

PHILIPS

Xitanium

LED driver



Datasheet

Xitanium High Efficient Track Drivers

Xitanium 28W 0.35-0.7A 40V HE 3CW 230V

9290 039 21706

Xitanium 28W 0.35-0.7A 40V HE 3CB 230V

9290 039 21806

Xitanium 28W 0.35-0.7A 40V HE 3CG 230V

9290 039 21906

Combination of high performance and reliability

The development of Xitanium track drivers is now in a new phase with improved efficiency. The new portfolio boasts up to 7% increase in efficiency compared to standard track driver portfolio. We have also further optimized the performance of the new range enabling minimum efficiency loss at different points through the operating curve. Also with the flexibility provided by the increased number of dipswitches, Xitanium Track High Efficient range helps unlock the extraordinary potential of light, facilitating innovation and inspiring the next generation of luminaire design for our OEM customers.

Features

- High efficiency
- Compact size
- Optimized current choice
- Long lifetime
- Low output current ripple, low input current THD
- Suitable for 3-phase track systems

Benefits

- Driver design based on Philips experience and knowledge of conventional fluorescent and HID technologies
- Various power ratings matching common lumen packages/applications
- Increased flexibility thanks to 3 dipswitches for output current setting

Application

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

Logistical data

Specification item	Value
Product name	Xitanium 28W 0.35-0.7A 40V HE 3CW 230V
EOC	872110304337500
Logistic code 12NC	9290 039 21706
EAN1 (GTIN)	8721103043375
EAN3 (box)	8721103043382
Pieces per box	40
Weight	107.5 gram

Specification item	Value
Product name	Xitanium 28W 0.35-0.7A 40V HE 3CB 230V
EOC	872110304339900
Logistic code 12NC	9290 039 21806
EAN1 (GTIN)	8721103043399
EAN3 (box)	8721103043405
Pieces per box	40
Weight	107.5 gram

Specification item	Value
Product name	Xitanium 28W 0.35-0.7A 40V HE 3CG 230V
EOC	872110304341200
Logistic code 12NC	9290 039 21906
EAN1 (GTIN)	8721103043412
EAN3 (box)	8721103043429
Pieces per box	40
Weight	107.5 gram

Electrical input data

Specification item	Value	Unit	Condition
Rated input voltage range	220...240	V _{ac}	Performance range
Rated input voltage	230	V _{ac}	
Rated input frequency	50...60	Hz	Performance range
Rated input current	0.133	A	@ full output power @ rated input voltage
Rated input power	30.4	W	@ rated output power @ rated input voltage
Power factor performance range	≥ 0.9 C		@ rated output power @ rated input voltage
Total harmonic distortion	20	%	@ rated output power @ rated input voltage
Efficiency	92.0	%	@ rated output power @ rated input voltage @ max. U _{out}
Input voltage AC	198...264	V _{ac}	Operational range
Input frequency AC	45...66	Hz	Operational range
Isolation input to output	reinforced/SELV		

Electrical output data

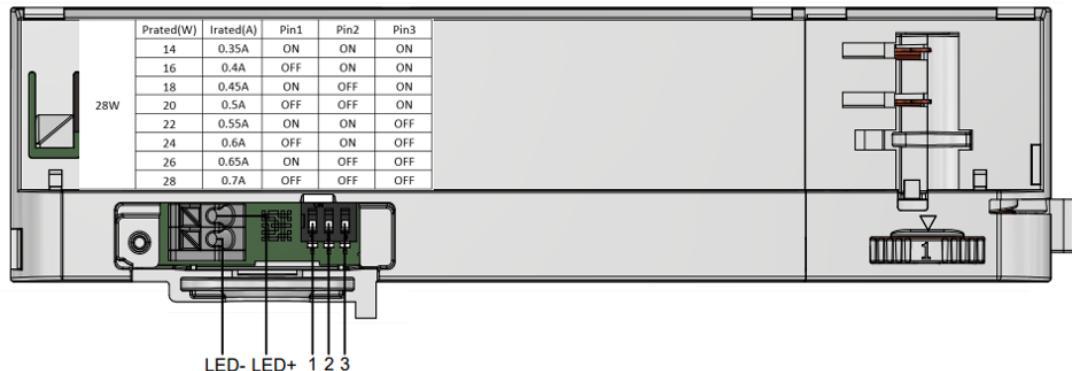
Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	30...40	V _{dc}	
Output voltage max.	60	V	Maximum output voltage (rms)
Output current	350 ... 700	mA	Select output current via the dipswitches with steps of 50 mA
Output current tolerance ±	7.5	%	
Output current ripple LF	≤ 3	%	Ripple = peak / average, < 3kHz
Output current ripple HF	≤ 15	%	
Output P _{st} ^{LM}	≤ 1.0		In entire operating window
Output SVM	≤ 0.4		In entire operating window
Output power	10.5...28.0	W	
Rated output power	28.0	W	

