

OMEGA Ø35 – 24V - DATASHEET

CONSTANT CURRENT	FLIKER FREE	MULTIFUNCTION BUS	0% DIM	WIDE OUTPUT RANGE	100°C	PROTECTION	TH° C DIMMING	SW TOOL
100mA ÷ 500mA SW configurable	Ripple and Flicker free IEEE1789 Analog Modulation I > 100mA PWM Modulation I < 100mA	MULTISTANDARD With External Insulated interface - DALI - BLUETOOTH With or Without External Insulated interface - 0-10V - 1-10V - PWM - Push-Dim	Deep & Smooth to 0%	Wide output range for flexible led selection	Up to 100° Tc Point Temperature	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 - Read Diagnostic info



DESCRIPTION

- OMEGA COB Holder Ø35 is DC/DC drivers, for constant current to CoBs used with spot, track and ceiling lighting.

APPLICATION

- Led Driver COB Holder D35 incorporates a DC/DC driver into the holder for a constant current to CoBs, spot, track and ceiling lighting.

FEATURES

- Constant Current mode output;
- 10W output driver;
- Class 2 power unit;
- IP20 rating for indoor installations;
- Ripple Free;
- Flicker Free, IEEE 1789;
- Smooth dimming from 100% to 0.4%;
- High efficiency: >90% at full load;
- Protection against overheating, short circuits, overloads;
- Wise Programming with SW **DEVELED SUITE**;
- Dimensions Ø35, 6mm high; (inch: Ø 1.37 - 0.23 high)
- Standard safety: UL 8750 – UL 8754 - EN 61347-1 - EN 61347-2-13;
- Standard EMC: EN 55015 - FCC part 15, EN 61547;
- Typical lifetime > 50.000 hours;
- 5 years warranty;
- VERSIONS: OMEGA 35; Collimator Holder (on request);
- Emergency function (**pending**);

Electrical

Vin Voltage Range	21.5 ÷ 25V DC SELV and US NEC class 2: Isolated output
Maximum Input Voltage	25.5V (not recommended)
Efficiency	> 90% @ full load
Output Power	10W
Output Current	100mA ÷ 500mA (configurable with SW "DEVELED SUITE")
Output Current Tolerance	±2% of nominal setting ±5% including temperature variations
Output Voltage Range	2.5 ÷ 20Vdc (@ 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" (<i>pending</i>)
Start-Up Time	<100ms ±10%
Stand Alone Dimming (not isolated)	<ul style="list-style-type: none"> 0-10V/1-10V/PWM(*)/Push-Dim 100kOhm typical Potentiometer Compatibility DIGITAL CONTROL
External Interface Dimming (isolated)	<ul style="list-style-type: none"> 0-10V/1-10V/PWM/Push-Dim (Compliance with New Edition of UL 8750 and Supplement SF) DALI (<i>pending</i>) BLUETOOTH Mesh (Bluetooth Low Energy v4.2, IEEE 802.15.4) CASAMBI; XICATO GalaXI; Silvair; others on request DMX (on development) Compatible with Emergency module compact controller for Emergency light function (<i>pending</i>)
Dim to Off	Yes
Minimum Dim Level	2mA
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: 18Vdc ÷ 19Vdc
Input Safety	Fused. Product falls safe when 230 applied
HOT Pluggable Input	Yes

Environment

Max Tc temperature	100°C
Thermal Interface Material:	Recommended: Compound GREASIL MS12
Storage Temperature/Humidity	-20° ÷ +60°C; 10 ÷ 95%RH
Lifetime	50.000hrs
Warranty	5 years

