROL ARCHITECTURE (ISOLATED)

- It is possible to send broadcast command to Led Driver TRACK 20
- Every LED Driver TRACK 20 executes the same command



DALI ARCHITECTURE:

- Throw controller, it is possible manage each single LED Driver TRACK 20 as an independent address



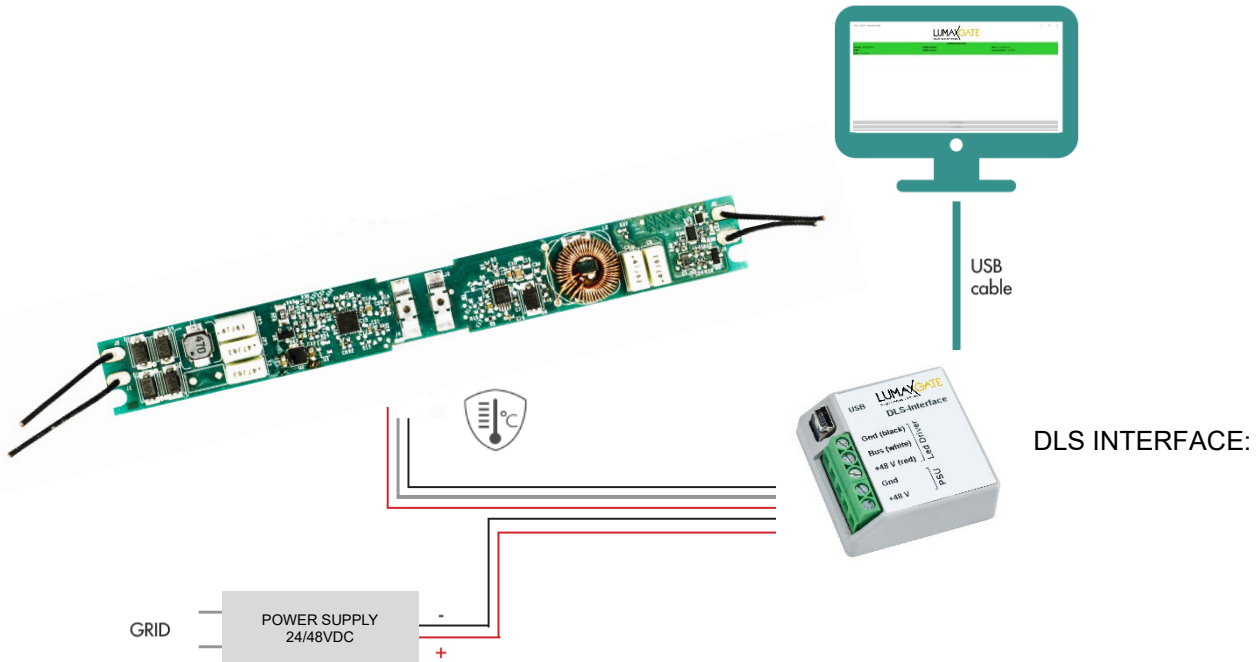
BLUETOOTH ARCHITECTURE (on request)

- Throw controller, it is possible manage each single LED Driver TRACK 20 as an independent address



PROGRAM TOOL SW

Full Program and Configuration using PC and Interface



SW DEVELED SUITE

- Set any I-out value from the Nominal Range
- Select Linear or Logarithm dimming curve
- Select Dimming Protocol
- Set Fade Time value
- Set Minimum Dimming I-out Value
- Set Thermal Thresholds of Thermal Protection Algorithm
- Read Tc Realtime Temperature
- Read SN, FW/HW version, OEM
- It is possible to create and download custom configuration profile

