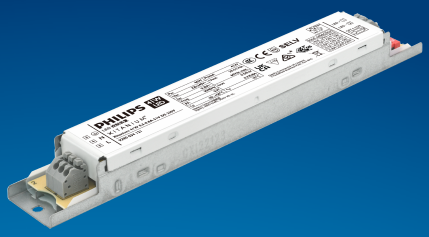
PHILIPS

Xitanium

LED driver



Datasheet

Xitanium G3 HE

Xitanium 41W 0.5-0.8A 51V DS 230V

9290 034 12180

Enabling future-proof LED technology

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

Features

- Efficiency > 90%
- Built in
- Low Ripple less than 3%
- 2 output currents by jumper wire
- 50,000 hours lifetime

Benefits

- Provides options for different luminaire designs
- Great EMI performance for easy design-in
- Selectable output current enables flexibility
- Peace of mind with proven reliability

Application

- Spot lighting
- Track lighting

September 2026

Logistical data

Specification item	Value
Product name	Xitanium 41W 0.5-0.8A 51V DS 230V
Logistic code 12NC	9290 034 12180
Pieces per box	20
Weight	145 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	0.2	A	@ full output power @ rated input voltage
Rated input power	46.0	W	@ full output power @ rated input voltage
Power factor performance range	≥ 0.97		@ rated output power @ rated input voltage
Total harmonic distortion	20	%	For full performance range, Vin range 220…240V
Efficiency	88.0	%	@ full output power @ rated input voltage @ max. Iout
Input voltage AC	198…264	V_{ac}	Operational range
Input frequency AC	47.5…63	Hz	Operational range
Isolation input to output	SELV		

Electrical output data

Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	23…51	V_{dc}	27…51 (Iout=0.5A)
Output voltage max.	60	V	Maximum output voltage (rms)
Output current	500 / 600 / 700 / 800	mA	Select output current via the dipswitch
Output current tolerance ±	8	%	@full load
Output current ripple LF	≤ 4	%	Ripple = peak to average, < 3kHz
Output P_{st}^{LM}	≤ 1.0		In entire operating window
Output SVM	≤ 0.6		In entire operating window
Output power	13.5…40.8	W	
Rated output power	40.8	W	

Control interfaces

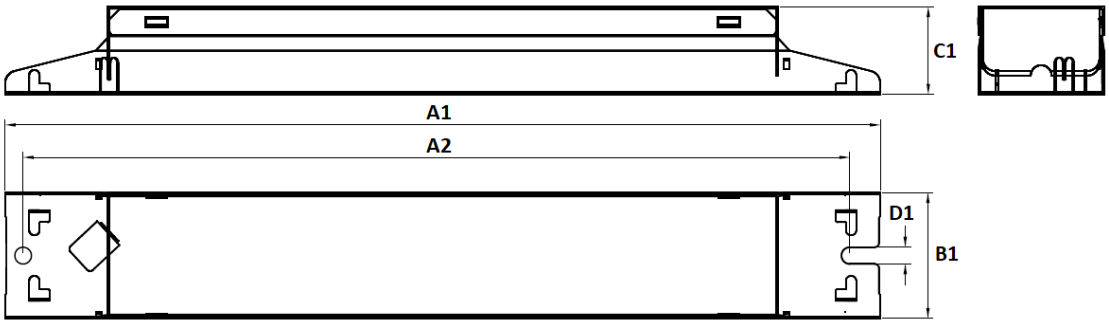
Specification item	Value	Unit	Condition
Control method	Fixed		

Wiring and Connections

Specification item	Value	Unit	Type
Input wire cross-section	0.5…1.5 / 20…16	mm^2 / AWG	solid / stranded wire
Input wire strip length	8.5…9.5	mm	
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	2	m	Total length of wiring including LED module, one way. For longer wiring please double check EMI behavior of luminaire

Dimensions and weight

Specification item	Value	Unit	Tolerance (mm)
Length (A1)	210	mm	
Mounting hole distance (A2)	198.4	mm	
Width (B1)	30.2	mm	
Height (C1)	21	mm	
Mounting hole diameter (D1)	4	mm	
Weight	145	gram	