Control interfaces

Specification item	Value	Unit	Condition
Control method	Fixed		Set by dipswitch

Wiring and Connections

Specification item	Value	Unit	Type
Output wire cross-section	0.5...1.5 / 20...16	mm ² / AWG	solid wire/stranded wire
Output wire strip length	8.5...9.5	mm	
Maximum cable length	0.3	m	Total length of wiring including LED module, one way

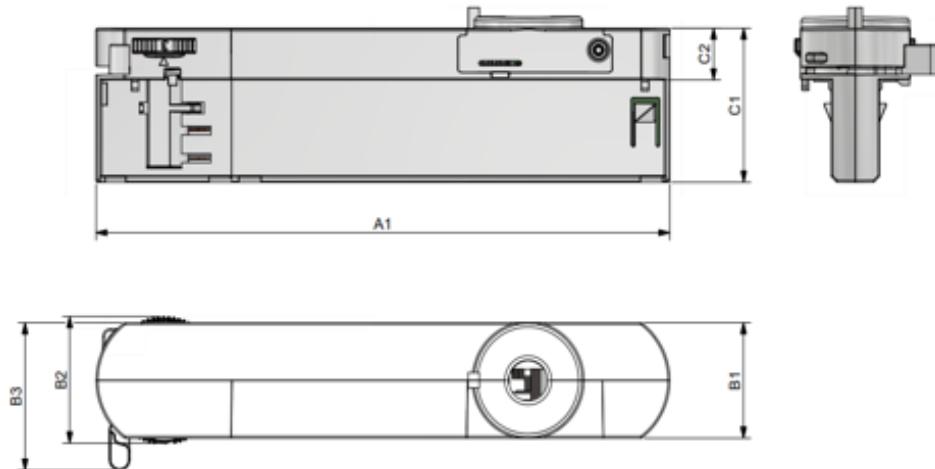


Isolation

Insulation per IEC61347-1	Input	Output
Input	-	reinforced/SELV
Output	reinforced/SELV	-

Dimensions and weight

Specification item	Value	Unit	Tolerance (mm)
Length (A1)	162	mm	
Width (B1)	31	mm	
Width (B2)	33	mm	
Width (B3)	39.6	mm	
Height (C1)	44.4	mm	
Height (C2)	13.9	mm	
Weight	107.5	gram	
Housing color	White, Black, Gray		