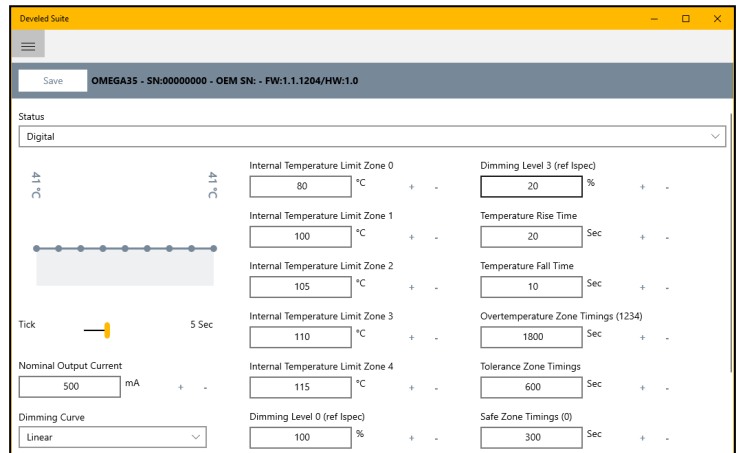
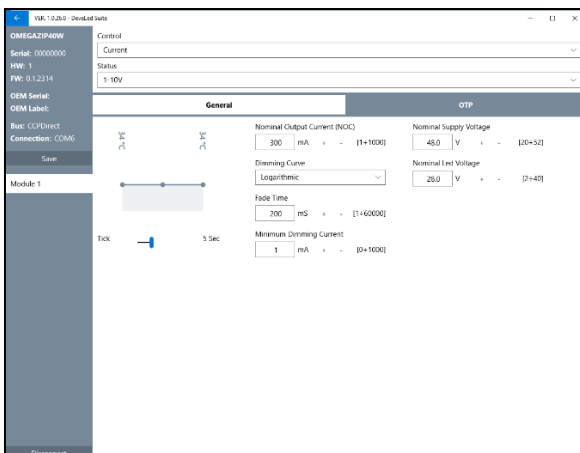
THERMAL PROTECTION LIMIT ALGORITHM

This special Algorithm define five zones of functionality.

For each zone it is set an operating Tc temperature and a Dimming level.

When the Tc is out of the tolerance zone, this Algorithm can reduce the light level to reestablish the Tc temperature and preserving the product life.

It is possible to set the dimming level and the tolerance timings for each zone.



C.C.

10 ÷ 1050mA
Software
configurable



Ripple and
Flicker free
IEEE1789
Analog Modulation
I > 100mA
PWM Modulation
I < 100mA



MULTISTANDARD BUS
• 0-10V / 1-10V
• 100KΩ Pot.
• PWM
• Push-Dim
• Digital Control

With External Interface
(isolated):
- DALI
- BLUETOOTH
- 0-10V/1-10V



Deep &
Smooth
to 0,1%



Wide
output
range for
flexible led
selection



Overheating;
Short-circuits;
Voltage spikes;
Overloads;
Polarity
inversion;



Special Thermal
Protection with
safety dimming
threshold



DEVELED SUITE
• Iout setting;
• Max Power Setting;
• Dimming Curve
Linear/Logarithm
setting
• Thermal Protection
• Threshold setting
• Diagnostics Info



DESCRIPTION

DC/DC LED Driver for Track Lighting, featuring Constant Current output.

Driver for built in use, ultra compact size, suitable for 24V and 48V (Low Voltage) Stucchi Track Adapter series "9500".

FEATURES

- Constant Current mode output
- 42W output driver
- Ripple Free
- Flicker Free, IEEE 1789
- Smooth dimming from 100% to 0.1%
- High efficiency: 94% (TBC) at full load
- Protection against output short circuits, input polarity inversion
- Wise Programming with SW **DEVELED SUITE**
- Dimensions (L x W x H): 136.40 x 14.5 x 11 mm; (inch: 5.37 x 0.57 x 0.43)
- Standard safety: UL 8750 - EN 61347-1 - EN 61347-2-13
- Standard EMC: EN 55015 - FCC part 15, EN 61547
- Typical lifetime > 50.000 hours
- 5 years warranty

