eldoLED

mastering light

LED Driver Selection Guide

Global edition

AcuityBrands.

Photo: Holland Light Company

Introduction

By setting standards for dimming, flicker, and enabling quality light, eldoLED drivers play an essential role in the transformation of lighting.

Our aim is to reduce complexity, ensure reliability, and facilitate beautifully lit spaces. We achieve this by innovating, in order to create the future of human centric lighting and spectrum management.

eldoLED's digital driver technology makes it possible to seamlessly integrate components - from source to lens or sensor - across a room, building, or site. Regardless of protocol or control system.

Our drivers, featuring two-way communications, are a reliable constant in the design of any solution and key to creating attractive, healthful lighting.

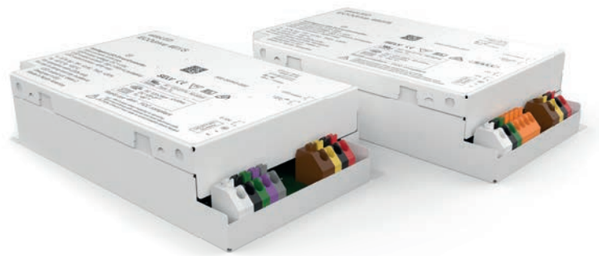
This selection guide presents an overview of our product portfolio. You will find descriptions of each driver family and a matrix to help find the right eldoLED driver for your application.

ECOdrive

Value delivered

Premium performance for general lighting. Smooth and flicker-free dimming down to 1% with programmable current setting.

- Natural dimming – Dim to 1%
- Constant current
- DALI-2 or 0-10V controls
- LEDcode for in-luminaire intelligence
- Power levels from 10W to 100W
- For indoor applications

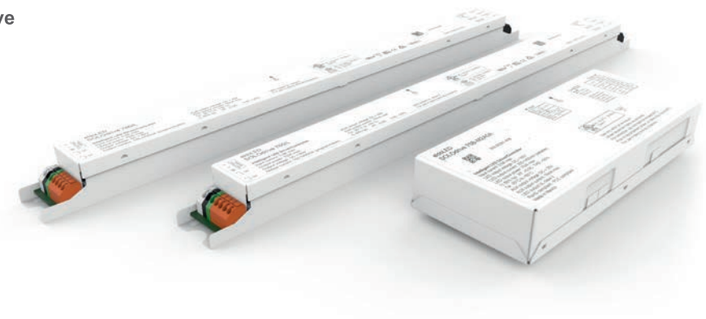


SOLOdrive

LED dimming made beautiful

The smoothest dimming all the way to dark. With any controller, in any application. What's more, LightShape allows you to tailor the dimming curve to perfectly match your lighting application.

- Natural dimming – Dim to Dark (0.1%)
- Constant current
- DALI-2 or 0-10V controls, single channel
- LightShape for Dim to Warm applications
- LEDcode for in-luminaire intelligence
- Power levels from 10W to 100W
- For indoor applications



DUALdrive

Every shade of white

Designed for dynamic and Tunable White LED lighting. DUALdrive excels in configurability, deep dimming, and two-way digital control.

- Natural dimming – Dim to Dark (0.1%)
- Constant current
- DALI-2 controls, dual channel
- LightShape for Tunable White applications
- LEDcode for in-luminaire intelligence
- Power levels from 20W to 120W
- For indoor applications

POWERdrive

Beyond color

Achieve more than the right color and the smoothest fade. POWERdrive is DMX and DALI compatible. In addition, it allows you to create your color or dynamic show without an external controller. POWERdrive's dynamic response allows you to fine-tune your application like no other driver!

- Natural dimming – Dim to Dark (0.1%)
- Constant current
- DMX / RDM or DALI controls
- Designed for 3 or 4-channel, RGBW
- Application-specific dynamic response
- Power levels from 50W to 100W
- For indoor applications

LINEARdrive

Infinite color control

All the color you will ever need for low-voltage LED applications. LINEARdrive products cover applications from single colors for accent and cove lighting right up to RGBW for full-color entertainment product solutions. All industry control protocols are covered: DALI, DMX/ RDM and 0-10V – you'll not run out of control options with LINEARdrive!

