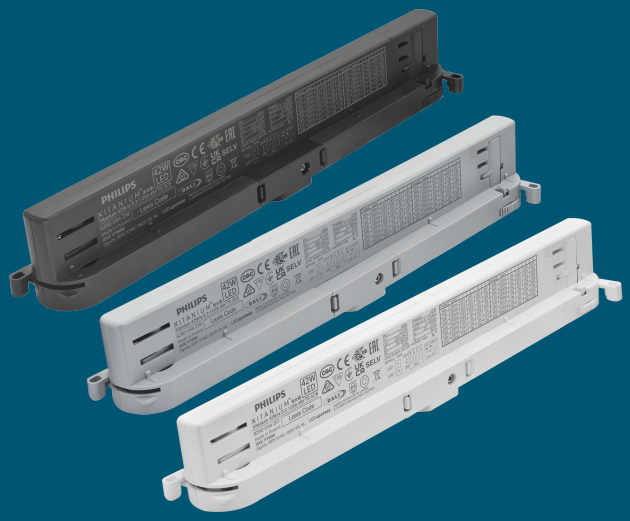
Xitanium

Datasheet

Xitanium track DALI adaptor drivers (3C)

Xitanium 42W/a 0.3-1.05A 48V TD 3CG
9290 034 25906



Enabling future-proof LED technology

Philips Xitanium LED Point drivers are designed to operate with LED solutions used both in built-in and independent applications such as down light, spot light and track light. Xitanium drivers have common features such as low ripple output current, adjustable output current and 50,000 hours lifetime. They are specifically designed to ensure great EMI performance, high robustness and safe usage.

Benefits

- Driver design based on Philips experience and knowledge of different applications
- Suitable power option matching common lumen packages/applications
- Track adaptor housing design for compact track luminaire designs

Application

- Public buildings (airports, cinemas, theaters, exhibition halls)
- Retail (supermarkets, shops)
- Offices

Features

- DALI 2.0 compliant with additional memory banks for energy metering and diagnostics
- Compact size
- Optimized output current choice via dipswitch
- Long lifetime
- Low output current ripple, low input current THD
- Suitable for 3-phase track systems
- Available in white, black and grey housing color

Logistical data

Specification item	Value
Product name	Xitanium 42W/a 0.3-1.05A 48V TD 3CG
EOC	872016923691200
Logistic code 12NC	9290 034 25906
EAN1 (GTIN)	8720169236912
EAN3 (box)	8720169236929
Pieces per box	40
Weight	155 gram

Specification item	Value
Product name	Xitanium 42W/a 0.3-1.05A 48V TD 3CW
EOC	872016923687500
Logistic code 12NC	9290 034 25706
EAN1 (GTIN)	8720169236875
EAN3 (box)	8720169236882
Pieces per box	40

Specification item	Value
Product name	Xitanium 42W/a 0.3-1.05A 48V TD 3CB
EOC	872016923689900
Logistic code 12NC	9290 034 25806
EAN1 (GTIN)	8720169236899
EAN3 (box)	8720169236905
Pieces per box	40

Electrical input data

Specification item	Value	Unit	Condition
Rated input voltage range	220...240	V_{ac}	Nominal range
Rated input voltage	230	V_{ac}	
Rated input frequency	50...60	Hz	Nominal range
Rated input current	0.22	A	@ rated output power @rated input voltage
Rated input power	49.0	W	@ rated output power @ rated input voltage
Power factor performance range	≥ 0.80 C		@ rated output power
Total harmonic distortion	20	%	@ rated output power @ rated input voltage
Efficiency	87.0	%	@ rated input voltage @ rated output power @ max. Iout
Input voltage AC	198...264	V_{ac}	Safety operational range
Input frequency AC	45...66	Hz	Safety operational range
Standby Power (no load)	0.5	W	
Isolation input to output	Reinforced		

