

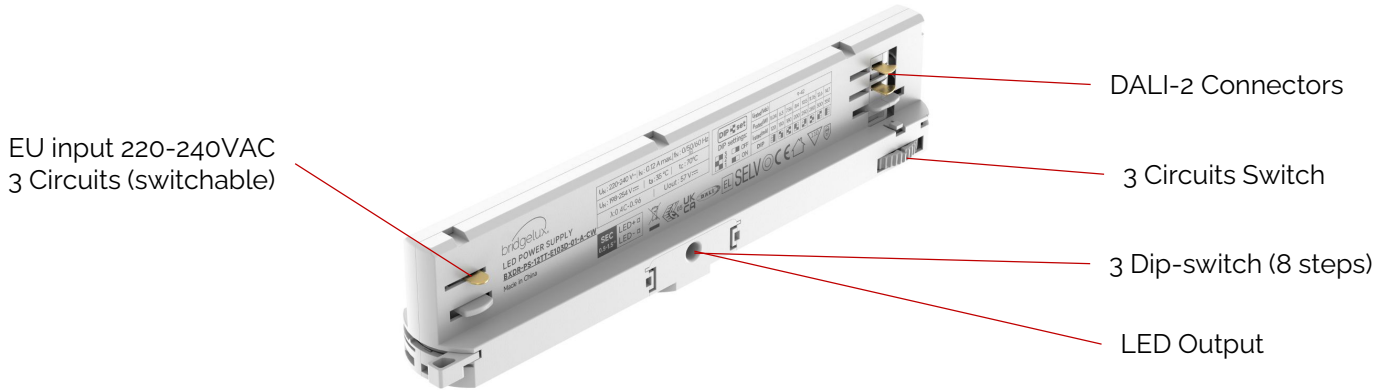


# Bridgelux® PallasTrack-D Single Channel 12W (DALI-2) Brick Driver

Product Data Sheet DS1205

# Product Feature Map

Bridgelux PallasTrack-D (DALI-2) Single Channel 12W 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 PallasTrack-D (DALI-2) Single Channel 12W Driver is explained as follows:

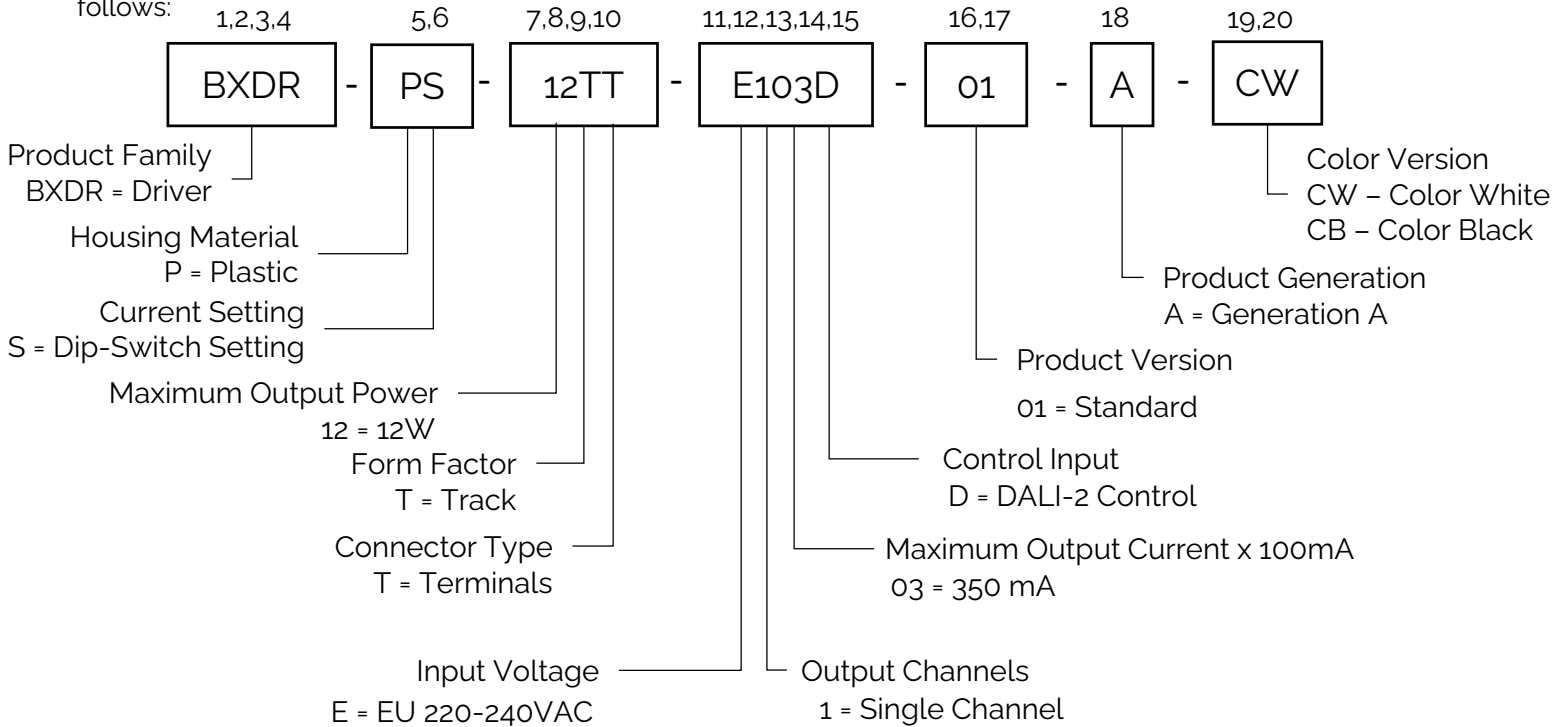


Table 1: Product Selection Guide

Part Number	Configuration
BXDR-PS-12TT-E103D-01-A-CW	12W PallasTrack-D driver, white color
BXDR-PS-12TT-E103D-01-A-CB	12W PallasTrack-D driver, white black

# Electrical Characteristics

Table 2: Input Electrical Characteristics

Parameter	Unit	Specification
Nominal voltage	V	220 – 240
Nominal frequency	Hz	50 / 60
AC voltage range	V	176 – 264
DC voltage range	V	198 – 280
Nominal current	A	0.12
Power factor (Full load)		≥ 0.9
THD (Full load)	%	≤ 10
Efficiency (Full load)	%	≥ 82
Standby /NO load	W	≤ 0.5W
Protection class		II
Inrush current(Cold start)	A pk	< 7.96 (th = 116.0 μs)
Max. units per circuit breaker		B10: 66; B16: 106; B20: 133; C10: 66; C16: 106; C25: 133

Table 3: Output Electrical Characteristics

Parameter	Unit	Specification							
Nominal voltage range	V	9-42V	9-42V	9-42V	9-42V	9-42V	9-42V	9-42V	9-42V
Maximum voltage(Open Circuit)	Vdc	≤ 55							
Nominal current	mA	120	150	180	200	250	280	300	350
Current accuracy	%	+/- 5%							
Dimming		Yes DALI-2 (IEC 62386-101,102,207) & Push Dim							
Dimming Range		1% – 100%							
Current ripple LF < 200Hz	%	≤ 5							
Pst LM		≤ 1							
SVM		≤ 0.4							
Maximum power	W	12							
Galvanic isolation:		<b>SELV</b>							