- Natural dimming – Dim to Dark (0.1%)
- Constant voltage
- DALI-2, DMX / RDM or 0-10V controls
- Designed for 12V or 24V LED tape lighting
- Application-specific dynamic response
- Power levels up to 720W
- For indoor applications
- LightShape for Dim to Warm or Tunable White applications

Standards & certifications

eldoLED LED drivers are high quality products that comply with regional and global industry standards. Below is an overview of the industry standards and concepts with which eldoLED is compliant.

IS 15885
(Part 2/Sec 13)
R-41136530

BIS (India)
Safety certification for India.
The figure at the bottom of the label indicates the number of the certificate.

ENEC (Europe)
The ENEC European safety certification and defines requirements for preventing electrical shock and fire.
There are two categories:

- A standard ENEC label indicates that the LED driver has passed the standard ENEC safety test with AC mains voltage. The standard reference is EN61347-1. The digits in the label ('05') are the lab identification number.
- An EL label indicates that the driver has also passed the test with DC mains voltage for emergency lighting. The standard reference is EN-61347-2-13.

PSE (Japan)
PSE is the safety standard for Japan. PSE certified products have this label.

RCM (Australia/NZ)
RCM is a certification for New Zealand and Australia. This consists of basic ENEC certification with additional testing for RCM. The standard references are SAA 61347.1 and SAA 61347.2.13.
There are two RCM labels:

- The standard RCM label
- The label for independent drivers

The LED driver is a standalone driver and should not be covered with isolation material.

TIS 1955-2551

TISI (Thailand)
TISI is the safety standard for Thailand. The digits below the label are the certificate number.

C US
E333135

UL
UL is a North American safety standard that defines requirements for preventing electrical shock and fire from LED drivers.
There are three categories:

- UL recognized. This is the basic UL certification.
  The LED driver is a UL recognized component and only intended for use in other end-use products.
  The standard references are UL8750 and UL1310.
  In the label, 'C' is for Canada and 'US' for United States of America.
  The code 'E333135' at the bottom is the company identification number for eldoLED.
- UL recognized, type TL
  The LED driver is a UL recognized component. In addition to standard UL certification, the LED driver has been tested and Tref and TrefMax value.
- UL listed, Class-P
  The LED driver is a UL listed product that can be used as end-use product.
  In addition to standard UL certification, the LED driver has been tested on temperature protection.

Product selector

On the next pages, you will find an overview of eldoLED's driver portfolio with a variety of options.
You can easily select the most suitable product based on the most critical elements of an LED driver:
- driver family
- output power
- controls type
- constant current vs. constant voltage
- form factor

LEDcode2
The ECOdrive, SOLOdrive and DUALdrive families support LEDcode2.
Several products exclusively support LEDcode2 and do not support any other control type. These products can be used in combination with any LEDcode2 peripheral such as a Bluetooth radio, and are marked with a blue dot in the product overview.