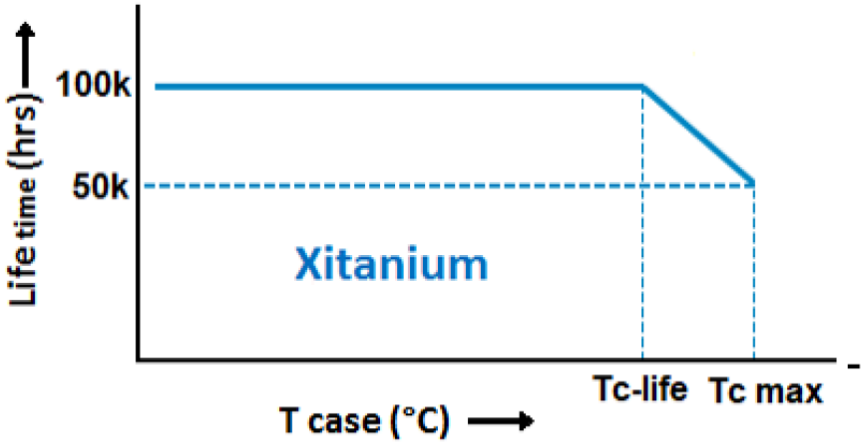


Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-20…+50	°C	Higher ambient temperature allowed as long as Tcase-max is not exceeded
Tcase-max	75	°C	Maximum temperature measured at T_{case}-point
Tcase-life	65	°C	Measured at T_{case}-point
Maximum housing temperature	110	°C	In case of a failure, inherent by design
Relative humidity	10…90	%	Non-condensing

Lifetime

Specification item	Value	Unit	Condition
Driver lifetime	100,000	hours	Measured temperature at Tcase-point is Tcmax - 10 degrees. Maximum failures = 10%
Driver lifetime Tcmax	50,000	hours	Measured temperature at Tcase-point is Tc-max. Maximum failures = 10%



Maximum failures = 10%

Temperature [°C]	Lifetime	Unit	Condition
75	50000	hr	
70	71000	hr	
65	100000	hr	Temperature measured @Tc point
60	>100000	hr	
55	>100000	hr	

Storage temperature and humidity

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

Programmable features

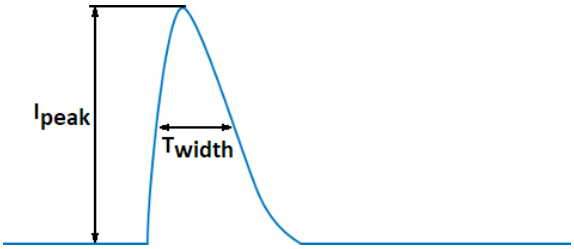
Specification item	Available	Default setting	Condition
Set Adjustable Output Current (AOC)	DipSwitch	800 mA	Set the output current via the dipswitch, see wiring diagram for an overview
Constant Light Output (CLO)	No		
DC emergency (DCemDim)	No		

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 and II		per IEC60598
Energy metering (DALI part 252)	No		
Diagnostics via Signify tool	No		

Inrush current

Specification item	Value	Unit	Condition
Inrush current	17.8	A	Input voltage 230V
Inrush peak width	180	µs	Input voltage 230V, measured at 50% height
Drivers / MCB 16A type B @230V AC	≤ 38	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

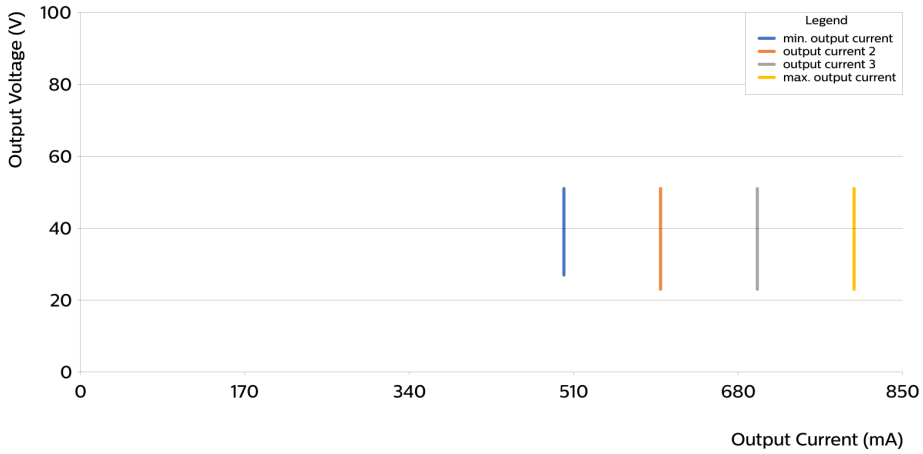
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us

