Datasheet DimWheel White

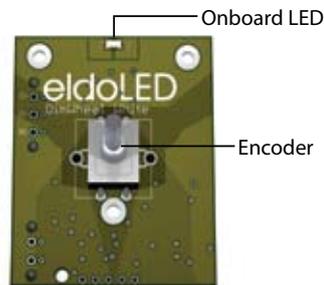**Colour** is our **nature**

Integrated Network Dimmer

Dimming Control

With its 15-bit setpoint resolution guaranteeing smooth brightness control, the DimWheel is the perfect digital dimmer for LED lighting. In addition to having a high setpoint resolution, the DimWheel also allows dimming levels from 100% down to 0.5%.

The operation of the DimWheel is very user-friendly due to the added ballistic effect: turning the encoder quickly turns the light output on or off, turning it slowly gives you a bit-by-bit brightness control.
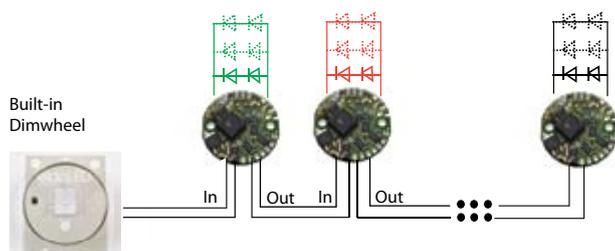
Encoder and Onboard LED

The DimWheel features a detentless rotary encoder, which also functions as a push-button switch. A white LED on the DimWheel's PCB gives you a visual representation of the dimming level you have set.

Onboard LED

Encoder

Network Protocol

The DimWheel uses a LedSync/DMX-compatible output interface to control eldoLED and other standard DMX devices with either an 8-bit or 16-bit network resolution. The network resolution is configurable by way of a DIP switch.

The 16-bit network resolution, which is only possible with the LedSync protocol, allows extremely fine dimming.

Built-in Dimwheel

In   Out   In   Out

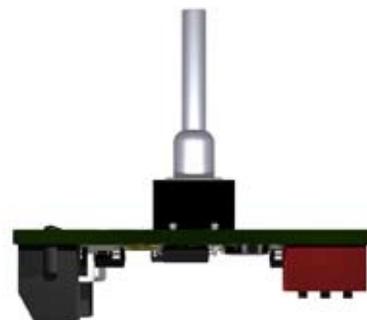Sample wiring schematic of a DimWheel

Dimensions

Thanks to its very small footprint (40mm x 48mm), the DimWheel can be integrated in any industry-standard mounting space used for traditional lighting dimmers.

Features

• Complete solution for LED lighting dimming
• On/off switch integrated in encoder
• 12-28V supply range
• LedSync- and DMX-compatible
• 8- or 16-bit network resolution
• Long life (5 years)
• Onboard white LED for visual inspection
• On/off state and dimming level preserved during system power on/off cycle
• Low EMI due to smart electronics design

Advantages

• Accurate dimming solution
• Compatible with established network protocol DMX-512A
• Can be mounted and used like standard household dimmers
• Simplifies total system solution
• Easy network setup

Component side and user side for easy mounting.

Dynamic Effects

• Control channel 1-127: 0 – 100%
• Control channel 128-256: 0 or 100%

Thermal Data

• Cooling: Passive. No active cooling required.

Network Control

• Output protocol: LedSync or USITT DMX-512A
• Output network: RS485
• Output update rate: 22ms
• Number of network channels: 256
• Network resolution: 8- or 16-bit
• Resolution setting: by way of DIP switch
• Communication: bi-directional for configuration or reading of sensor values

Electrical Data

• Supply voltage: 12-28V
• Processor: eldoLAB DimLogic 1200 Series
• Reverse polarity protection: yes

User Interface

• Encoder type: detentless
• Resolution: 80 steps in 360°
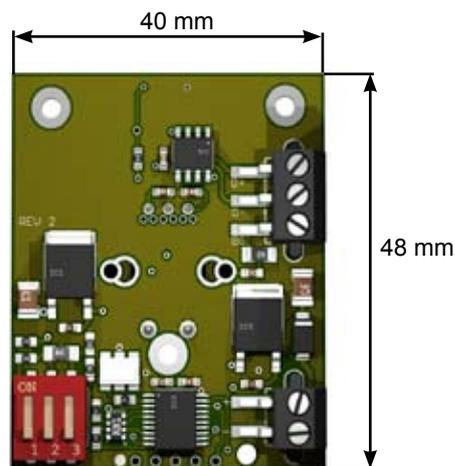• Ballistic effect: yes

Operation Modes

• On/Off: enter this mode by pressing the encoder.
• Dimming mode: enter this mode by pressing the encoder, and subsequently turning it until the desired dimming level has been reached. When turning off the light while in dimming mode, dimming level is saved and restored next time the light is turned back on.

Mechanical Dimensions

• PCB dimensions: 40mm x 48mm
• Encoder shaft length: 21.2mm (0.835 inch)

Connections

• Power connection: 2-screw contact
• Data connection for LedSync/DMX OUT: 3-screw contact

Environmental Ratings

• Maximum ambient temperature: 60° C (140° F)
• Minimum ambient temperature: 0° C (32° F)
• Storage ambient temperature: -40° C to 95°C (-40° F to 203°F)
• Relative humidity: non-condensing

Miscellaneous

• Mounting orientation: any

Ordering information

Description	Product	Ordernr	Qty
DimWheel White 8/16Bit	Dimmer-White	1050DLW10101	10

For special form factors, connectors or other customised solutions, please contact our OEM support desk.

More information, application notes and user manuals available at www.eldoled.com