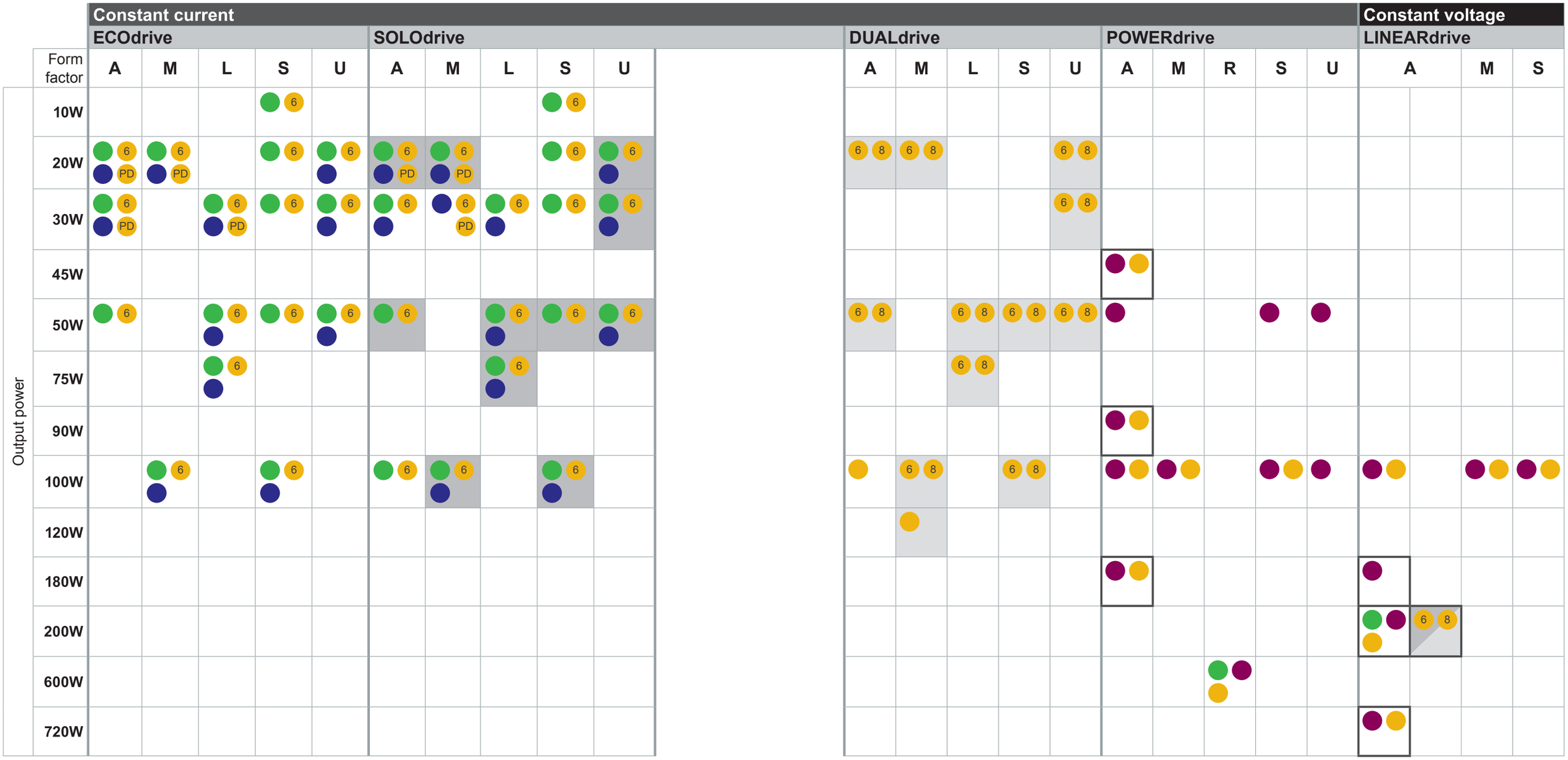
Wireless solution with Bluetooth radio
Wireless lighting with eldoLED is easy with our Bluetooth Low Energy (BLE) radios. eldoLED's BLE radios feature a LEDcode2 connection and are compatible with our DALI and LEDcode2-only drivers. Lighting control is easily managed using an SDK mobile application from Casambi or Atrius.
Application configurations include::
- Through-ceiling installation with integrated antenna
- In luminaire installations with integrated or external antenna

For more information, please visit http://eldoLED.com/wireless.

A driver with Bluetooth radio (Casambi or Atrius ready)

LightShape
Our LightShape technology takes the complexity out of dynamic white lighting and allows you to create intuitive Tunable White and Dim to Warm lighting applications with standard controls, drivers and LED modules. In the product overview, you can see products that include LightShape technology for either Dim to Warm or Tunable White applications.
For more information on LightShape, please visit www.eldoled.com/lightshape.