Application Info (Approbation)

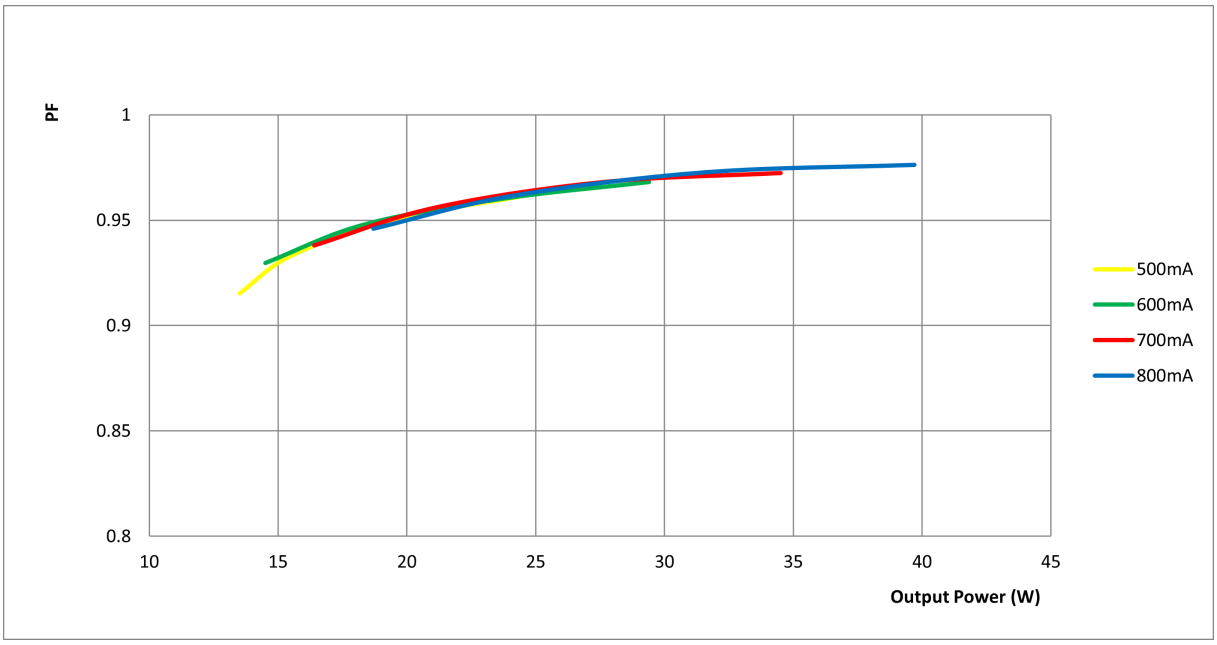
Specification item	Value
Approval marks and Certifications	CB / CCC / CE / ENEC / RCM / TISI / UKCA
Ingress Protection classification (IP)	20
Noise and hum dB(A)	20
Application	Indoor Linear
Mounting Type	Built-in