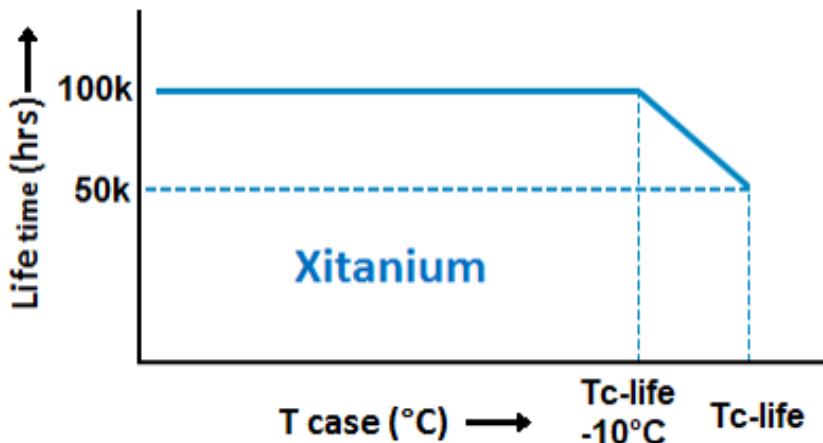


Operational temperatures and humidity

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 Tcase-point
Tcase-life	80	°C	Measured at Tcase-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%
Driver lifetime	100,000	hours	Measured temperature at Tcase-point is Tcase-life -10 degrees. Maximum failures = 10%



Maximum failures = 10%

Temperature [°C]	Lifetime	Unit	Condition
80	50000	hr	Temperature measured @Tc point
75	>50000	hr	
70	100000	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	700 mA	Set the output current via the dipswitches, see wiring diagram for an overview

Non-programmable features

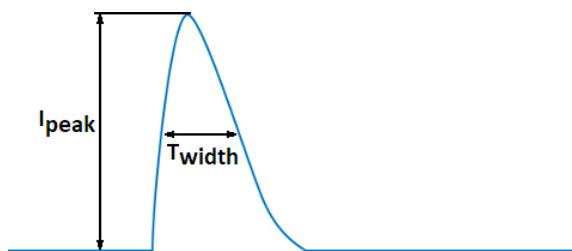
Specification item	Value	Condition
Open load protection	Yes	Automatic recovering
Short circuit protection	Yes	Automatic recovering
Over power protection	Yes	Automatic recovering
Hot wiring	No	
Suitable for fixtures with protection class	I	per IEC60598

Inrush current

Specification item	Value	Unit	Condition
Inrush current	19.3	A	Input voltage 230V
Inrush peak width	142	μs	Input voltage 230 V, measured at 50% height
Drivers / MCB 16A type B @230V AC	≤ 47	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

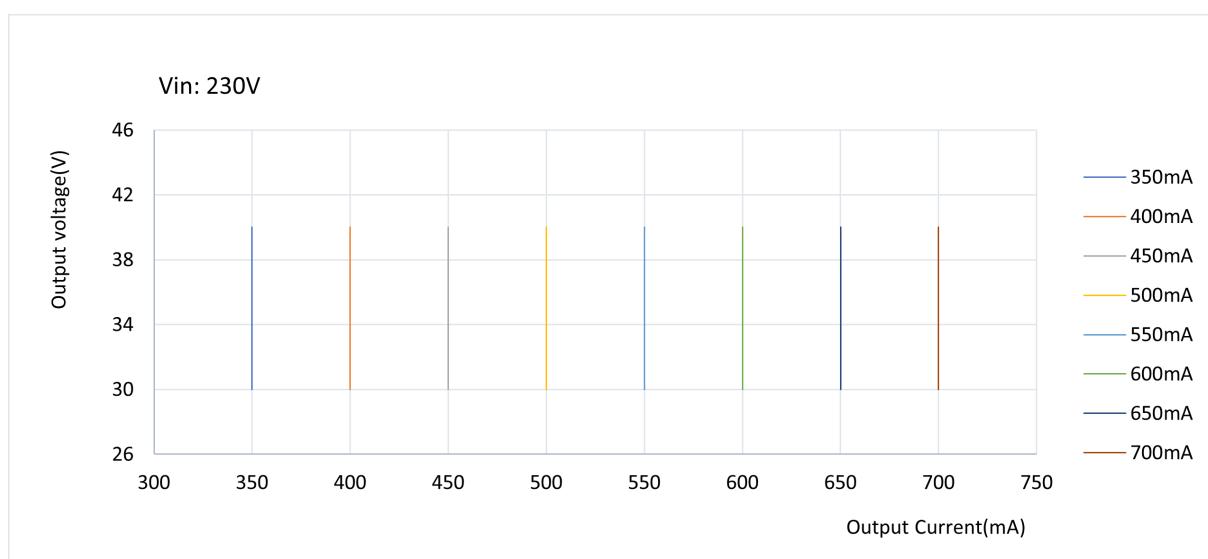
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us

