PHILIPS

Outdoor lighting

FastFlex
LED module
2x8/740 Gen2

Datasheet

Perfectly match **each project's needs**

Benefits

- Perfectly match each project's needs
- Flexible system design
- Easy factory assembly and reliable lifetime performance
- Low cost of thermal management
- Minimal scrap and outdated component

Application

- Road lighting
- Flood and Area lighting
- Urban street lighting
- Tunnel
- High bay

Features

- Modular approach to luminaire design; choice of different optical distributions
- CCT 4000 K, CRI 70
- Patented interface between lens, module and mounting surface
- High Tcase 75 °C
- Lean supply

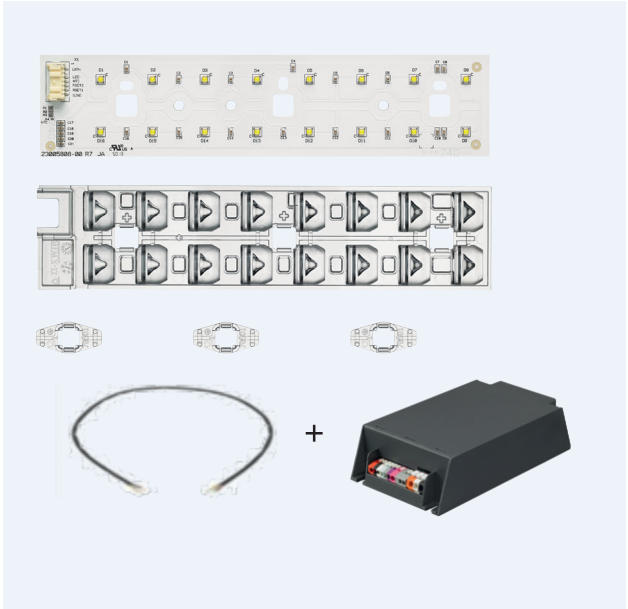
September, 2014

Logistical data

Specification item (designed for the board)	Value
Product name	FastFlex LED board 2x8/740 Gen 2
European order code	8718696 407738
Logistic code 12NC	9290 009 11406
Pieces per box	10

Specification item (designed for the board)	12NC	EOC (European Order Code)	Pieces/Board
FastFlex lens 2x8/xx	See family sheet of lenses		1
FastFlex module clip	9290 008 10003	8718291 224358 00	3
Cable Fortimo 7 PA to 6 wire - 600 mm	9290 008 03903	8718291 214120 00	1

Basic configuration



To operate a system you will need one or more FastFlex LED modules, which are sold separately.

Each FastFlex LED module consists of:

- FastFlex LED board 2x8/740 Gen2
- FastFlex lens 2x8 Gen2 (any type, see table above)
- FastFlex module clips (3 pieces are necessary for 1 FastFlex LED board)
- Specified cable (depending on driver type)
- Compatible Xitanium LED driver

Operating Conditions

Specification item	Value	Unit	Condition
Default output current	530	mA	Current setting via Rset1 or Rset2 connection
Case temperature	75	°C	
Ambient temperature	25	°C	Temperature outside luminaire
Min driver current	100	mA	
Max driver current	1000	mA	
Max ΔT (Tambient -Tcase) must not exceed 50 °C	50	°C	

