



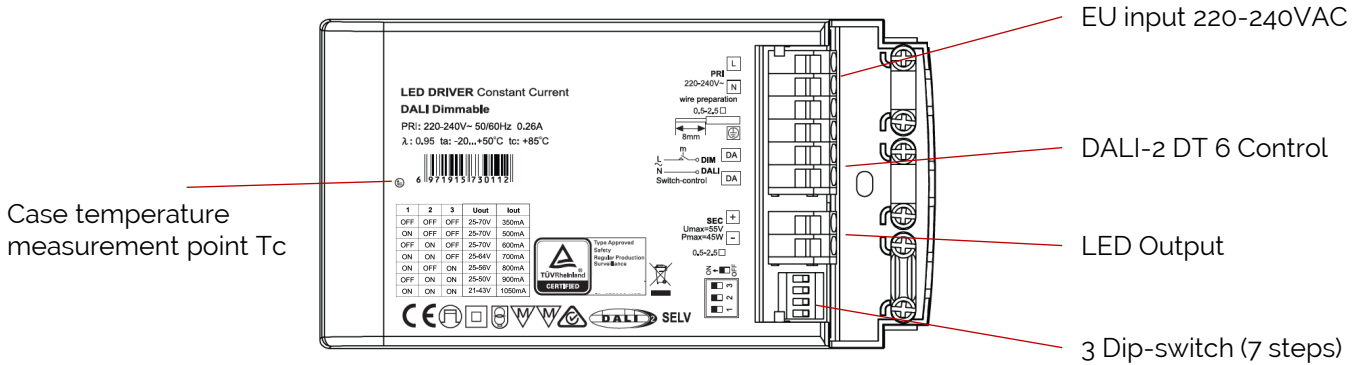
# Bridgelux® Pallas-D Single Channel 45W (DALI-2) Brick Driver

Product Brief

# Product Feature Map

# Preliminary Product Brief

Bridgelux Pallas-D (DALI) Single Channel 45W Driver provides dynamic constant current output for LED modules and arrays. This Driver interoperates with DALI-2 standard lighting systems and protocols and allows for simple integration of Bridgelux's and all major brands White Arrays and Linear modules. Please visit [www.bridgelux.com](http://www.bridgelux.com) for more information.



## Product Nomenclature

The part number designation for Bridgelux Pallas-D (DALI) Single Channel 45W Driver is explained as follows:

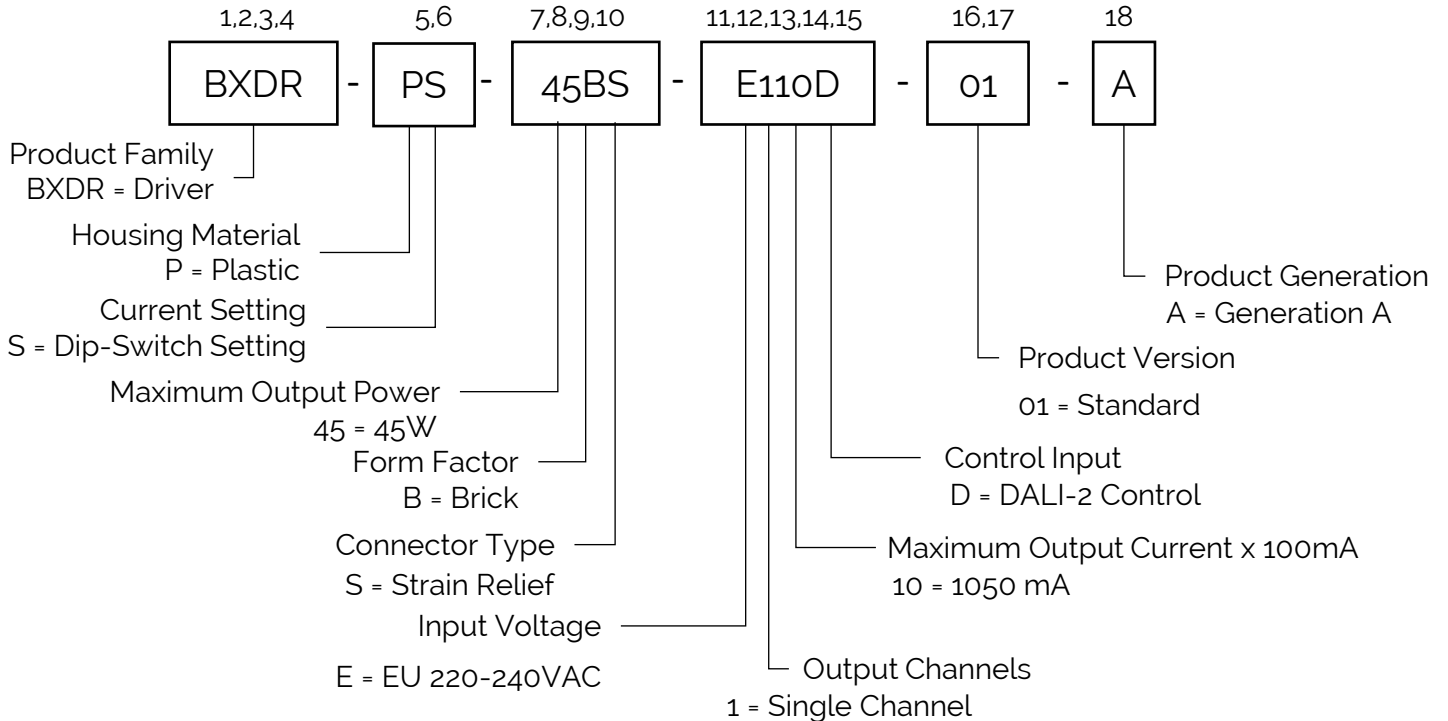


Table 1: Product Selection Guide

Part Number	Configuration
BXDR-PS-45BS-E110D-01-A	Brick with strain relief built-in

Table 2: Input Electrical Characteristics

Parameter	Unit	Specification	
Nominal voltage	V	220 – 240	
Nominal frequency	Hz	50 / 60	
AC voltage range	V	198 – 264	
DC voltage range	V	176 - 370	
Nominal current	A	0.26	
Power factor (Full load)		≥ 0.9 (350, 500 mA)	≥ 0.95 (600 mA – 1050 mA)
THD (Full load)	%	≤ 25 (350, 500 mA)	≤ 15 (600 mA – 1050 mA)
Efficiency (Full load)	%	≥ 87	
NO load	W	≤ 0.5	
Protection class		II	
Inrush current(Cold start)	A pk	< 20 (th = 100 μs)	
Max. units per circuit breaker		B10: 23 B16: 37 C10: 46 C16: 74	

Table 3: Output Electrical Characteristics

Parameter	Unit	Specification						
Nominal voltage range	V	25-70V	25-70V	25-70V	25-64V	25-56V	25-50V	21-43V
Maximum voltage(Open Circuit)	Vdc	≤ 80						
Nominal current	mA	350mA	500mA	600mA	700mA	800mA	900mA	1050mA
Current accuracy	%	+/- 5						
Current ripple LF < 200Hz	%	≤ 3						
Pst LM		≤ 1						
SVM		≤ 0.4						
Maximum power	W	45						
Galvanic isolation:  <b>SELV</b>		Output voltage of SELV controlgear not exceed limits in 10.4 of IEC61347-1 during the test of 15.1 and 15.2 <i>IEC61347-1 10.4: "Controlgear providing SELV may have accessible conductive parts in the SELV circuit; if : the rated output voltage exceed 60V ripple free d.c., the touch current does not exceed 0.7 mA (peak).</i>						