Electrical output data

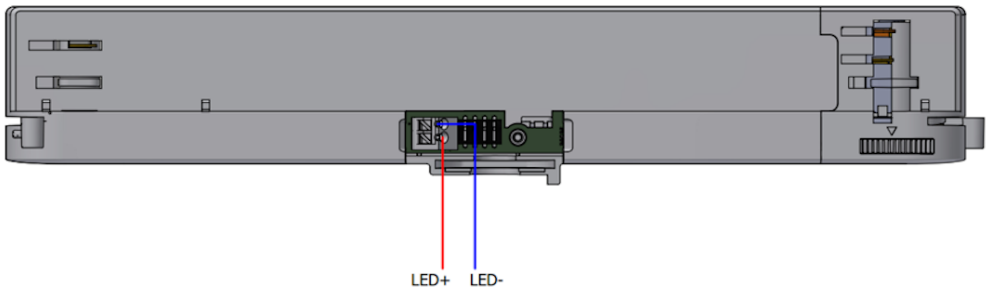
Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	5...48	V_{dc}	
Output voltage max.	60	V	Maximum output voltage (rms)
Output current	300...1050	mA	
Output current min programmable	300	mA	
Min output current	6	mA	
Output current tolerance ±	5	%	
Output current ripple LF	≤ 4	%	Ripple = peak / average, < 3kHz
Output P_{st}^{LM}	≤ 1.0		
Output SVM	≤ 0.6		
Output power	0.0...42.0	W	
Minimum performance output power	10	W	Power factor > 0.9 and THD < 20%

Control interfaces

Specification item	Value	Unit	Condition
Control method	Corridor Mode, DALI, TD		DALI parts: 101, 102, 207, 251, 252, 253
Dimming range	1...100	%	Output current min dimming 6mA
Isolation controls input to output	Reinforced		acc. IEC61347-1

Wiring and Connections

Specification item	Value	Unit	Type
Output wire cross-section	0.5...1.5 / 20...16	mm^2 / AWG	solid / stranded wire
Output wire strip length	8.5...9.5	mm	
Maximum cable length	0.6	m	Total length of wiring including LED module, one way



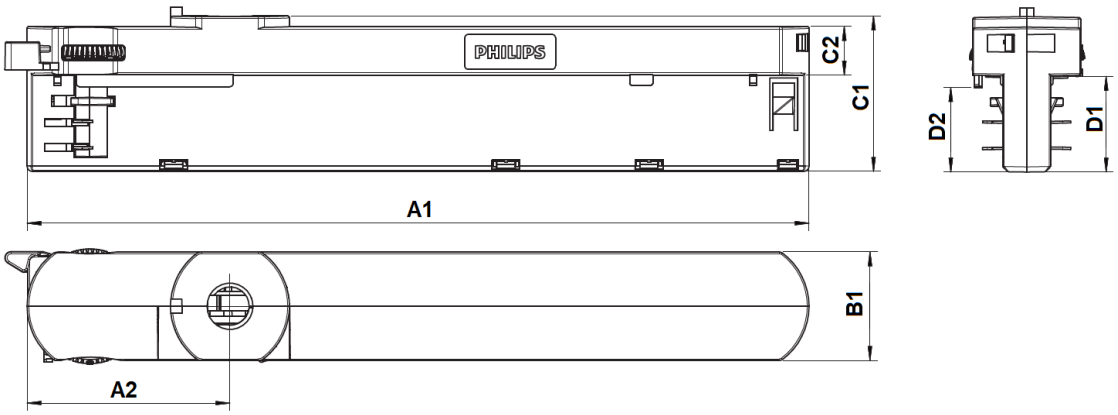
Prated	Irated	1	2	3	4	Prated	Irated	1	2	3	4
14W	300mA	OFF	OFF	OFF	OFF	34W	700mA	ON	OFF	OFF	OFF
17W	350mA	OFF	OFF	OFF	ON	36W	750mA	ON	OFF	OFF	ON
19W	400mA	OFF	OFF	ON	OFF	38W	800mA	ON	OFF	ON	OFF
22W	450mA	OFF	OFF	ON	ON	41W	850mA	ON	OFF	ON	ON
24W	500mA	OFF	ON	OFF	OFF	42W	900mA	ON	ON	OFF	OFF
26W	550mA	OFF	ON	OFF	ON	42W	950mA	ON	ON	OFF	ON
29W	600mA	OFF	ON	ON	OFF	42W	1000mA	ON	ON	ON	OFF
31W	650mA	OFF	ON	ON	ON	42W	1050mA	ON	ON	ON	ON