Released system combinations

Number of FastFlex LED modules (any type)	Max output current (mA)	Driver	GPC	Cable
Xitanium programmable LED drivers				
1x	530	Xitanium 40W 0.53A Prog+ GL-J sXt	9290 007 10303	Cable Fortimo 7 PA to 6 wire - 600 mm
	700	Xitanium 40W 0.7A Prog+ GL-J sXt	9290 007 08803	
	1000	Xitanium 75W 0.1 – 1.05A Prog+ sXt	9290 007 08903	
2x	700	Xitanium 75W 0.70A Prog+ GL-Z sXt	9290 007 10103	2x Cable Fortimo 7 PA to 6 wire - 600 mm
	700	Xitanium 75W 0.35-0.7A GL Prog sXt	9290 007 02302	
	700	Xitanium 75W 0.35-0.7A GL Prog+ sXt	9290 007 04903	
	1000	Xitanium 150W 0.1-1.05A Prog+ sXt	9290 007 09003	
3x	530	Xitanium 75W 0.35-0.7A GL Prog sXt	9290 007 02302	3x Cable Fortimo 7 PA to 6 wire - 600 mm
	530	Xitanium 75W 0.35-0.7A GL Prog+ sXt	9290 007 04903	
	530	Xitanium 100W 0.53A Prog+ GL-Z sXt	9290 007 10403	
	700	Xitanium 150W 0.7A Prog+ 230V-H sXt	9290 007 10503	
4x	700	Xitanium 150W 0.7A Prog+ 230V-H sXt	9290 007 10503	4x Cable Fortimo 7 PA to 6 wire - 600 mm
	700	Xitanium 150W 0.35-0.7A GL Prog sXt	9290 007 02202	
	700	Xitanium 150W 0.35-0.7A GL Prog+ sXt	9290 007 05103	
5x	6101	Xitanium 150W 0.7A Prog+ 230V-H sXt	9290 007 10503	5x Cable Fortimo 7 PA to 6 wire - 600 mm
	6101	Xitanium 150W 0.35-0.7A GL Prog sXt	9290 007 02202	
	6101	Xitanium 150W 0.35-0.7A GL Prog+ sXt	9290 007 05103	
Xitanium AOCM LED drivers				
2x	530	Xitanium 75W 0.53A AOCM 1-10 230V-Y sXt	9290 007 12403	2x Cable Fortimo 7 PA to 6 wire - 600 mm
	700	Xitanium 75W 0.70A AOCM 1-10 GL-Y sXt	9290 007 08003	
Xitanium dimmable LED drivers				
1x	700	Xitanium 75W 0.70A 1-10V 230V sXt	9290 007 05503	Cable Fortimo 7 PA to 6 wire - 600 mm
	1000	Xitanium 150W 1.05A 1-10V 230V sXt	9290 007 04712	
2x	700	Xitanium 75W 0.70A 1-10V 230V sXt	9290 007 05503	2x Cable Fortimo 7 PA to 6 wire - 600 mm
	1000	Xitanium 150W 1.05A 1-10V 230V sXt	9290 007 04712	
	700	Xitanium 150W 0.70A 1-10V 230V sXt	9137 012 11603	
3x	700	Xitanium 150W 0.70A 1-10V 230V sXt	9137 012 11603	3x Cable Fortimo 7 PA to 6 wire - 600 mm
4x	700	Xitanium 150W 0.70A 1-10V 230V sXt	9137 012 11603	4x Cable Fortimo 7 PA to 6 wire - 600 mm
Xitanium LED drivers 150 W 0.70 A				
2x	700	Xitanium 150W 0.70A 230V sXt	9137 108 59002	2x Cable Fortimo 7 PA to 6 wire - 600 mm
3x	700	Xitanium 150W 0.70A 230V sXt	9137 108 59002	3x Cable Fortimo 7 PA to 6 wire - 600 mm
4x	700	Xitanium 150W 0.70A 230V sXt	9137 108 59002	4x Cable Fortimo 7 PA to 6 wire - 600 mm
Xitanium dimmable LED drivers 150 W 0.35 A				
4x	350	Xitanium 150W 0.35A 1-10V 230V sXt	9137 012 18202	4x Cable Fortimo 7 PA to 6 wire - 600 mm
5x	350	Xitanium 150W 0.35A 1-10V 230V sXt	9137 012 18202	5x Cable Fortimo 7 PA to 6 wire - 600 mm
Xitanium LED drivers 150 W 0.35 A				
4x	350	Xitanium 150W 0.35A 230V sXt	9137 108 50002	4x Cable Fortimo 7 PA to 6 wire - 600 mm
5x	350	Xitanium 150W 0.35A 230V sXt	9137 108 50002	5x Cable Fortimo 7 PA to 6 wire - 600 mm