Application Info (Approbation)

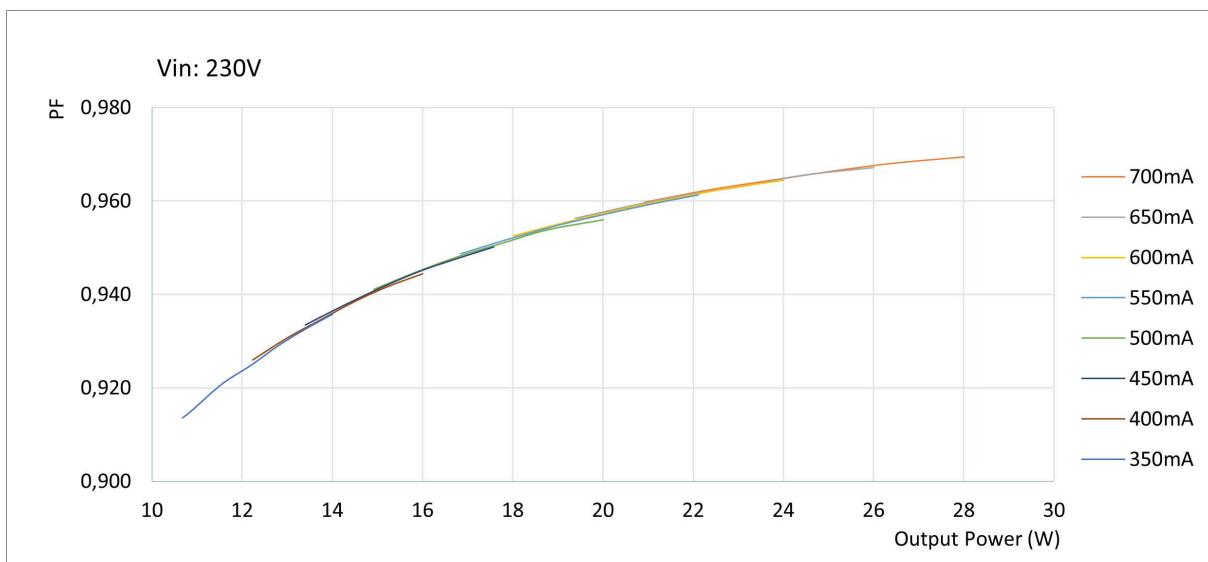
Specification item	Value
Approval marks and Certifications	CB / CE / CQC / EAC / ENEC / RCM / SELV / UKCA
Ingress Protection classification (IP)	20
Application	Indoor Point
Mounting Type	Track mounting