Isolation

Insulation per IEC61347-1	Input	Output	Control
Input	-	Reinforced	Basic
Output	Reinforced	-	Reinforced
Control	Basic	Reinforced	-

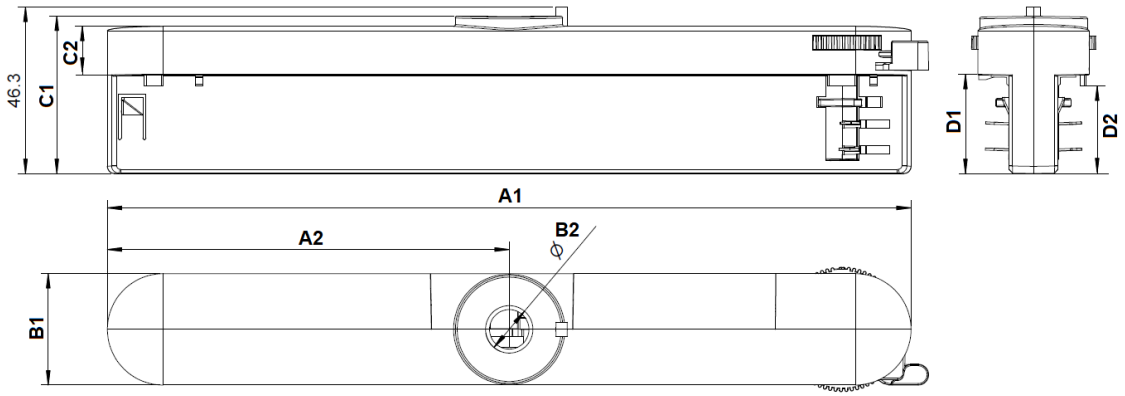
Dimensions and weight (for housing Track Driver 224 left)

Specification item	Value	Unit	Tolerance (mm)
Length (A1)	224	mm	± 1.5
Mounting hole distance (A2)	58.1	mm	± 1.5
Width (B1)	31	mm	± 1
Height (C1)	44.4	mm	± 1
Height (C2)	13.9	mm	± 0.5
Mounting hole diameter (D1)	27.3	mm	± 0.5
Mounting hole diameter (D2)	24.4	mm	± 0.5
Weight	155	gram	
Housing color	Grey (RAL 7040)		



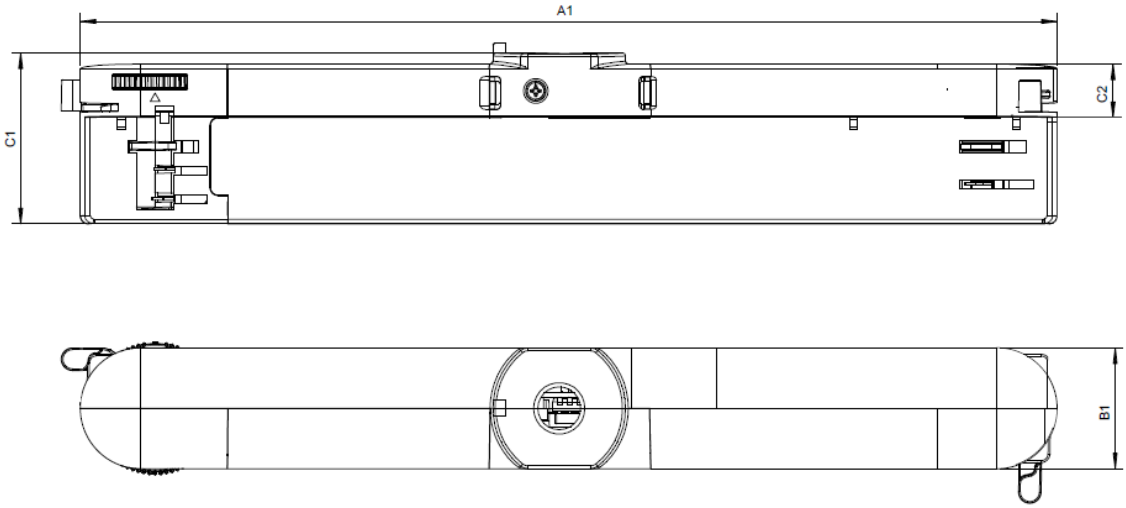
Dimensions and weight (for housing Track Driver 224 middle)