Released system combinations - continued

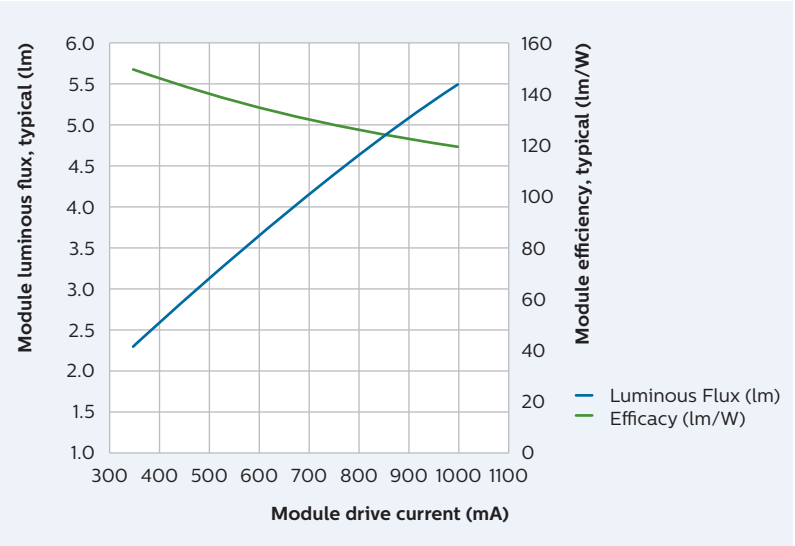
Number of FastFlex LED modules (any type)	Max output current (mA)	Driver	GPC	Cable
Xitanium FULL and LITE programmable LED drivers				
1x	750	Xitanium FULL prog 35W 1000 NLD C150 Xt	9290 008 84606	
	750	Xitanium FULL prog 35W 1000 NL1 C150 Xt	9290 008 84706	
2x	730	Xitanium FULL prog 70W 1000 NLD C150 Xt	9290 008 84306	
	730	Xitanium FULL prog 70W 1000 NL1 C150 Xt	9290 008 84406	
	730	Xitanium LITE prog 70W 1000 NL C150 OD	9290 008 84506	
	1000	Xitanium FULL prog 110W 1000 NLD C150 Xt	9290 008 83906	
	1000	Xitanium FULL prog 110W 1000 NL1 C150 Xt	9290 008 84006	
	1000	Xitanium LITE prog 110W 1000 NL C150 OD	9290 008 84106	
3x	770	Xitanium FULL prog 110W 1000 NLD C150 Xt	9290 008 83906	
	770	Xitanium FULL prog 110W 1000 NL1 C150 Xt	9290 008 84006	
	770	Xitanium LITE prog 110W 1000 NL C150 OD	9290 008 84106	
4x	570	Xitanium FULL prog 110W 1000 NLD C150 Xt	9290 008 83906	
	570	Xitanium FULL prog 110W 1000 NL1 C150 Xt	9290 008 84006	
	570	Xitanium LITE prog 110W 1000 NL C150 OD	9290 008 84106	
Xitanium low voltage LED drivers				
1x	700	Xitanium 40W 0.2-0.7A LS 12-24VDC	9290 008 38003	Cable Fortimo solar 7 pin to 7 pin
2x	700	Xitanium 70W 0.2-0.7A LS 12-24VDC	9290 006 12003	Coming soon

Performance Characteristics (under typical operating If = 530 mA and Tcase = 75 °C)

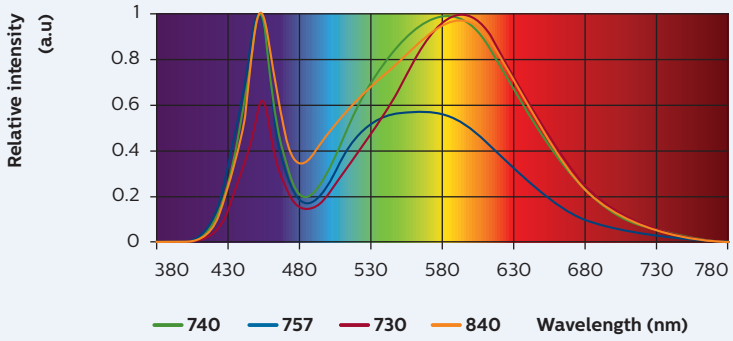
Specification item	Min	Typ	Max	Unit
Lumen output	2960	3289	3618	lm
Efficacy	118	138	-	lm/W
Power consumption		23.8	25.1	W
Forward voltage		44,8	47.4	V
Correlated Color Temperature (CCT)	-	4000	-	K
Color Rendering Index (CRI)	70	-	-	Ra
Initial color accuracy	-	5	7	SDCM
Lumen maintenance B50L70	-	>50,000	-	h
Product lifetime, 90% survivals	-	50,000	-	h