ELECTRICAL

Nominal Vin Voltage Range	22 ÷ 27VDC; 42 ÷ 55VDC (configurable with SW "DEVELED SUITE")
Maximum Input Voltage	56V (not recommended)
Max. Efficiency	95% @ full load
Standby Power	<500mW
Max. Output Power	42W
Output Current	10mA ÷ 1050mA (configurable with SW "DEVELED SUITE")
Output Voltage Range	2.5 ÷ 40V DC (@ Pout max)
Channel Output	N° 1
Current Regulation	<ul style="list-style-type: none"> • I < 100mA Digital • I > 100mA Analogic • Custom configurable with SW "DEVELED SUITE"
Start-Up Time	< 100ms
MULTIFUNCTION BUS (not isolated)	<ul style="list-style-type: none"> • 0-10V • 1-10V • 100KΩ Potentiometer • PWM (*) • Push-Dim • Digital Control
With External ISOLATED COMPACT CONTROLLER MODULE	<ul style="list-style-type: none"> • 0-10V • 1-10V • 100KΩ Potentiometer • PWM (*) • Push-Dim • Digital Control • DALI • BLUETOOTH
Dim to Off	Yes
Minimum Dim Level	1mA
Dimming Curve	Linear/Logarithm (configurable with SW "DEVELED SUITE")
Hot Pluggable Output	Yes

PROTECTION

Inrush/Over Current	Constant Current limit, recovers automatically after fault condition is removed
Short Circuit	Constant Current limit, recovers automatically after fault condition is removed in 10sec with slow fade time
Over Voltage	Shut down o/p voltage, recovers automatically after fault condition is removed
Over Temperature	Shut down o/p voltage, recovers automatically after fault condition is removed Special "Thermal Protection Algorithm" with dimming threshold configurable by SW "Light performance Suite"
Against Mains Voltage Spikes	Yes, on Input Port
Against Polarity Inversion	Yes
Under Voltage Lock Out Protection	Yes: 36Vdc ÷ 38Vdc (for 48V nominal input); 18Vdc ÷ 19Vdc (for 24V nominal input)
Input Safety	Fused. Product falls safe when 230 applied
HOT Pluggable Input	Yes

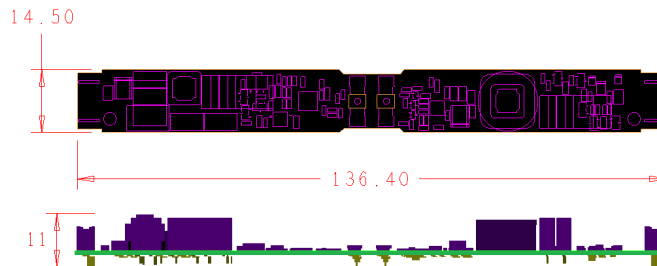
(*) Minimum voltage value for logical high level: 14V

ENVIRONMENT

Working Temperature	-25° ÷ +50°C
Max Temperature	110°C on Tc Point
Storage Temperature/Humidity	-20° ÷ +60°C; 10 ÷ 95%RH
Lifetime	50.000hrs
Warranty	5 years

MECHANICAL

Dimensions	Dimensions (L x W x H): 136.40 x 14.5 x 11 mm; (inch: 5.37 x 0.57 x 0.43)
Electrical Connections	<ul style="list-style-type: none"> • 2 Connector Blades (Input): V+, V- • 2 Connector Blades (Bus): BUS+, BUS- • 2 Clamps (LED): A+, K-



STANDARD

Safety Standards	EN 61347-1 - EN 61347-2-13 UL8750
EMC Interference	EN 55015 - FCC part 15
EMC Immunity	EN 61547
Environmental	Rohs and reach compliant