Specification item	Value	Unit	Tolerance (mm)
Length (A1)	224	mm	
Mounting hole distance (A2)	112	mm	
Width (B1)	31	mm	
Height (C1)	43.8	mm	
Height (C2)	13.7	mm	
Mounting hole diameter (D1)	27.3	mm	
Mounting hole diameter (D2)	24.4	mm	
Weight	155	gram	
Housing color	Grey (RAL 7040)		



Dimensions and weight (for housing Track DS 251mm)

Specification item	Value	Unit	Tolerance (mm)
Length (A1)	251	mm	± 1.5
Width (B1)	31	mm	± 1
Height (C1)	43.8	mm	± 1
Height (C2)	13.7	mm	± 1
Weight	155	gram	
Housing color	Grey (RAL 7040)		

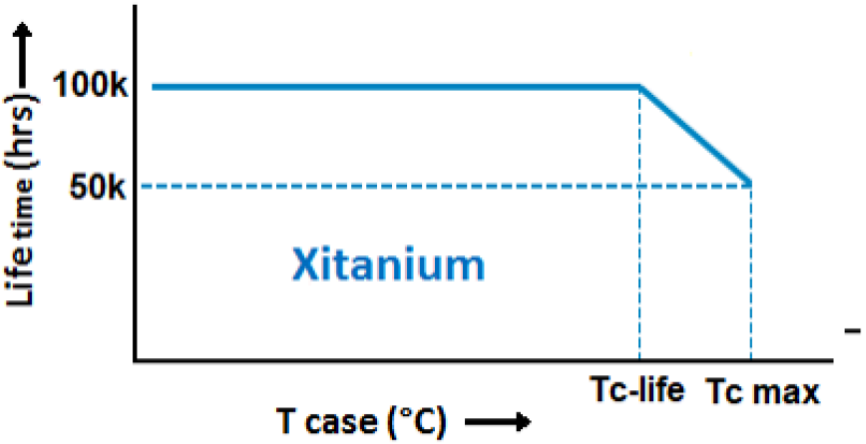


Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-20...+35	°C	Higher ambient temperature allowed as long as Tcase-max is not exceeded
Tcase-max	80	°C	Maximum temperature measured at T_{case}-point
Tcase-life	80	°C	Measured at T_{case}-point
Maximum housing temperature	130	°C	In case of a failure, inherent by design
Relative humidity	10...90	%	Non-condensing

Lifetime

Specification item	Value	Unit	Condition
Driver lifetime	50,000	hours	Measured temperature at Tcase-point is Tcase-life. Maximum failures = 10%



Maximum failures = 10%

Temperature [°C]	Lifetime	Unit	Condition
80	50000	hr	Temperature measured @Tc point
75	>50000	hr	
70	>50000	hr	

Storage temperature and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-25...+85	°C	
Relative humidity	5...95	%	Non-condensing