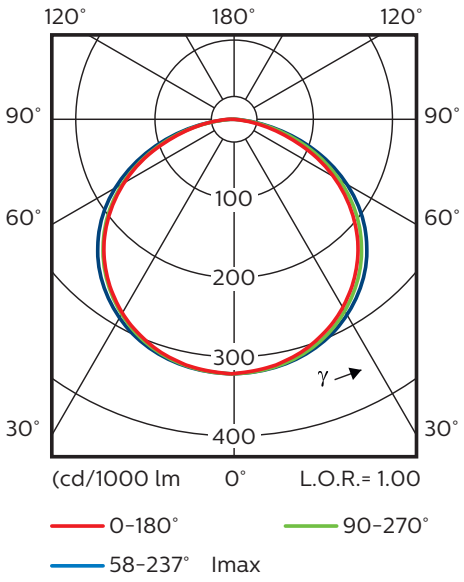
Performance Characteristics (under typical operating If = 530 mA and Tcase = 75 °C)

Driver current (mA)	Typ Luminous flux (lm)	Typ efficacy (lm/W)	Typ thermal power (W)	Typ power (W)	Max power (W)
350	2300	149	9.3	15.5	16.4
410	2640	145	11.4	18.2	19.3
530	3290	138	15.1	23.8	25.1
700	4140	130	21.0	31.8	33.5
1000	5490	119	32.2	46.2	48.7



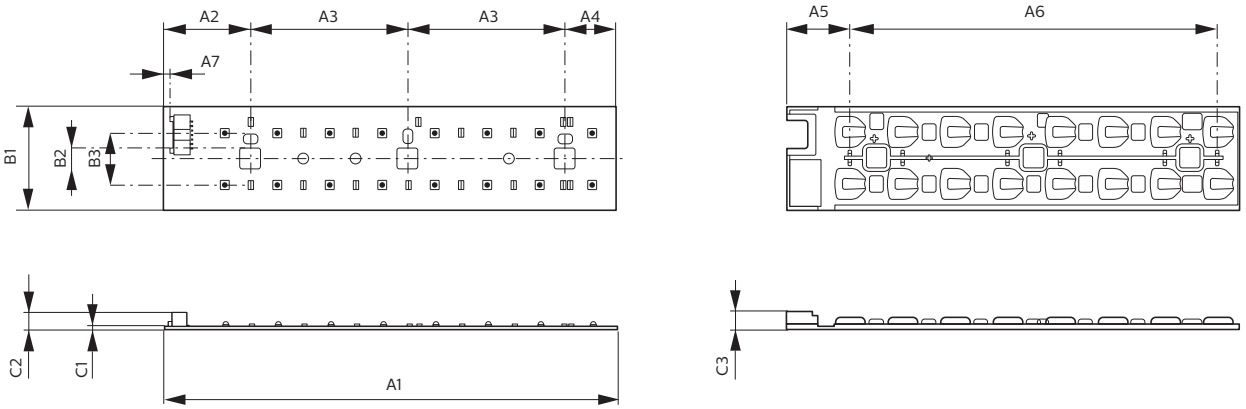
Optical Characteristics





Mechanical Characteristics

Dimensions in mm (nominal ± 0.4	A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	C1	C2	C3
FastFlex LED module 2x8 Gen2 (all types)	216	42	75	24	30	175	3.5	49.5	10	25	1.6	7.4	8.5



Electrical Characteristics (wiring)