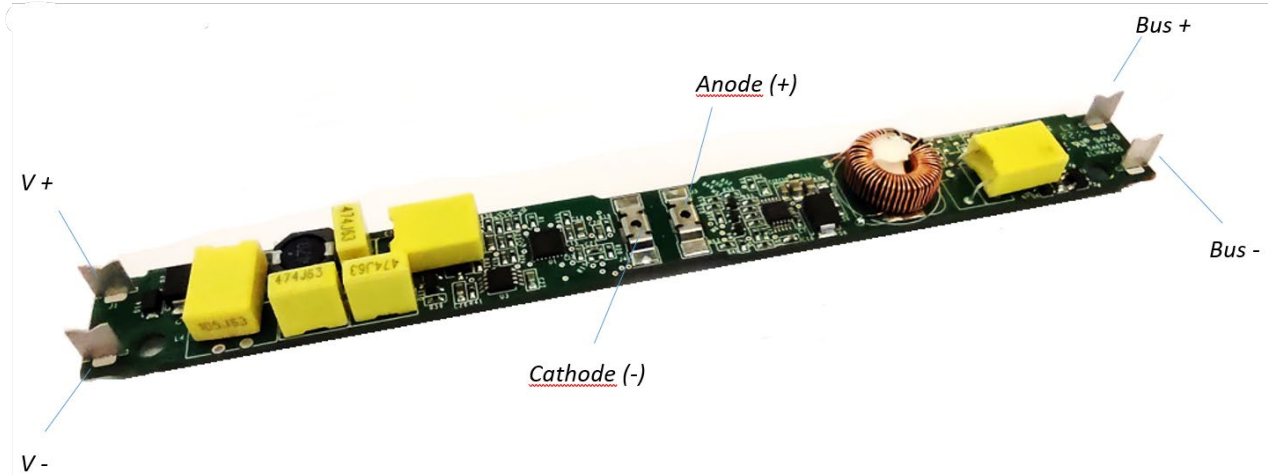
DIAGNOSTIC and PERFORMANCE FUNCTION

DEVELED SUITE SOFTWARE

- Set any lout value from the Nominal Range
- Select Linear or Logarithm dimming curve
- Setting VIN DC Voltage 24/48 VDC
- Select Dimming Protocol
- Set Fade Time value
- Set Minimum Dimming lout Value
- Set Thermal Thresholds of Thermal Protection Algorithm
- Read tc Realtime Temperature
- Read SN, FW/HW version, OEM
- It is possible to create and download custom configuration profile

REQUIREMENTS

CONNECTIONS



POWER SUPPLY

An European SELV class I & II or US NEC class 2 or Isolated low-voltage limited output of 48Vdc (limited 25A) must be used to power the Led Driver TRACK 42. Maximum output voltage should not exceed 55Vdc. Input signal needs to be applied to wires Bus+ and Bus-

DIMMING FUNCTION

To regulate the LED light intensity, a signal needs to be applied to wires White Bus+ and Bus-. If no signal is applied to BUS, the output current is at maximum level