Programmable features

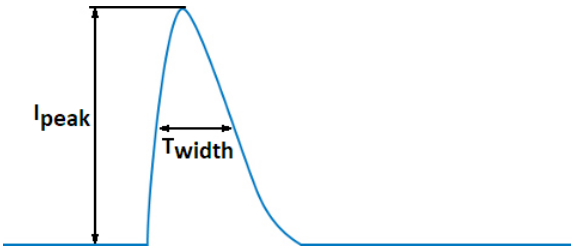
Specification item	Available	Default setting	Condition
Set Adjustable Output Current (AOC)	DipSwitch, Programmable	300 mA	Current setting via Dipswitch or MultiOne AOC. Default setting: Dipswitch enabled.
NTC on LEDset	No		
Adjustable Light Output (ALO)	Yes	OFF	
Constant Light Output (CLO)	Yes	OFF	
Touch & Dim (TD)	Yes	ON	
Corridor Mode	Yes	ON	Default: T1=55s, T2=12s, T3=30min
Min Dim Level (%)	Yes		
DC emergency (DCemDim)	No		Light output is 100%.
OEM Write Protection (OWP)	Yes	OFF	
Luminaire Info (DALI part 251)	Yes		

Non-programmable features

Specification item	Value	Condition
Open load protection	Yes	Automatic recovering
Short circuit protection	Yes	Automatic recovering
Over power protection	Yes	Automatic recovering
Hot wiring	No	
Suitable for fixtures with protection class	I	per IEC60598
Energy metering (DALI part 252)	Yes	
Diagnostics (DALI part 253)	Yes	

Inrush current

Specification item	Value	Unit	Condition
Inrush current	8.6	A	Input voltage 230V
Inrush peak width	25	µs	Input voltage 230V, measured at 50% height
Drivers / MCB 16A type B @230V AC	≤ 50	pcs	Input voltage 230V



Please refer to the driver design in guide if you use other MCB-types.

If several mini circuit breakers are used directly side-by-side (without distance pieces

a correction factor of 80% has to be applied to the rated current

Driver touch current / protective conductor current / earth leakage current

Specification item	Value	Unit	Condition
Typical Touch Current (ins. Class II)	0.7	mA peak	Acc. IEC61347-1. LED module contribution not included

Surge immunity

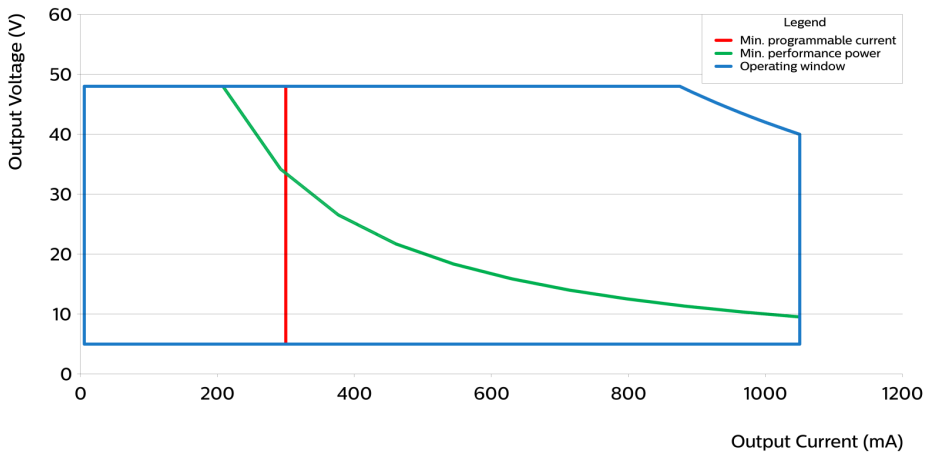
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us
Control surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Control surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us

Application Info (Approbation)

Specification item	Value
Approval marks and Certifications	CE / CQC / DALI 2 / EAC / ENEC / RCM / SELV / UA / UKCA
Ingress Protection classification (IP)	20
Application	Indoor Point
Mounting Type	Track mounting