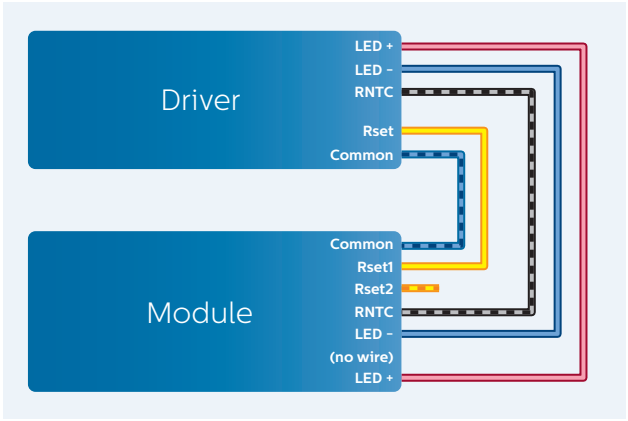
Pin numbering depending on type of driver

The Rset2 wire should be left unconnected when Rset1 drivers are used, and vice versa.
The unused Rset wire should be shortened and the end wrapped with an insulating material.

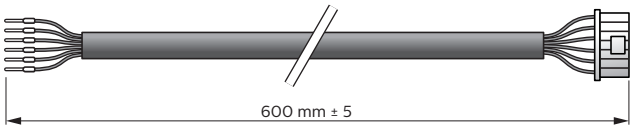
Connector	Signal	Description
Pin 1	IDC	LED driver current input (+)
Pin 2	(HV spacer)	Not connected
Pin 3	PGND	Power ground (-)
Pin 4	NTC	Temperature sensor (RNTC) 15 K + 390 Ω resistor in series
Pin 5	Rset2	Resistor for current setting of LED driver 2
Pin 6	Rset1	Resistor for current setting of LED driver 1
Pin 7	SGND	Signal ground

Connector pin	Function	Color coding driver / cable
Pin 1	LED+	Red
Pin 2	-	No wire
Pin 3	LED-	Blue
Pin 4	RNTC	Black / White
Pin 5	Rset2	Yellow / Black
Pin 6	Rset1	Yellow
Pin 7	Common	Blue / White