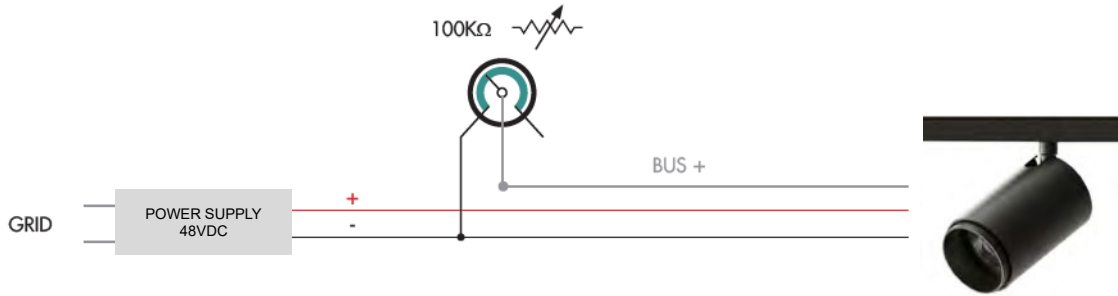
INSTALLATION



ARCHITECTURE

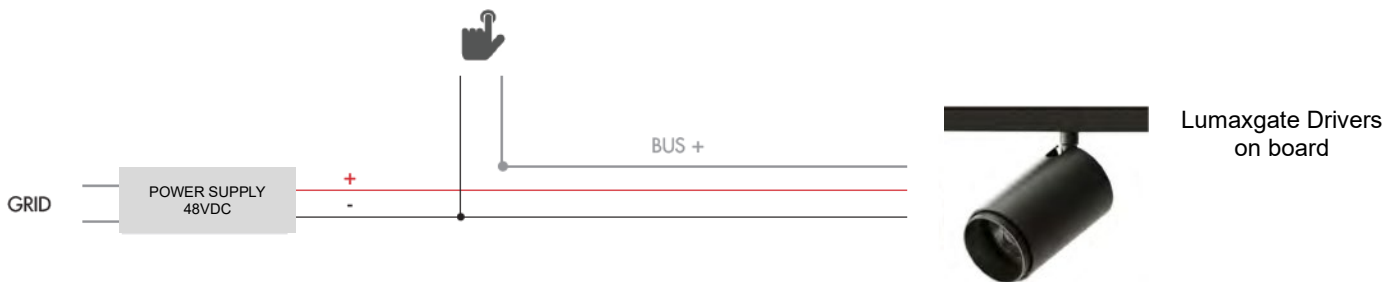
STAND ALONE APPLICATION WITH POTENTIOMETER

- LED Driver TRACK 42 built into a track adaptor with 100kΩ trimmer potentiometer
- 0-10V ANSI E1.3, Entertainment Technology
 - 1-10V IEC 60629 (Annex E) (100kΩ)



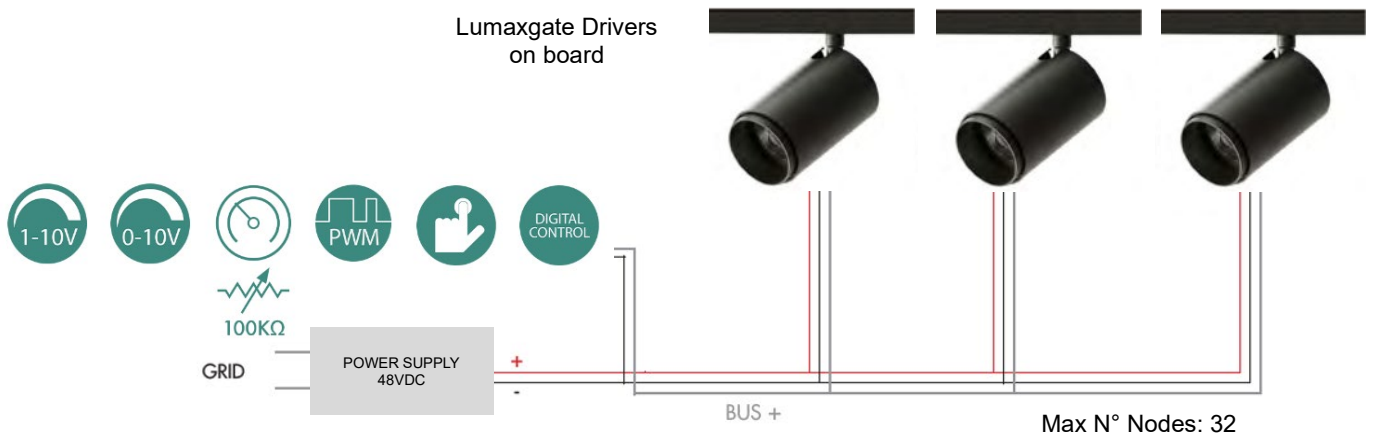
STAND ALONE APPLICATION WITH PUSH DIM

- LED Driver TRACK 42 built into a track adaptor with PUSH-DIM
- Push for on/off
 - Keep pushed for dimming up and down