# Electrical Characteristics

Figure 1: Typical Operating Window

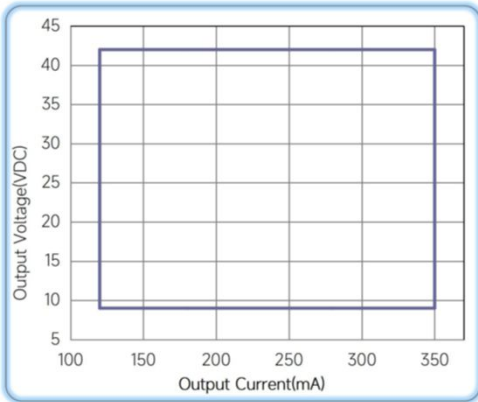


Figure 2: Typical THD vs. Load

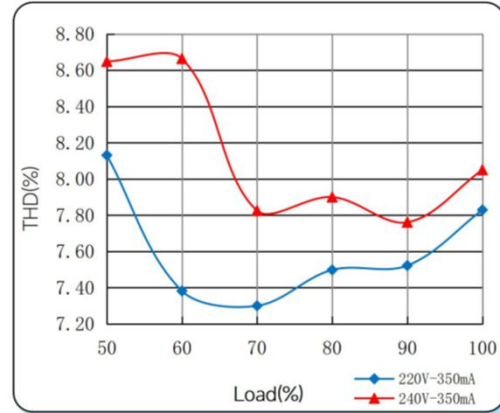


Figure 3: Typical Efficiency vs. Load

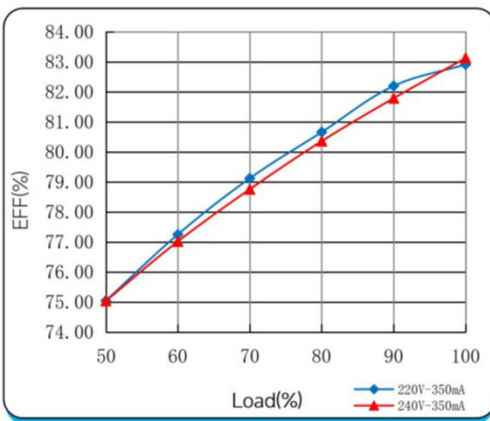


Figure 4: Typical Power Factor vs. Load

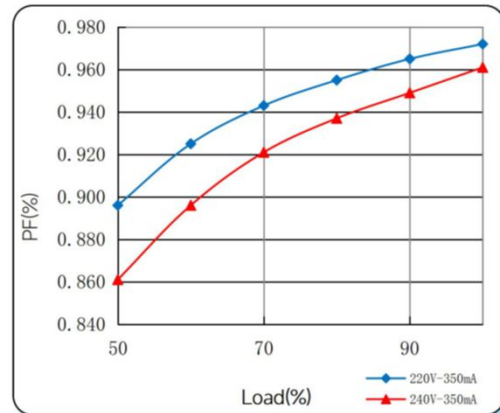
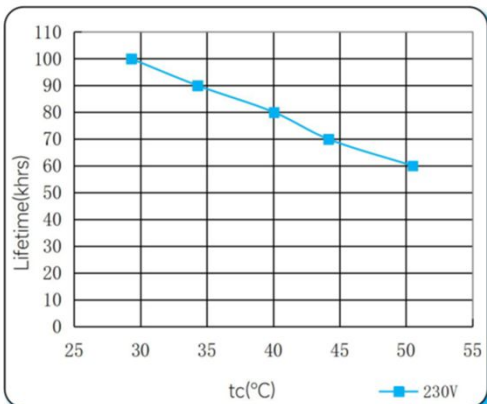