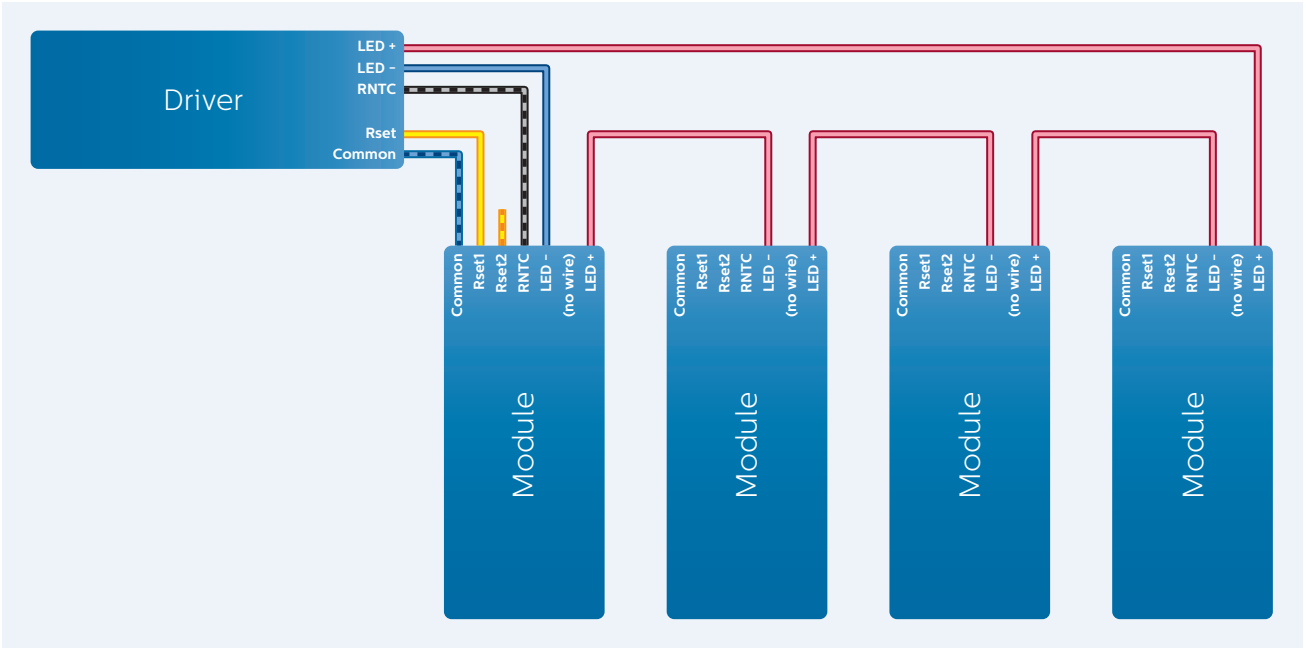
Connection between driver and FF-module



Used cable between driver and FF-module



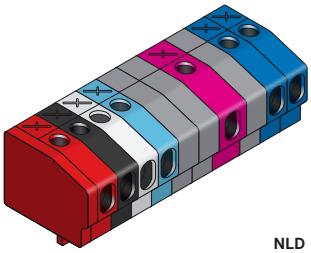
Multiple boards on one driver



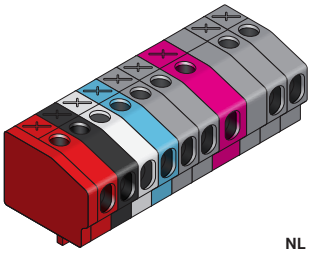
If a system consists of multiple FastFlex modules connected to a single driver:

- The first module connected to the driver is the master
- Only this module is monitored by the NTC and RSET

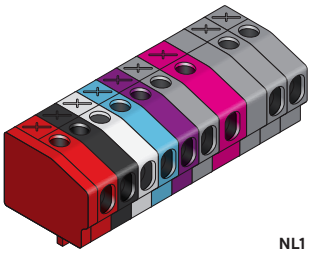
Connector of the Xitanium FULL/LITE Prog LED driver



NLD



NL



NL1

Connector pin name (alternative name)	Colour		Alternative Colour	
PROG1	Blue	(NLD)	Grey	(NL/NL1)
PROG2	Blue	(NLD)	Grey	(NL/NL1)
Spacer	Grey		(all)	
Functional Earth	Pink		(all)	
1-10 V [-]	Grey	(NL1)	Grey spacer	(NL/NLD)
1-10 V [+]	Purple	(NL1)	Grey spacer	(NL/NLD)
NTC	Light blue		(all)	
NTC common	White		(all)	
LED [-]	Black		(all)	
LED [+]	Red		(all)	