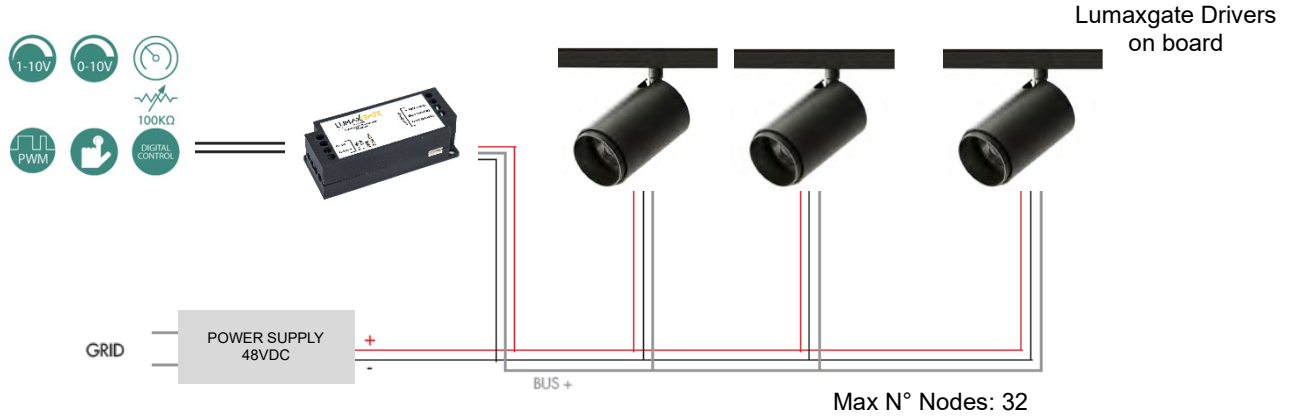
0-10V/1-10V/POTENTIOMETER/PWM/DIGITAL CONTROL ARCHITECTURE (NOT ISOLATED)

- It is possible to send broadcast command to Led Driver TRACK 42
- Every LED Driver TRACK 42 executes the same command



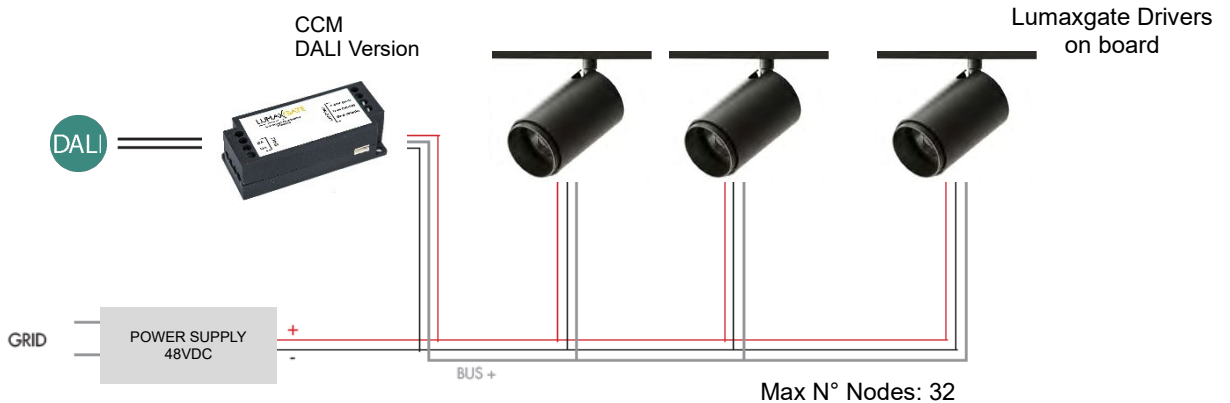
0-10V/1-10V/POTENTIOMETER/PWM/DIGITAL CONTROL ARCHITECTURE (ISOLATED)

- It is possible to send broadcast command to Led Driver TRACK 42
- Every LED Driver TRACK 42 executes the same command