Graphs

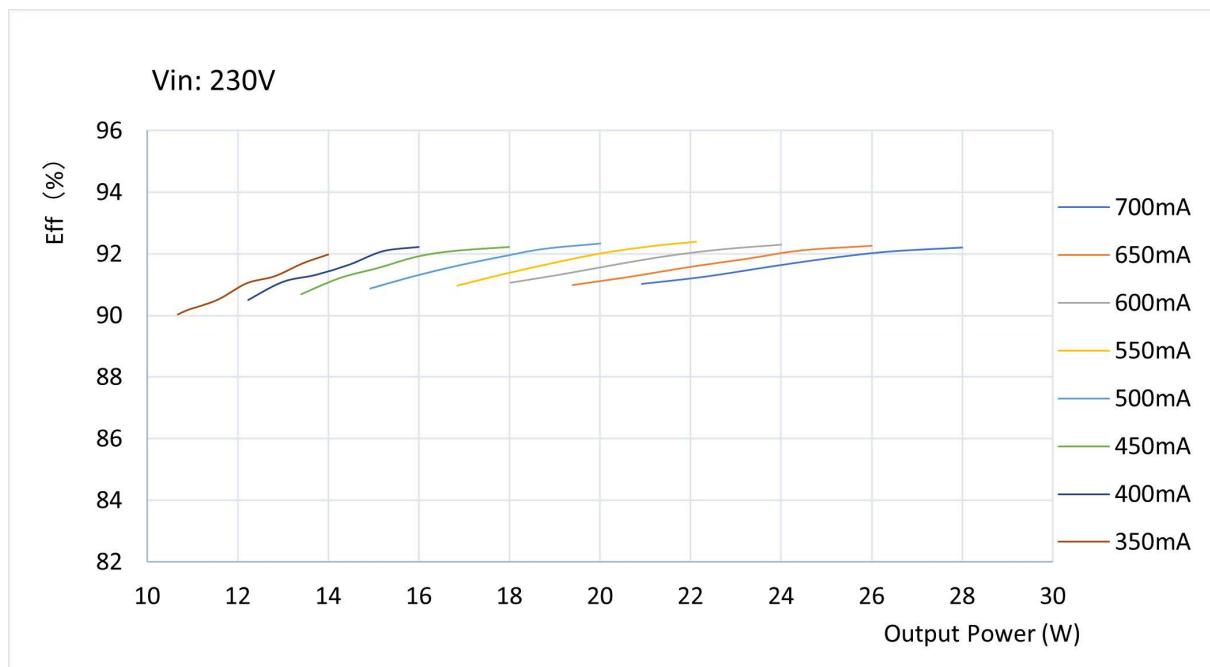
Operating window



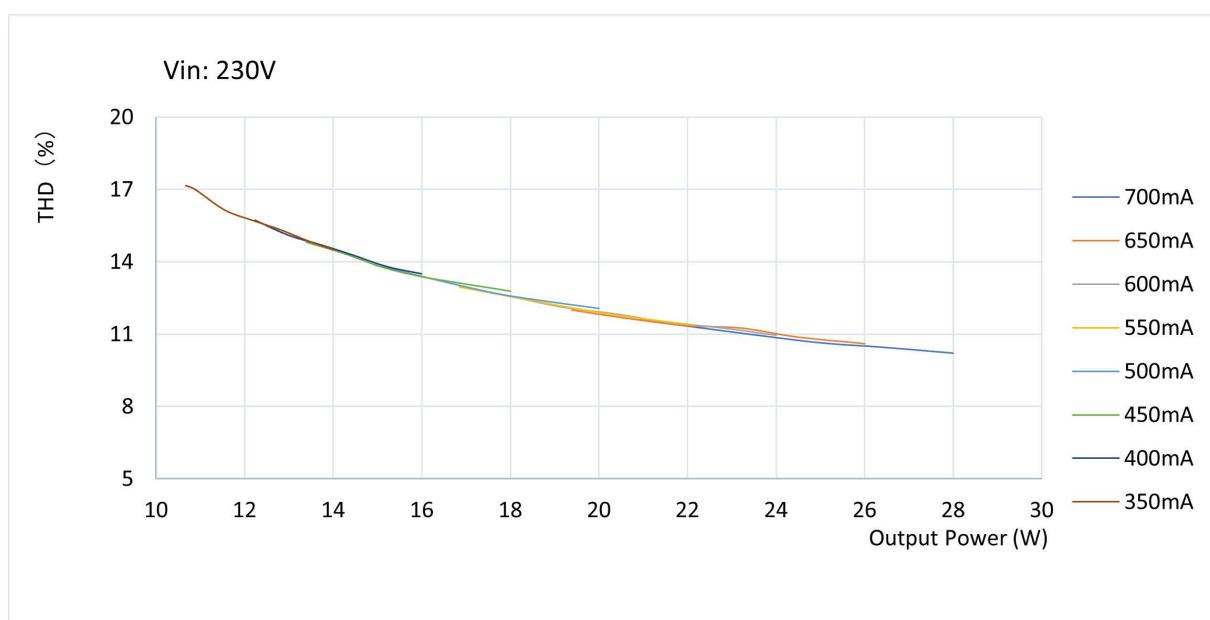
Power factor versus output power



Efficiency versus output power



THD versus output power



Notes

The adapter is compatible with Global Trac Pro, Stucchi OneTrack, Powergear 3 Circuit tracks.



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