Figure 1: Power Factor vs. Load

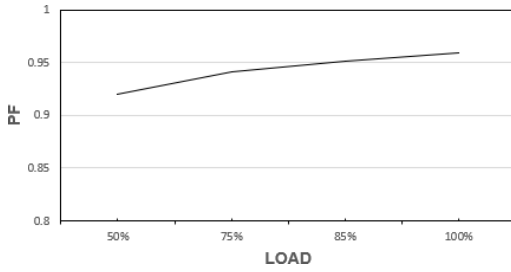


Figure 2: Total Harmonic Distortion vs. Load

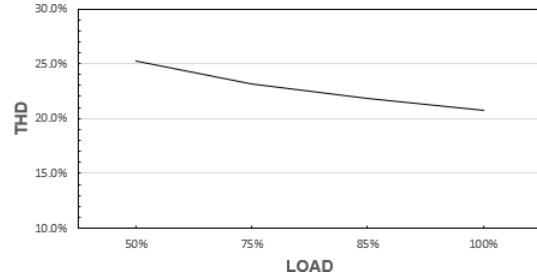


Figure 3: Efficiency vs. Load

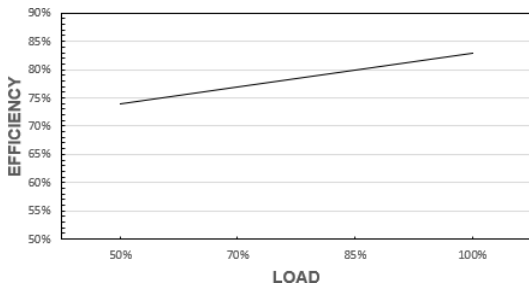


Figure 4: Expected Life Time

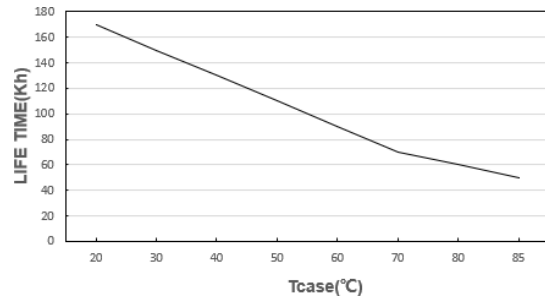
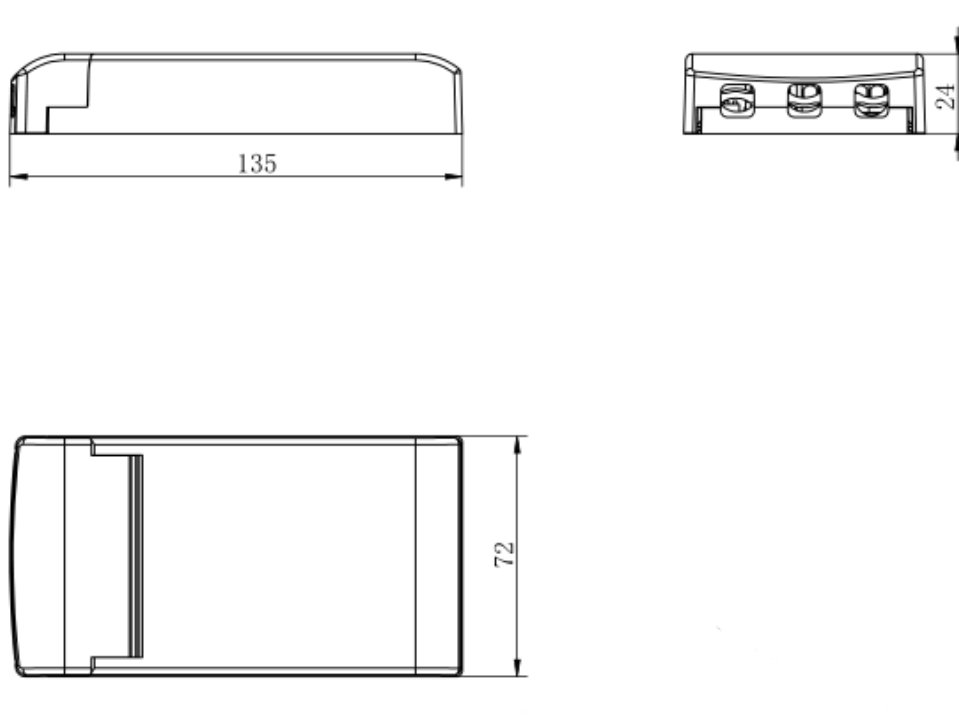