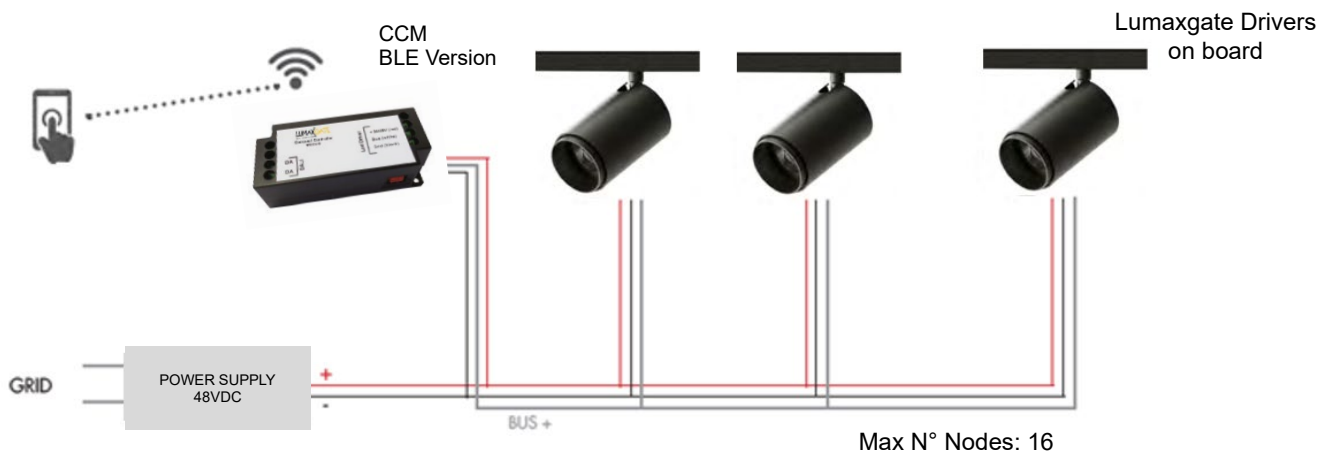
ARCHITECTURE:

- Throw controller, it is possible manage each single LED Driver TRACK 42 as an independent address



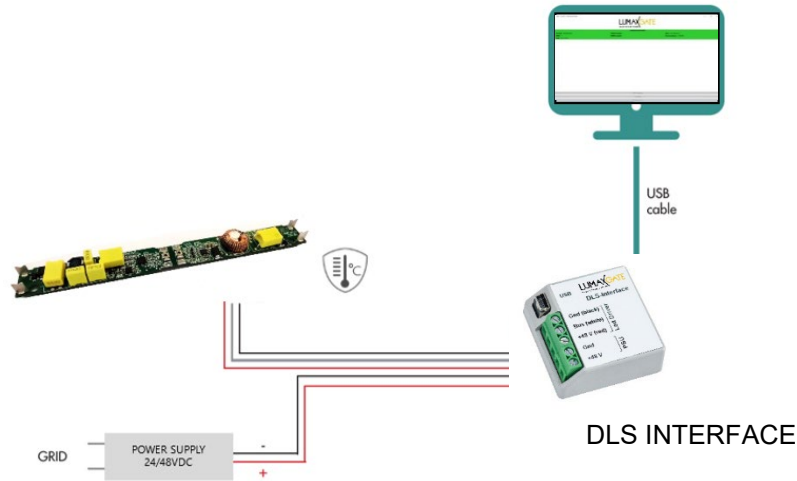
BLUETOOTH ARCHITECTURE (on request)

- Throw controller, it is possible manage each single LED Driver TRACK 42 as an independent address



PROGRAM TOOL SW

Full Program and Configuration using PC and Interface



SW DEVELED SUITE

- Set any I-out value from the Nominal Range
- Select Linear or Logarithm dimming curve
- Select Dimming Protocol
- Set Fade Time value
- Set Minimum Dimming I-out Value
- Set Thermal Thresholds of Thermal Protection Algorithm
- Read Tc Realtime Temperature
- Read SN, FW/HW version, OEM
- It is possible to create and download custom configuration profile

NOTE: to comply with the performances of this datasheet, during the configuration by DEVELED SUITE the driver must to be powered by the nominal system input voltage and connected to the final lamp led load. The default settings are 250mA output current, 48V input voltage, 30V nominal led load voltage.

THERMAL PROTECTION LIMIT ALGORITHM

This special Algorithm define five zones of functionality.

For each zone it is set an operating Tc temperature and a Dimming level.

When the Tc is out of the tolerance zone, this Algorithm can reduce the light level to reestablish the Tc temperature and preserving the product life. It is possible to set the dimming level and the tolerance timings for each zone.