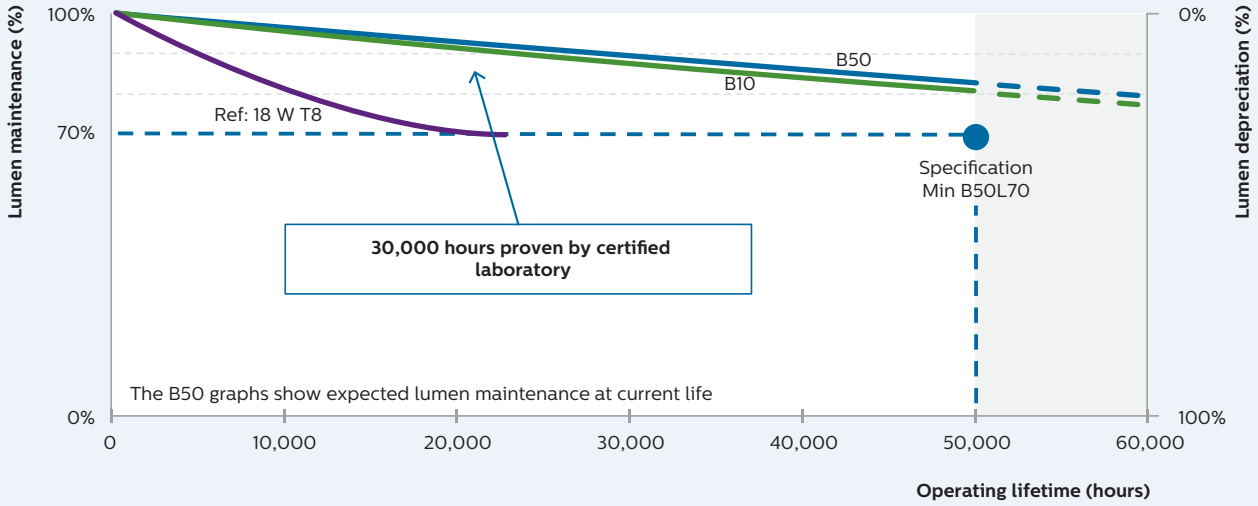
Note

When using the Xitanium FULL/LITE Prog LED driver, you need to change the current via the MultiOne Configurator. Default setting of this driver is 700 mA.

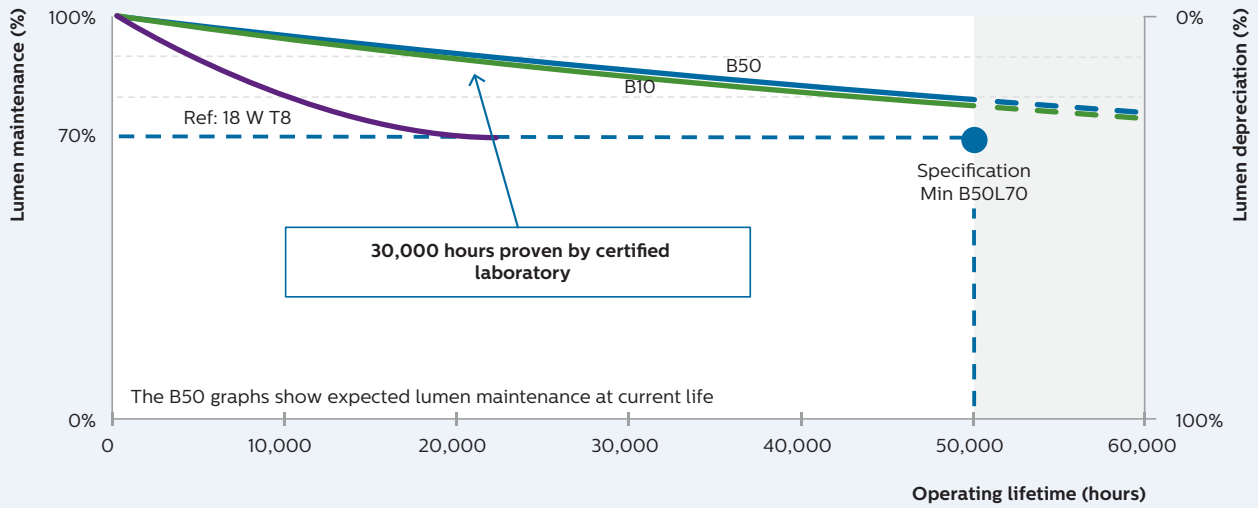
Lifetime

Specification item	Value	Unit	Condition
Lifetime characteristics	50,000	hours	Measured @ Tcase-life, with min 90% survival
Lifetime performance	See graphs		Measured in a system without the CLO feature