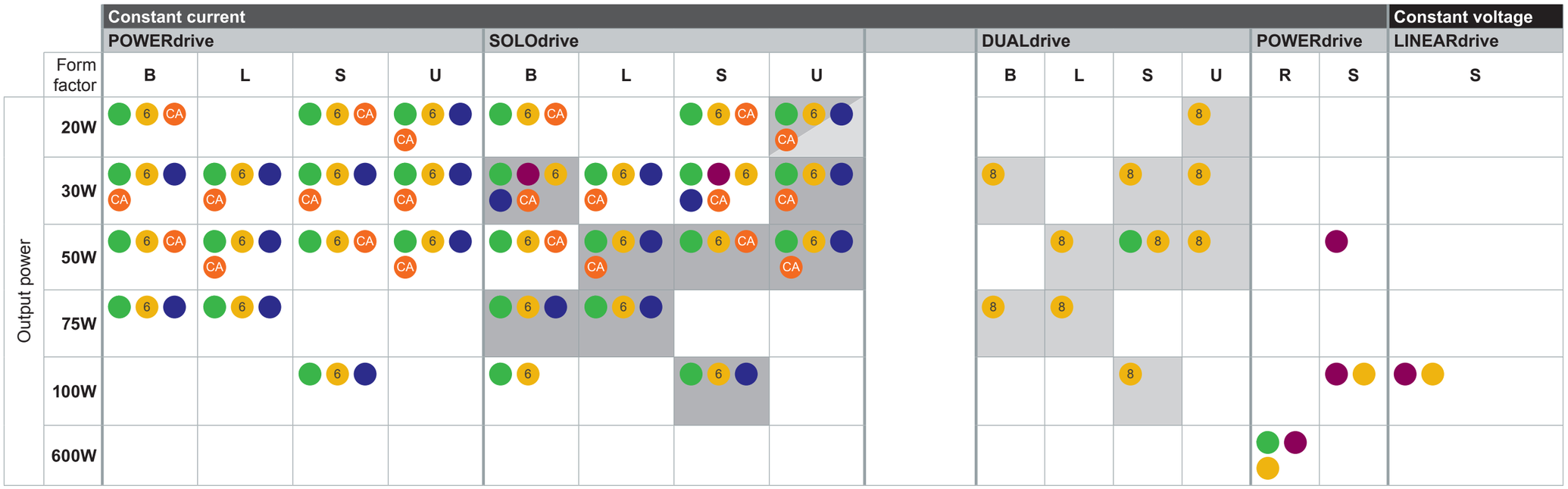
ENEC certified LED drivers



- 0 - 10V
- DMX
- LEDcode2 only
- DALI version-1
- 6 DALI-2 Device Type 6 (DT6)
- 8 DALI-2 Device Type 8 (DT8)
- PD PulseDimming

- DC powered product (needs a separate power supply)
- LightShape: for Tunable White applications
- LightShape: for Dim to Warm applications

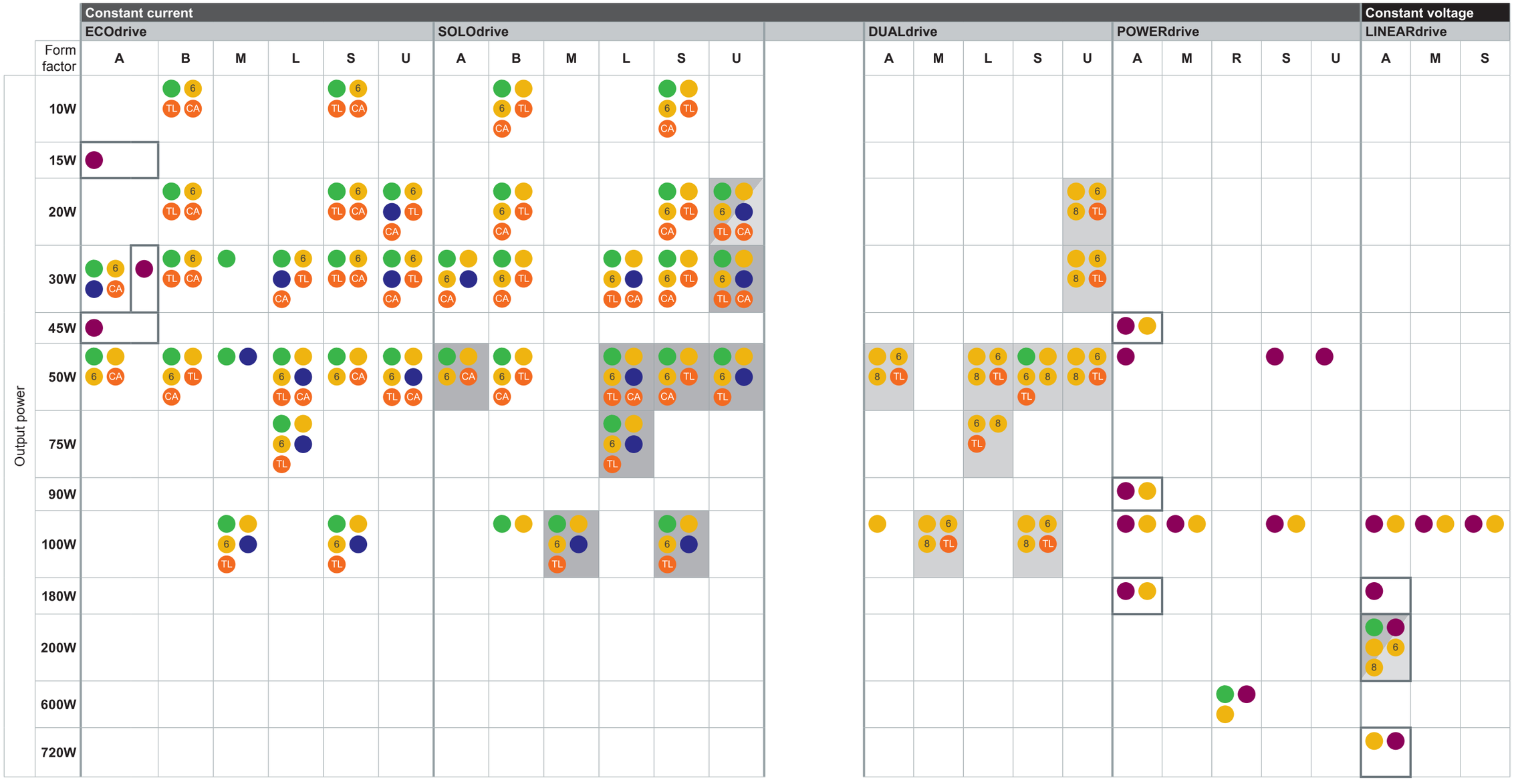
UL listed, Class P certified LED drivers