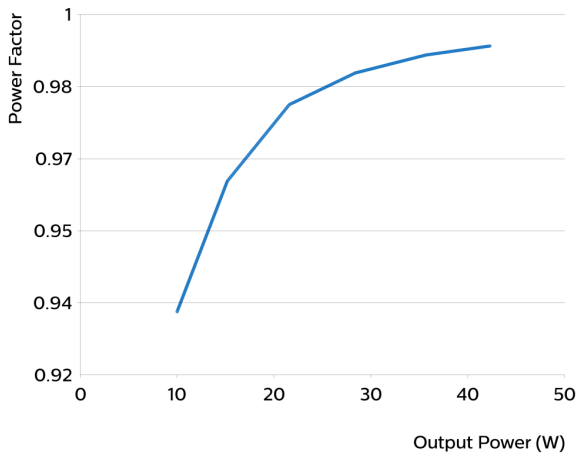
Graphs

Operating window

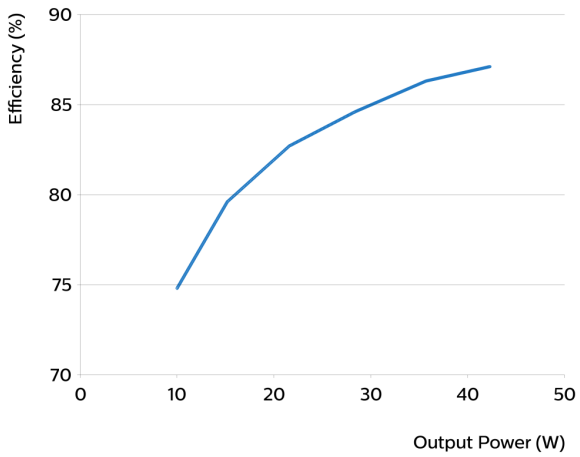


Type	Output current (mA)	Min. output voltage (V)	Max. output voltage (V)	Max. output power (W)
Xitanium 42W/a 0.3-1.05A 48V TD 3CG	300	5	48	14.4
Xitanium 42W/a 0.3-1.05A 48V TD 3CG	350	5	48	16.8
Xitanium 42W/a 0.3-1.05A 48V TD 3CG	400	5	48	19.2
Xitanium 42W/a 0.3-1.05A 48V TD 3CG	450	5	48	21.6
Xitanium 42W/a 0.3-1.05A 48V TD 3CG	500	5	48	24
Xitanium 42W/a 0.3-1.05A 48V TD 3CG	550	5	48	26.4
Xitanium 42W/a 0.3-1.05A 48V TD 3CG	600	5	48	28.8
Xitanium 42W/a 0.3-1.05A 48V TD 3CG	650	5	48	31.2
Xitanium 42W/a 0.3-1.05A 48V TD 3CG	700	5	48	33.6
Xitanium 42W/a 0.3-1.05A 48V TD 3CG	750	5	48	36
Xitanium 42W/a 0.3-1.05A 48V TD 3CG	800	5	48	38.4
Xitanium 42W/a 0.3-1.05A 48V TD 3CG	850	5	48	40.8
Xitanium 42W/a 0.3-1.05A 48V TD 3CG	900	5	46	42
Xitanium 42W/a 0.3-1.05A 48V TD 3CG	950	5	44	42
Xitanium 42W/a 0.3-1.05A 48V TD 3CG	1000	5	42	42
Xitanium 42W/a 0.3-1.05A 48V TD 3CG	1050	5	40	42

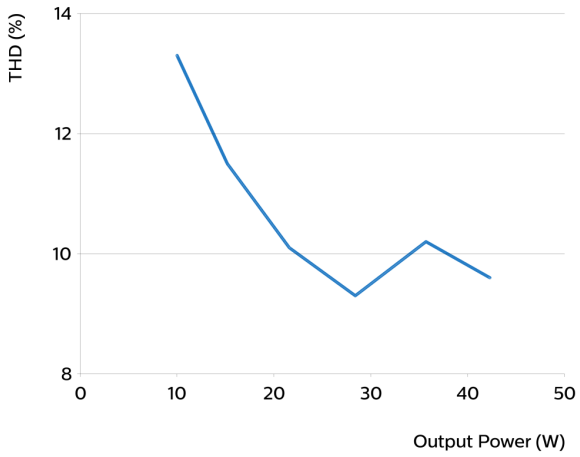
Power factor versus output power



Efficiency versus output power



THD versus output power



Notes

The adapter is compatible with "Global Trac Pulse", “Stucchi OneTrack 9000” and “Power Gear Pro 3C DALI” tracks.

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