Figure 5: Est. Lifetime vs. Case Temperature

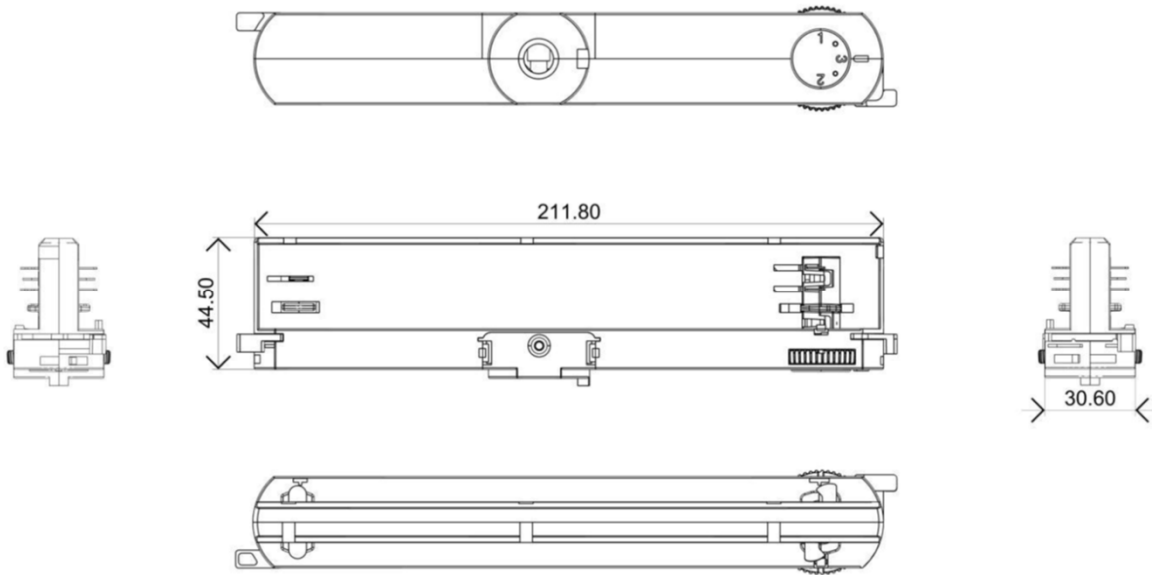


# Mechanical Characteristics

Table 4: Product Selection Guide

Characteristics	Specification
Dimensions	212 mm (L) x 31 mm (W) x 45 mm (H)
Enclosure Materials	PC Plastic
Weight	128 g
Ingress Protection	IP20

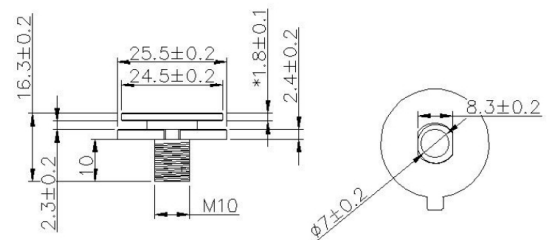
Figure 6: Mechanical Drawing



Notes for Figure 6:

1. Drawing dimensions are in millimeters
2. Unless otherwise specified, all linear tolerances are  $\pm 1.0$ mm.

Suitable Nipples: Typical M10x8



## Track Compatibility

Nordic Aluminum (Global Trac Pro / Global Trac Pulse)

Stucchi (OneTrack, 3 Circuit Track)

# Wiring Diagram

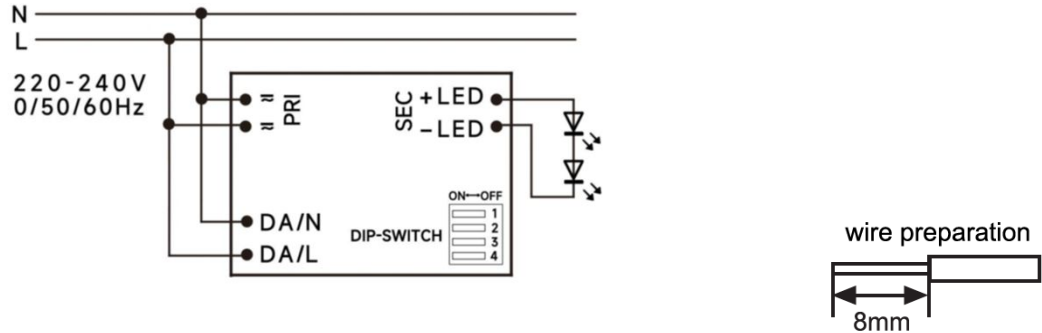


Table 5: Wiring

SEC		
Output	Cable cross-section	0.5 – 1.5 mm <sup>2</sup> / AWG 20 – 15
	Stripping	8 – 9 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	9-42V	120 mA
ON	OFF	OFF	9-42V	150 mA
OFF	ON	OFF	9-42V	180 mA
ON	ON	OFF	9-42V	200 mA
OFF	OFF	ON	9-42V	250 mA
ON	OFF	ON	9-42V	280 mA
OFF	ON	ON	9-42V	300 mA
ON	ON	ON	9-42V	350 mA