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

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Mechanical	
Dimensions	Ø35mm, 6mm high; inch: Ø 1.37 - 0.23 high
Electrical Connections	<ul style="list-style-type: none"> 3 Wires (input): V+, V-, BUS+ 2 Springs (CoB): A+, K-
Mechanical Connection	Mounting screws: M3
Screw Torque:	0,4 ÷ 0,5Nm
Led Outline and LES Size	13.5x1.,5, d:4mm ÷ 6mm (inch 0.53 x 0.53; d: 0.157 ÷ 0.23)
CoB Thickness	Nominal 0.9mm (inch 0.035)
CoB Types	Both ceramic or aluminium types, eg: <ul style="list-style-type: none"> Bridgelux - DS401 V6 HD Citiled - CLU701-1002C4 Cree - CMT1420 Sunpo – G16-XXXH120
IP Rating	IP20
Materials	Halogen free glass filled PBT housing FR4 circuit board Copper alloy electrical contacts
Standard	
Safety Standards	<ul style="list-style-type: none"> ENEC: EN 61347-1 - EN 61347-2-13, Am1 - EN 60838-2-2 UL: UL8750, UL8754
EMC Interference	EN 55015 - FCC part 15
EMC Susceptibility	EN 61547
Environmental	Rohs and reach compliant
Optical	
Optics	On request: collimator version compatible with Ottica Gaggione serie LLC05x7 <ul style="list-style-type: none"> LLC05W7 – WIDE BEAM SIL COLLIMATOR 32mm (inch 1.25) LLC05M7 – MEDIUM BEAM SIL COLLIMATOR 32mm (inch 1.25) LLC05N7 – NARROW BEAM SIL COLLIMATOR 32mm (inch 1.25)
DIAGNOSTIC and PERFORMANCE FUNCTION	
DEVELED SUITE SOFTWARE	<ul style="list-style-type: none"> Set constant lout value Select Linear or Logarithm curve Select Dimming Protocol Set Fade Time value Set Minimum Dimming lout Value Set Thermal Thresholds Read tc Realtime Temperature Read SN, FW/HW version, OEM Read Diagnostic Set Custom Current Regulation (<i>pending</i>) FW upgrade (<i>pending</i>)

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

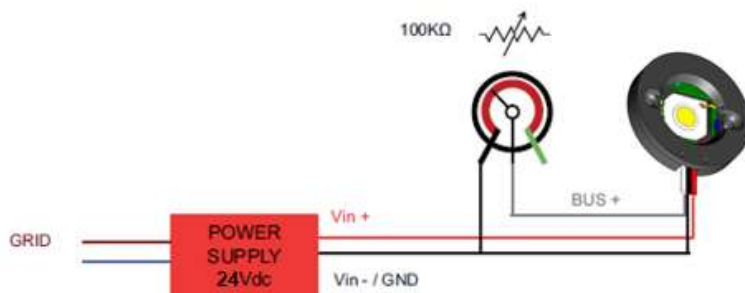
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ARCHITECTURE

STAND ALONE - POTENTIOMETER:

Led Driver OMEGA35 built in lamp with 100kΩ trimmer potentiometer.

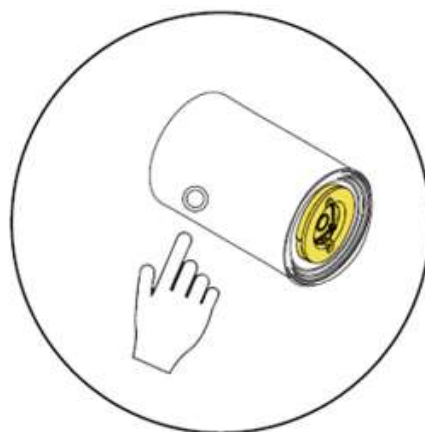
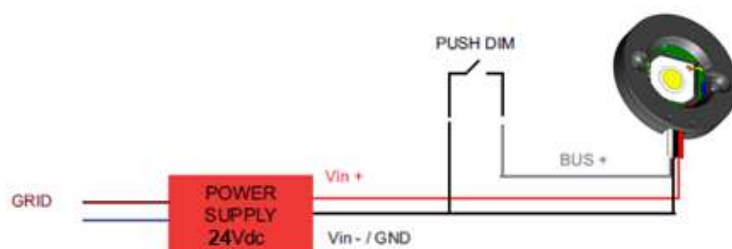
- 0-10V ANSI E1.3, Entertainment Tecnology;
- 1-10V IEC 60629 (Annex E) (100kΩ).



STAND ALONE – PUSH-DIM:

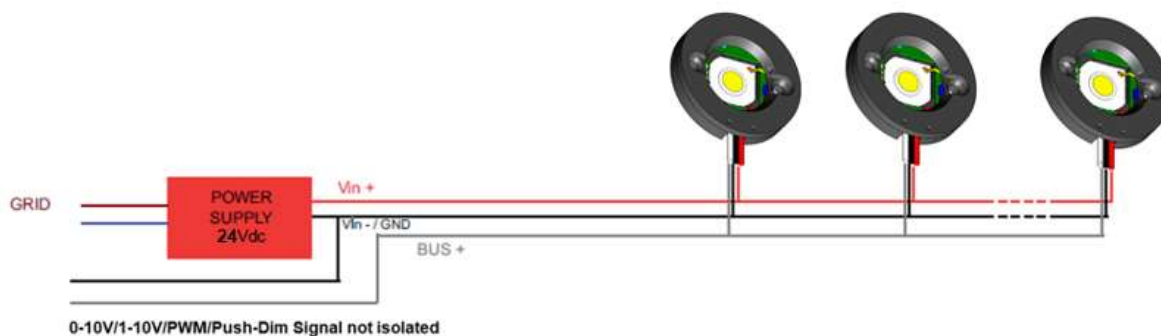
Led Driver OMEGA35 built in lamp with PUSH-DIM:

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



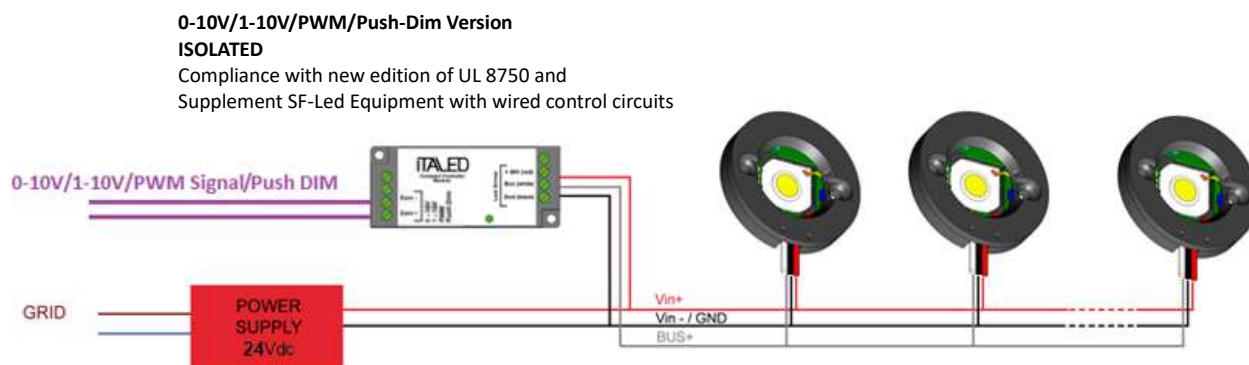
0-10V/1-10V/PWM/Push-Dim ARCHITECTURE (NOT ISOLATED):

- It is possible to send broadcast command to Led Driver OMEGA35;
- Every Led Driver OMEGA35 executes the same command.



0-10V/1-10V/PWM/Push-Dim ARCHITECTURE WITH EXTERNAL ISOLATED INTERFACE:

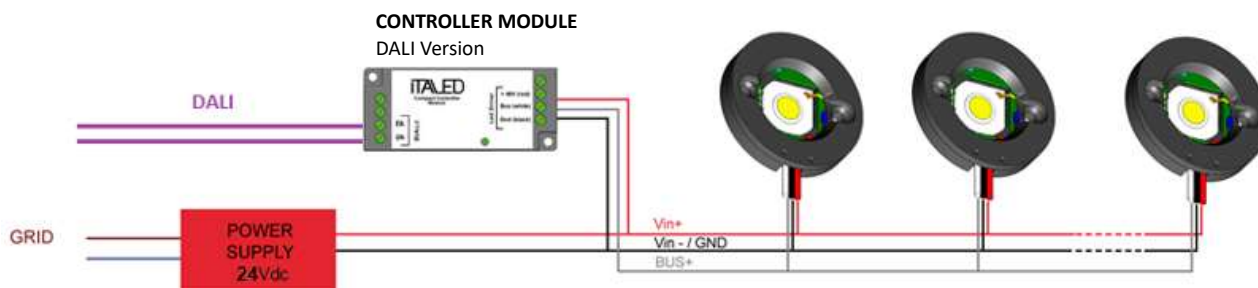
- It is possible to send broadcast command to Led Driver OMEGA35;
- Every Led Driver OMEGA35 executes the same command.



Max N° Nodes: 32

DALI ARCHITECTURE:

- Throw controller, it is possible manage each single Led Driver OMEGA35 as an independent address.

