

**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"> <li>• I &lt; 100mA Digital</li> <li>• I &gt; 100mA Analogic</li> <li>• Custom configurable with SW "DEVELED SUITE"</li> </ul>
Start-Up Time	< 100ms
MULTIFUNCTION BUS (not isolated)	<ul style="list-style-type: none"> <li>• 0-10V</li> <li>• 1-10V</li> <li>• 100KΩ Potentiometer</li> <li>• PWM (*)</li> <li>• Push-Dim</li> <li>• Digital Control</li> </ul>
With External ISOLATED COMPACT CONTROLLER MODULE	<ul style="list-style-type: none"> <li>• 0-10V</li> <li>• 1-10V</li> <li>• 100KΩ Potentiometer</li> <li>• PWM (*)</li> <li>• Push-Dim</li> <li>• Digital Control</li> <li>• DALI</li> <li>• BLUETOOTH</li> </ul>
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"> <li>• 2 Connector Blades (Input): V+, V-</li> <li>• 2 Connector Blades (Bus): BUS+, BUS-</li> <li>• 2 Clamps (LED): A+, K-</li> </ul>



## 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

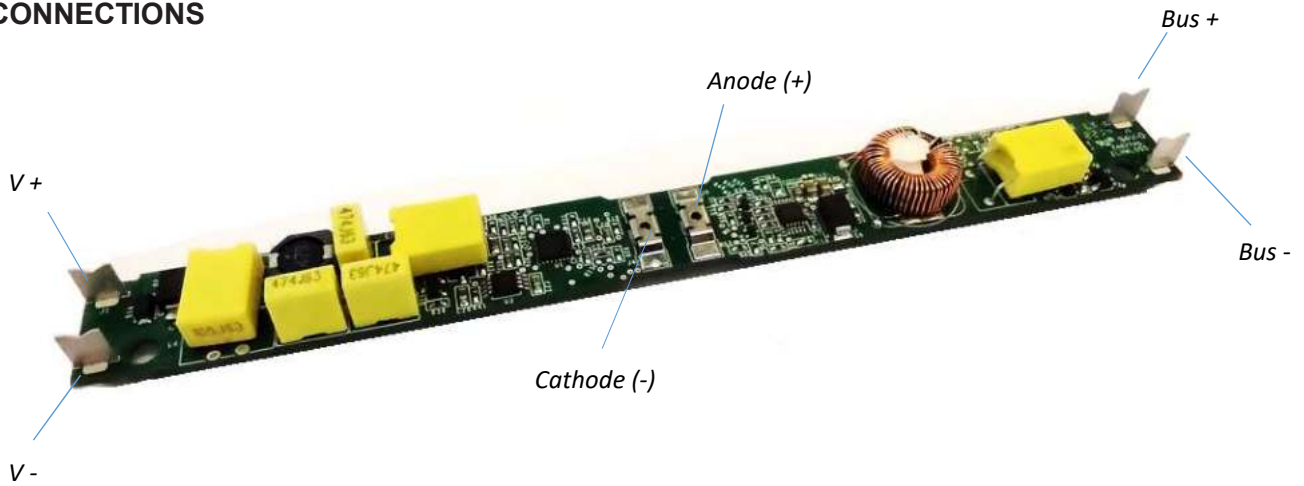
## DIAGNOSTIC and PERFORMANCE FUNCTION

### DEVELED SUITE SOFTWARE

- Set any Iout 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 Iout 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