- 0 - 10V
- DMX
- LEDcode2 only
- DALI version-1
- 6 DALI-2 Device Type 6 (DT6)
- 8 DALI-2 Device Type 8 (DT8)
- PD PulseDimming
- CA CA Title 24 compliant (start-up time)

- DC powered product (needs a separate power supply)
- LightShape: for Tunable White applications
- LightShape: for Dim to Warm applications

UL recognized LED drivers



- 0 - 10V
- DMX
- LEDcode2 only
- DALI version-1
- 6 DALI-2 Device Type 6 (DT6)
- 8 DALI-2 Device Type 8 (DT8)
- PD PulseDimming
- TL Type TL certification
- CA CA Title 24 compliant (start-up time)

- DC powered product (needs a separate power supply)
- LightShape: for Tunable White applications
- LightShape: for Dim to Warm applications

BIS certified LED drivers

Output power	Form factor	Constant current																Constant voltage
		ECOdrive					SOLOdrive					DUALdrive				POWERdrive				LINEARdrive
		A	B	M	L	S	A	B	M	L	S	A	L	S	U	A	M	S	U	A
	20W	0-10V, LEDcode2 only, DALI-2 DT6		0-10V, DALI-2 DT6			0-10V, LEDcode2 only, DALI-2 DT6		0-10V, DALI-2 DT6											
	30W	0-10V, DALI-2 DT6				0-10V, DALI-2 DT6	0-10V, DALI-2 DT6													
	50W	0-10V, DALI-2 DT6	DALI-2 DT6		DALI-2 DT6		0-10V, DALI-2 DT6	0-10V, DALI-2 DT6		0-10V	0-10V, DALI-2 DT6	DALI-2 DT6	DALI-2 DT6	0-10V, DALI-2 DT8	DALI-2 DT6	DMX		DMX	DMX	
	100W						0-10V, DALI version-1		0-10V, DALI version-1		0-10V, DALI version-1					DMX, DALI version-1	DMX, DALI version-1	DMX, DALI version-1		DMX, DALI version-1
	180W																			DMX
	200W																			DMX, DALI version-1
	720W																			DMX, DALI version-1

TISI certified LED drivers

Output power	Form factor	Constant current													
		ECOdrive						SOLOdrive					DUALdrive			
		A	B	M	L	S	U	A	B	M	L	S	A	L	S	U
	20W	0-10V, LEDcode2 only, DALI-2 DT6		0-10V, DALI-2 DT6				0-10V, LEDcode2 only, DALI-2 DT6		0-10V, DALI-2 DT6						
	30W	0-10V, LEDcode2 only, DALI-2 DT6						0-10V, DALI-2 DT6								
	50W	0-10V, DALI-2 DT6	DALI-2 DT6		0-10V, DALI-2 DT6	0-10V, DALI-2 DT6	0-10V	0-10V, DALI-2 DT6	0-10V, DALI-2 DT6		0-10V, DALI-2 DT6	0-10V, DALI-2 DT6	DALI-2 DT6	DALI-2 DT6	0-10V, DALI-2 DT8	DALI-2 DT6

- 0 - 10V
- DMX
- LEDcode2 only
- DALI version-1
- 6 DALI-2 Device Type 6 (DT6)
- 8 DALI-2 Device Type 8 (DT8)
- DC powered product (needs a separate power supply)
- LightShape: for Tunable White applications
- LightShape: for Dim to Warm applications