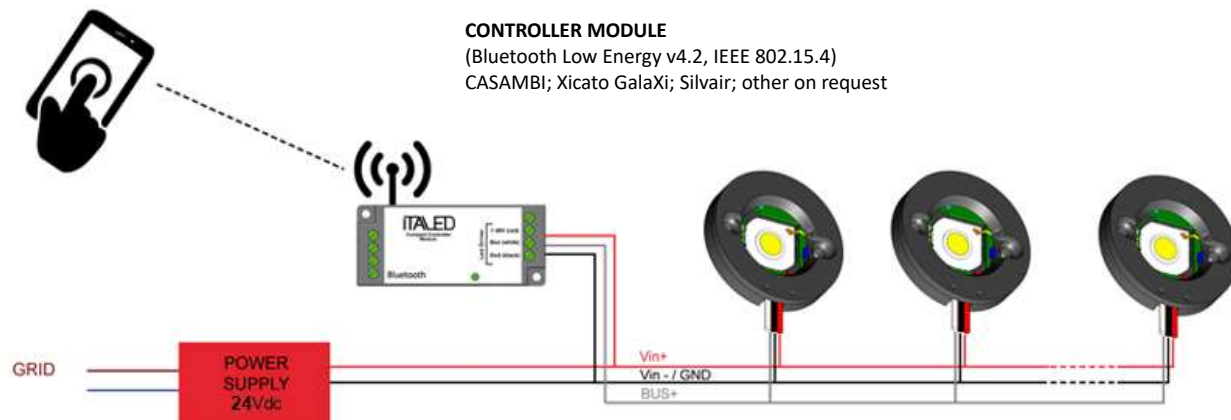


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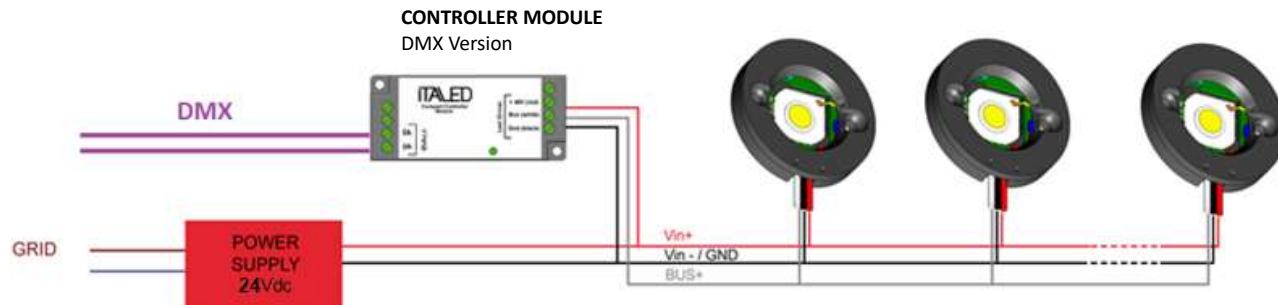
BLUETOOTH ARCHITECTURE:

- Throw controller, it is possible manage each single Led Driver OMEGA35 as an independent address.



Max N° BLE Nodes: 16

DMX COMPACT CONTROLLER Version on development.

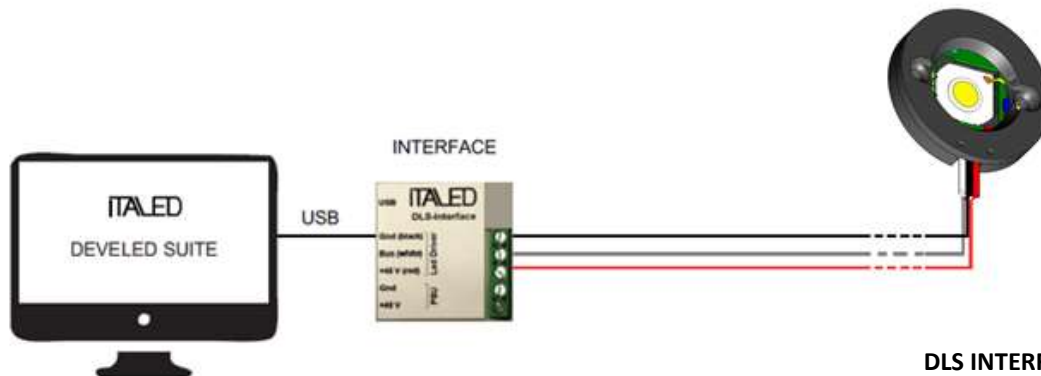


Max N° Nodes: 32

(*) speed equal to Dali speed as architectural lighting systems

PROGRAM TOOL SW

Full Program and Configuration using PC and Interface:



DLS INTERFACE:

Dimensions: 15mm x 43mm x 43mm
(inch: 0,59 x 1,69 x 1,69)

SW DEVELOPED SUITE

- Tool SW for programming and configuration;
- Set any constant Iout value from the Nominal Range;
- Select Linear or Logarithm dimming curve;
- 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;
- Read Diagnostic: temperature, protection events count, failres, lifetime (pending);
- Enabling special algorithm: CLO, led temperature protection, etc (pending);
- It is possible to create and download custom configuration profile (pending);
- Set Custom Current Regulation (pending)
- FW upgrade (pending).