# Environmental and Regulatory Standards

Table 7: Environmental Conditions

Parameter	Specification
Ambient Operating Temperature	-20°C to + 45°C
Max. Case Temperature Tc	+70°C (max)
Max. Case Temperature (In fault condition)	+110°C
Humidity Rating	Maximum 90% Relative Humidity, non condensing
Storage Temperature	-20°C to + 60°C
Expected Lifetime	60,000 hours (Tc < 50°C)

Table 8: Regulatory Approvals and Compliance

Specification	Value	Condition
Conducted and Radiated EMI	EN 55015:2019+A11:2020 (CISPR 15:2018)	
Harmonic Current Emissions	EN IEC 61000-3-2:2019+A1:2021	
Voltage Fluctuations & Flicker	IEC 61000-3-3:2013+A1:2019+A2:2021	
ESD (Electrostatic Discharge)	IEC 61547:2009 Section 5.2 Test des.: IEC 61000-4-2:2009	± 4 kV contact discharge, ± 8 kV air discharge, Performance criteria.: B
Radiated Electromagnetic Field Immunity	IEC 61547:2009 Section 5.3 Test des.: IEC 61000-4-3:2020	80-1000MHz.,3V/m,1kHz 80%AM(sine wave), modulated at distance of 3 meters
Electrical Fast Transient	IEC 61547:2009 Section 5.5 Test des.: IEC 61000-4-4:2012	±1KV, 5kHz repetition frequency.
Surge	IEC 61547 Section 5.7 Test des.: IEC 61000-4-5:2014+A1:2017	<25W 0.5KV L-N; >25W 1.0KV L-N;
Continuous Conducted Disturbance	IEC 61547:2009 Section 5.6 Test des.: IEC 61000-4-6:2014	0.15MHz~80MHz.,3V(r.m.s.) 1kHz , 80%AM
Voltage Dips	IEC 61547 Section 5.8, 5.9 Test des.: IEC 61000-4-11:2020	Voltage reduction 30% Number of periods 10,Performance criteria.: C; Voltage reduction 100% Number of periods 0.5,Performance criteria.: B.
Touch Current	EN60598-1	lower than 0.7 mA, according to EN 60598-1 annex. G and EN 61347-1 annex A

## Regulatory Standards (continued)

Table 9: Safety Agency Approvals

Specification	Value	Condition
ENEC / CE / UKCA	EN 61347-1:2015, AMD1:2017 EN 61347-2-13:2014 AM<D1:2016	*ENEC Certification pending
Glow wire test	EN 61347-1:2015	Passed with increased temperature at 650°C

Table 10: DALI-2 DT6 Standards

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



## Protection

Table 11: Protection

Parameters	Specification
Over Load Protection	103% - 120% Yes / Auto Resume
Over Voltage Protection	> 55Vdc Yes / Auto Resume
Short Circuit Protection	Yes / Auto Resume

## Packaging

Table 12: Packaging Box Configuration - BXDR-PS-12TT-E103D-01-A-xx

Parameters	Specification
Driver quantity	56 pcs
Outer dimensions	420 X 325 X 185 mm
Weight	7.0 kg



# Design Resources

## Application Notes

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

# Precautions

## CAUTION: PRODUCT HANDLING

Handle the PallasTrack-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 PallasTrack-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.

## About Bridgelux: Bridging Light and Life™

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.

For more information about the company, please visit

[bridgelux.com](http://bridgelux.com)

[twitter.com/Bridgelux](https://twitter.com/Bridgelux)

[facebook.com/Bridgelux](https://facebook.com/Bridgelux)

[youtube.com/user/Bridgelux](https://youtube.com/user/Bridgelux)

[linkedin.com/company/bridgelux](https://linkedin.com/company/bridgelux)

WeChat ID: BridgeluxInChina



46410 Fremont Blvd

Fremont, CA 94538 USA

Tel (925) 583-8400

[www.bridgelux.com](http://www.bridgelux.com)