Graphs

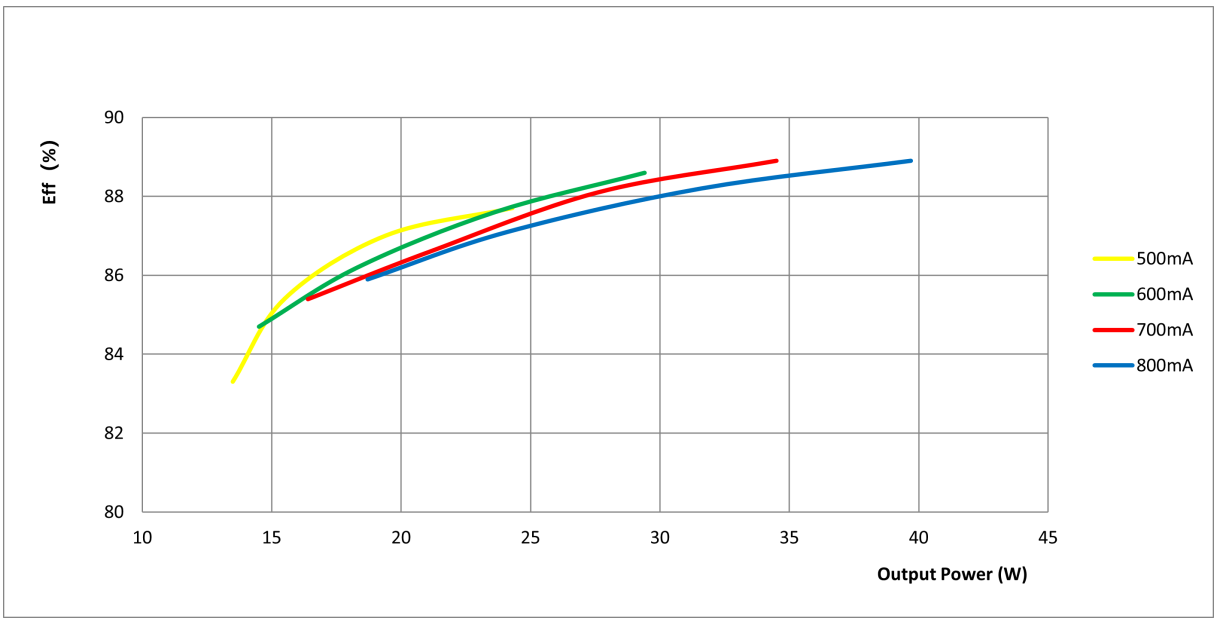
Operating window



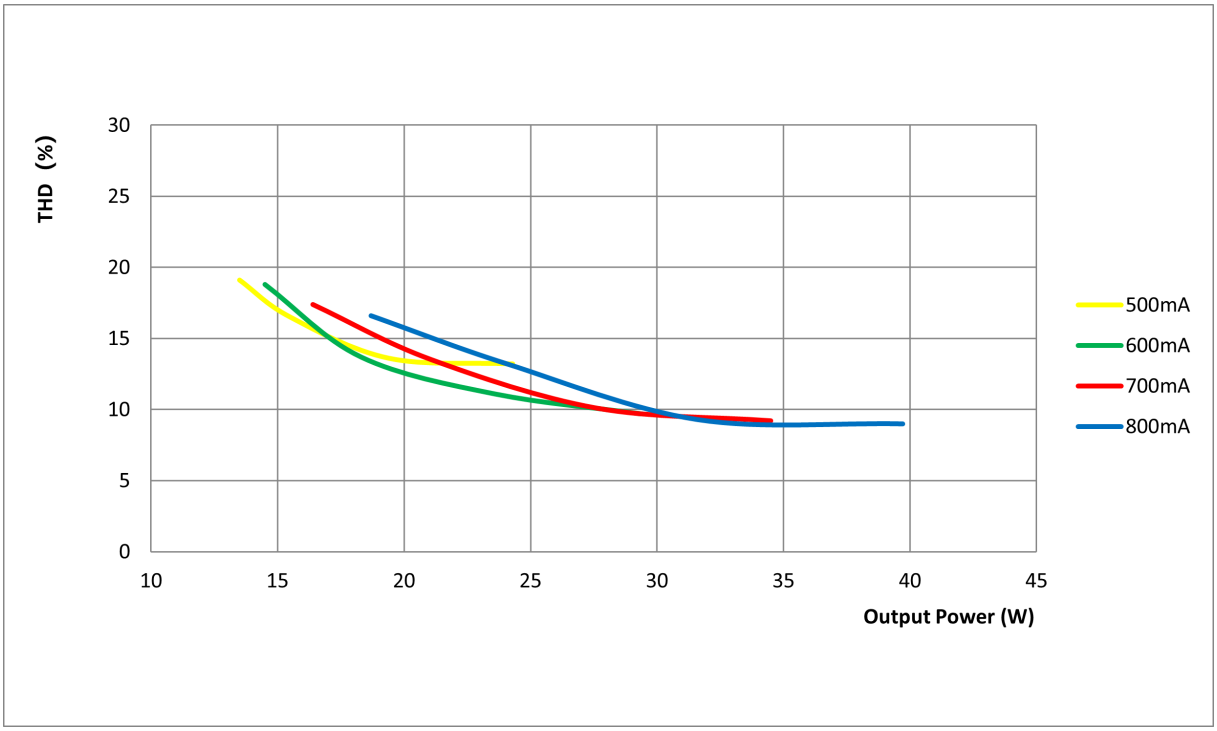
Power factor versus output power



Efficiency versus output power



THD versus output power



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