PSE certified LED drivers*

		Constant current				Constant voltage	
		ECOdrive	SOLOdrive	DUALdrive	POWERdrive	LINEARdrive	
	Form factor	A	A	A	A	A	
Output power	15W	●					
	30W	● ● 6 PD	● 6 PD				
	45W	●			● ●		
	50W	● 6	● 6	6			
	90W				● ●		
	180W				● ●	●	
	200W					● ● ●	6 8
	720W					● ●	

* Our DC drivers have an input voltage lower than 50V DC, therefore PSE certification is not required according to the official guide lines.

● 0 - 10V
● DMX
● LEDcode2 only

● DALI version-1
6 DALI-2 Device Type 6 (DT6)
8 DALI-2 Device Type 8 (DT8)
PD PulseDimming

RCM certified LED drivers

		Constant current										Constant voltage		
		ECOdrive		SOLOdrive		DUALdrive		POWERdrive				LINEARdrive		
	Form factor	A	M	A	M	A	M	A	M	S	U	A	M	S
Output power	15W	●												
	20W	● ● 6	● ● 6	● ● 6	● ● 6	6 8								
	30W	●						● ●						
	45W	●						●		●	●			
	90W							● ●						
	100W							● ●	● ●	● ●		● ●	● ●	● ●
	120W						●							
	180W							● ●				●		
	200W											● ● ●		
	720W											● ●		

** For our DC drivers RCM certification is not required according to the official guide lines.

☐ DC powered product (needs a separate power supply)
LightShape: for Tunable White applications
LightShape: for Dim to Warm applications

Lighting controls protocols

DALI-2
DALI-2 is an international standard for the DALI dimming protocol.
Compared to DALI version-1 devices current on the market, DALI-2 certified components bring the promise of significantly improved interoperability and additional functionality.
For more information: https://www.digitalilluminationinterface.org/certification/

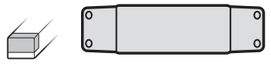
DMX
The international standard reference for DMX dimming is ANSI E1.20 and E1.11 – 2008, USITT DMX512-A.

0-10V dimming
The international standard for 0-10V dimming is IEC 60929 annex E; for Europe EN 60929 annex E.
Compliance of eldoLED drivers:
Below 0.6V: enabling standby mode.
From 0.6V to 10V: with IEC/EN 60929 annex E.
For detailed dimming characteristics see the 0-10V response chart in the Control Characteristics section of the product datasheets.

Pulse dimming
Pulse dimming is a feature on eldoLED DALI drivers that enables easy switching and dimming. Pulse dimming uses standard mains voltage (max 250V AC) switches for lighting control.

Form factor overview

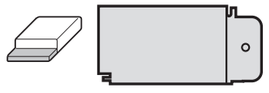
A



20W, single channel driver: 161 x 42 x 31 mm

20W, dual channel driver: 183 x 42 x 31 mm

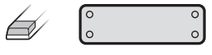
30W: 210 x 41 x 34 mm



50W: 153 x 76 x 31 mm

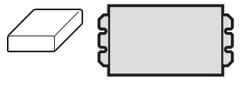
100W: 388 x 42 x 30 mm

POWERdrive 45W, 90W, 180W (DC product): 193 x 50 x23 mm

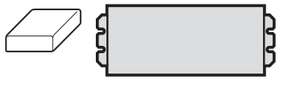


ECOdrive 15W, 45W and LINEARdrive 180W, 200W, 720W (DC product): 153 x 50 x 23 mm

B



10W, 20W, 30W, 50W: 130 x 72 x 35 mm



75W: 174 x 72x 29 mm

L

30W, 50W: 320 x 30 x 26 mm

75W: 424 x 30 x 27 mm

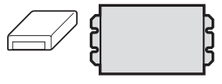
M

20W, single channel driver: 129 x 42 x 31 mm

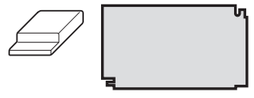
20W dual channel driver: 184 x 42 x 31 mm

100W, 120W: 370 x 41 x 30 mm

S



10W, 20W, 30W:130 x 72 x 35 mm



50W: 130 x 76 x 30 mm

100W: 230 x 80 x 30 mm

U

20W, 30W: 280 x 30 x 21 mm

50W: 444 x 30 x 21 mm

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