Table 4: Product Selection Guide

Characteristics	Specification
Dimensions	135.0 mm (L) x 72.0 mm (W) x 24.0 mm (H)
Enclosure Materials	PC Plastic
Weight	180 g
Ingress Protection	IP20

Figure 5: Mechanical Drawing



Notes for Figure 5:

1. Drawing dimensions are in millimeters
2. Unless otherwise specified, all linear tolerances are +/-1.0mm

## Wiring Diagram

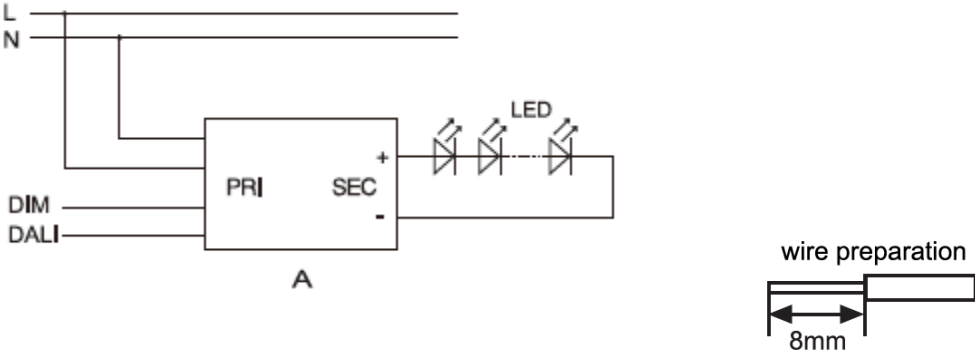


Table 5: **Wiring**

PRI		
PRI	Cable cross-section	0.5 – 2.5 mm <sup>2</sup> / AWG 20 - 13
	Stripping	8 mm
SEC	Cable cross-section	0.5 – 2.5 mm <sup>2</sup> / AWG 20 - 13
	Stripping	8 mm

Notes for Table 5:

- Hot plug-in or secondary switching of LEDs is not permitted and may cause a very high current to the LEDs.
- Unless otherwise specified, all linear tolerances are +/-1.0mm

## DIP-switch operation instructions & operating window

Table 6: **Dip-switch operation instructions & operating window**

Dip-switch setting				U <sub>out</sub>	I <sub>out</sub>
1	2	3			
OFF	OFF	OFF	ON	25-70V	350 mA
ON	OFF	OFF	ON	25-70V	500mA
OFF	ON	OFF	ON	25-70V	600 mA
ON	ON	OFF	ON	25-64V	700 mA
ON	OFF	ON	ON	25-56V	800 mA
OFF	ON	ON	ON	25-50V	900 mA
ON	ON	ON	ON	21-43V	1050 mA

Table 7: Environmental Conditions

Parameter	Specification
Ambient Operating Temperature	-20°C to + 50°C
Max. Case Temperature Tc	+85°C (max)
Max. Case Temperature (In fault condition)	+110°C
Humidity Rating	Maximum 85% Relative Humidity, non condensing
Storage Temperature	-20°C to + 70°C
Expected Lifetime	50,000 hours (Tc < 85°C)