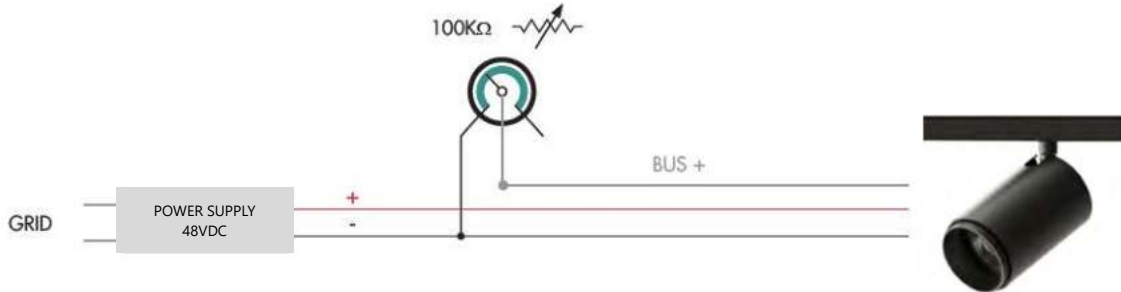
## INSTALLATION



### ARCHITECTURE

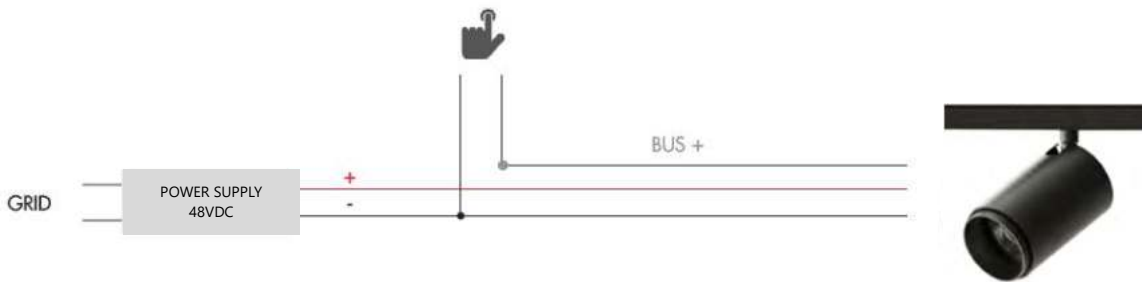
#### STAND ALONE APPLICATION WITH POTENTIOMETER

- 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



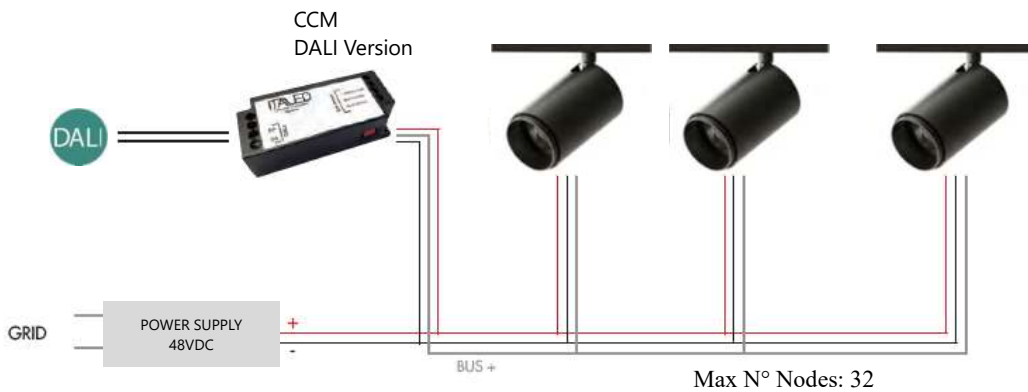
### 0-10V/1-10V/POTENTIOMETER/PWM/DIGITAL CONTROL ARCHITECTURE (ISOLATED)

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### DALI ARCHITECTURE:

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



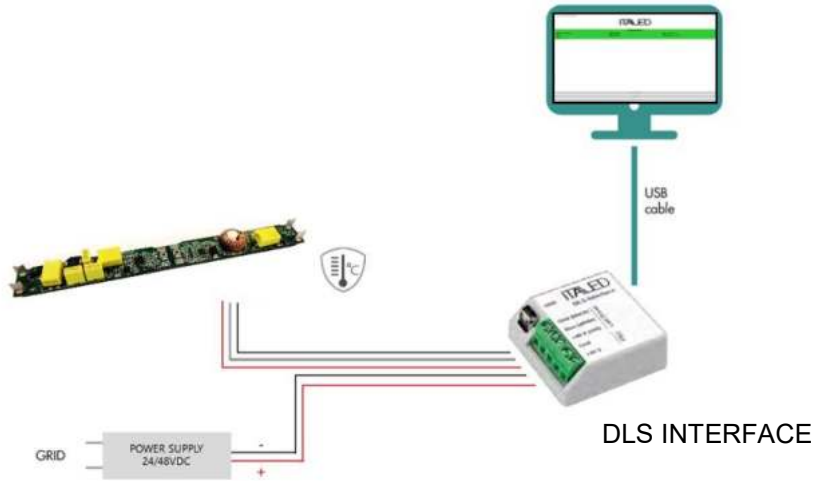
### BLUETOOTH ARCHITECTURE:

- 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.