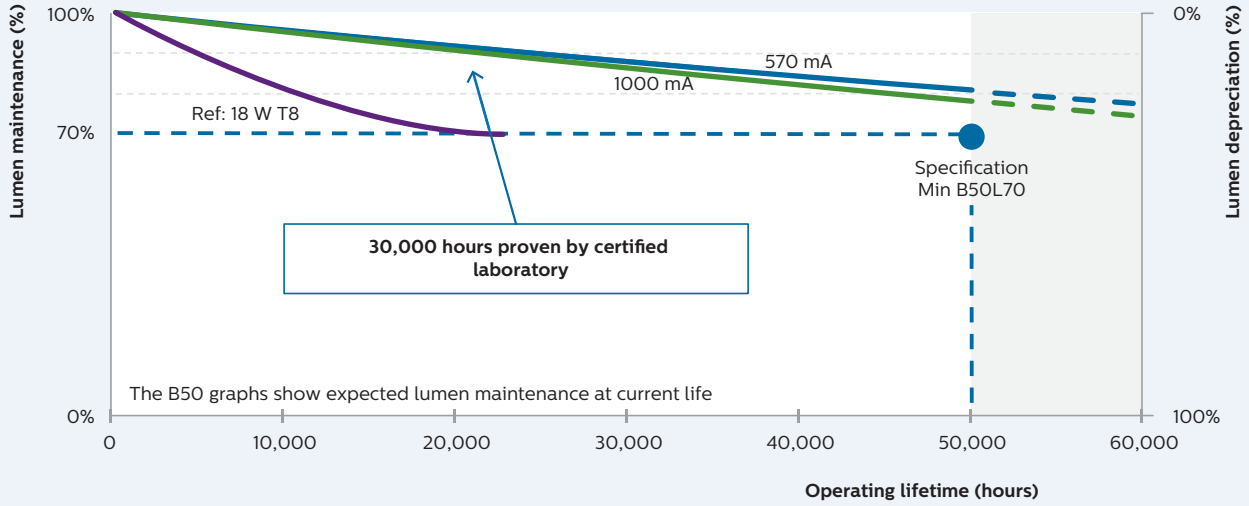
Lumen maintenance FastFlex Gen2 530 mA Tc: 75 °C



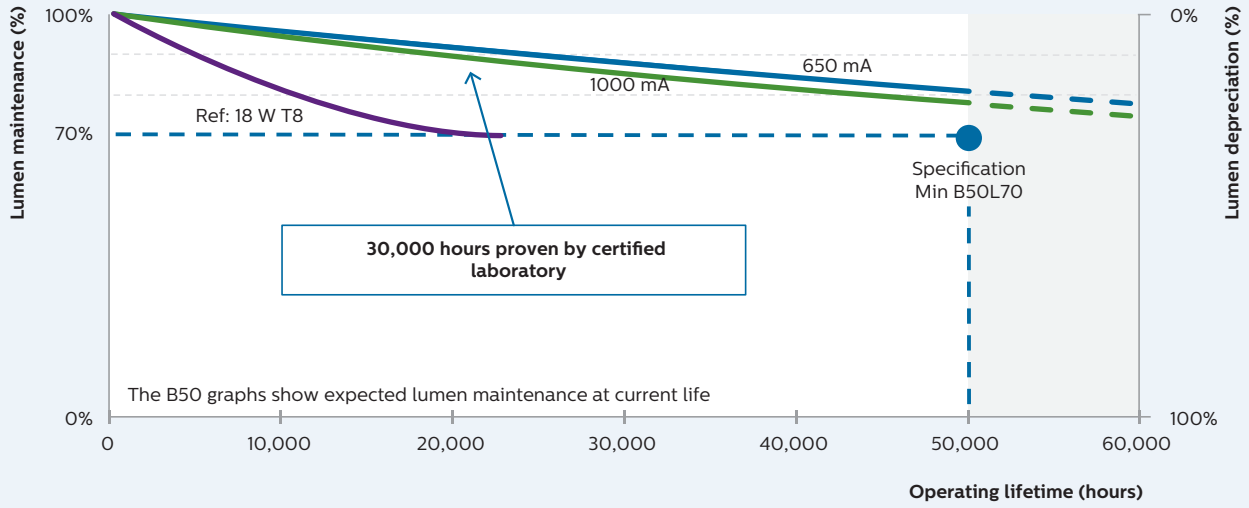
Lumen maintenance FastFlex Gen2 1000 mA Tc: 75 °C



Lumen maintenance (B10) FastFlex Gen2 Tc: 75 °C



Lumen maintenance (B10) FastFlex Gen2 Tc: 75 °C



Certificates and standards

Specification item	Value
Approval marks	CE, UL, ENEC
RoHS and Reach	compliant with European Directives

www.philips.com/fastflex
www.philips.com/xitanium
www.philips.com/outdoor

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