Table 8: Regulatory Approvals and Compliance

Specification	Value	Condition
DC or AC supplied electronic controlgear for LED modules	EN 62384	electronic controlgear for use on DC or AC supplies up to 1 000 V (alternating current at 50 Hz or 60 Hz) and with an output frequency which can deviate from the supply frequency
Conducted and Radiated EMI	EN 55015:2019+A1:2020 (CISPR 15:2018)	
Harmonic Current Emissions	EN IEC 61000-3-2:2019	
Voltage Fluctuations & Flicker	IEC 61000-3-3:2013+A1:2019	
ESD (Electrostatic Discharge)	IEC 61547:2009 Section 5.2 Test des.: IEC 61000-4-2	4 kV contact discharge, 8 kV air discharge, level 3
Continuous Radiated Disturbance	IEC 61547:2009 Section 5.3 Test des.: IEC 61000-4-3	3 V/m, 80 - 1000 MHz, 80% modulated at distance of 3 meters
Electrical Fast Transient	IEC 61547:2009 Section 5.5 Test des.: IEC 61000-4-4	± 1 kV on AC power port for 1 minute,
Surge	IEC 61547 Section 5.7 Test des.: IEC 61000-4-5	± 1 kV (differential mode) ± 2 kV (common mode)
Continuous Conducted Disturbance	IEC 61547:2009 Section 5.6 Test des.: IEC 61000-4-6	3V, 0.15-80 MHz, 80% modulated, Level 2
Voltage Dips	IEC 61547 Section 5.8, 5.9 Test des.: IEC 61000-4-11	70% dip during 25 cycles @ 50Hz, 30 cycles @ 60Hz 0% dip during ½ cycles
Touch Current	EN60598-1	lower than 0.7 mA, according to EN 60598-1 annex. G and EN 61347-1 annex A

## Regulatory Standards (2)

# Preliminary Product Brief

Table 9: Safety Agency Approvals

Specification	Value	Condition
ENEC / CE / UKCA	EN 61347-1:2015, EN 61347-2-13:2014+A1	ENEC Certification pending
Glow wire test	EN 61347-1:2015	Passed with increased temperature at 850°C

Table 10: DALI-2 DT6 Standards

Specification	Value	Condition
System Components (Part 101)	EN62386-101	
Control Gear (Part 102)	EN62386-102	
LED Module (Part 207)	EN62386-207	





### Application Notes

Please contact your Bridgelux sales representative for assistance on obtaining application support when designing with the Bridgelux Pallas-D Single Channel Driver. For a list of available resources, visit [www.bridgelux.com](http://www.bridgelux.com).

## Precautions

### CAUTION: PRODUCT HANDLING

Handle the Pallas-D Single Channel Driver with care to prevent any damage from mechanical shock. It is recommended to handle this driver in a static-free environment. Do not open or disassemble the product. To maintain product warranty, the installer is responsible for ensuring that the driver's operating conditions do not exceed the maximum conditions stated within this data sheet.

### CAUTION: PRODUCT INSTALLATION

Incorrect installation of the Pallas-D Single Channel Driver can cause irreparable damage to the driver, connected LEDs. Pay attention when connecting the LED load and observe the correct polarity of the output terminals as specified in this data sheet and on the driver label.

### CAUTION: ELECTRIC SHOCK

Be aware of the possibility of an electric shock hazard which can result in serious injury or death. Disconnect power before servicing or installing this device.

## Disclaimers

### MINOR PRODUCT CHANGE POLICY

The rigorous qualification testing on products offered by Bridgelux provides performance assurance. Slight cosmetic changes that do not affect form, fit, or function may occur as Bridgelux continues product optimization.

At Bridgelux, we help companies, industries and people experience the power and possibility of light. Since 2002, we've designed LED solutions that are high performing, energy efficient, cost effective and easy to integrate. Our focus is on light's impact on human behavior, delivering products that create better environments, experiences and returns—both experiential and financial. And our patented technology drives new platforms for commercial and industrial luminaires.

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