

PHILIPS

Fortimo

LED

FO strip PR FT 2ft 2200lm
927-965 HV5



Datasheet

Flexibility at your finger tips

FO strip PR FT 2ft 2200lm 927-965 FC HV5

Fortimo LED Strip FlexTune modules are designed to work perfectly together with the Xitanium FlexTune drivers. Both the modules and the drivers are co-developed as a high voltage solution.

The Fortimo LED Strip PR FT modules are designed in the traditional tunable white concept based on individual 2700K and 6500K LEDs. Together they mix the color temperature on the board to the desired setting. Unique in this solution is the application of our high efficiency CRI90 technology. With this technology the modules can be tuned to any color temperature between 2700K and 6500K and have a CRI bigger than 90 with almost the same efficiency (Lm/W) as CRI80 products. With this high CRI the modules are extremely suitable for office, retail and hospitality applications.

November 2020



Ordering data

Commercial product name	EOC	12NC	Box quantity
FO strip PR FT 2ft 2200lm 927-965 FC HV5	8718699 782672 00	9290 028 00906	84

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
FO strip PR FT 2ft 2200lm 927-965 HV5	200	400	400	mA

Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T _c (case temperature at T _c point)	45	70	80	°C

* Nominal value at which typical performance is specified

** Value at which life time is specified

*** Maximum value for safe operation, do not operate above this value

Optical characteristics - table per color (CCT)

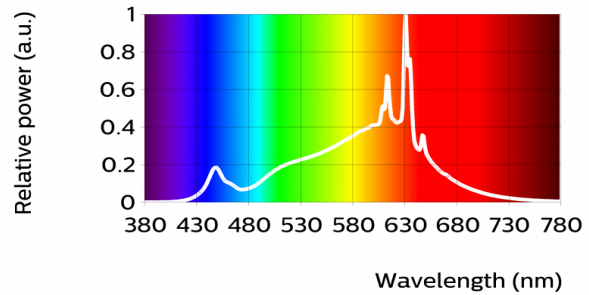
FO strip PR FT 2ft 2200lm 927-965 FC HV5 [2700K]

Parameter	Min	Typ	Max	Unit
Luminous flux	1890	2040	2190	lm
Module efficacy	131	145		lm/W
Correlated color temperature (CCT)		2700		K
Color coordinates (CIEx, CIEy)		(0.461, 0.407)		-
Color consistency			3	SDCM
CRI	90			
R9	40			
Photometric code		927/359		
Photobiological safety			RG1 unlimited	



Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	927	lm	lm/W
80% I-nom 160mA	Tc 25 °C	1700	154
	Tc-nom 45 °C	1661	151
	Tc-max 80 °C	1600	147
I-nom 200mA	Tc 25 °C	2088	148
	Tc-nom 45 °C	2040	145
	Tc-max 80 °C	1965	141
I-max 400mA	Tc 25 °C	3882	125
	Tc-nom 45 °C	3789	123
	Tc-max 80 °C	3644	119



FO strip PR FT 2ft 2200lm 927-965 FC HV5 [3000K]

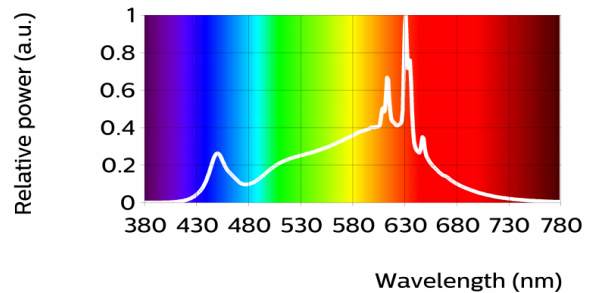
Parameter	Min	Typ	Max	Unit
Luminous flux	1910	2061	2220	lm
Module efficacy	132	147		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.436, 0.394)		-
CRI	90			
R9	40			
Photometric code		930/359		
Photobiological safety			RG1 unlimited	



Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Color coordinates are indicative.

Operation point	930	lm	lm/W
80% I-nom 160mA	Tc 25 °C	1718	155
	Tc-nom 45 °C	1677	152
	Tc-max 80 °C	1615	148
I-nom 200mA	Tc 25 °C	2111	149
	Tc-nom 45 °C	2061	147
	Tc-max 80 °C	1983	142
I-max 400mA	Tc 25 °C	3926	127
	Tc-nom 45 °C	3830	124
	Tc-max 80 °C	3680	120



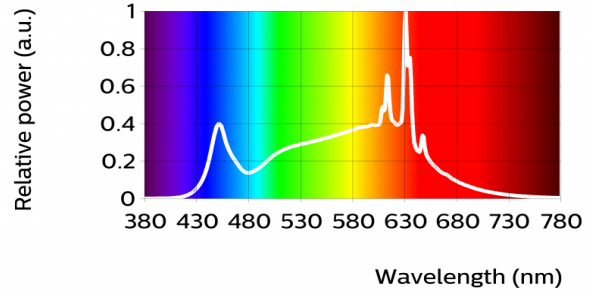
FO strip PR FT 2ft 2200lm 927-965 FC HV5 [3500K]

Parameter	Min	Typ	Max	Unit
Luminous flux	1930	2091	2250	lm
Module efficacy	134	149		lm/W
Correlated color temperature (CCT)		3500		K
Color coordinates (CIEx, CIEy)		(0.404, 0.376)		-
CRI	90			
R9	40			
Photometric code		935/359		
Photobiological safety			RG1 unlimited	



Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5
Color coordinates are indicative.

Operation point	935	lm	lm/W
80% I-nom 160mA	Tc 25 °C	1744	157
	Tc-nom 45 °C	1702	155
	Tc-max 80 °C	1636	150
I-nom 200mA	Tc 25 °C	2144	152
	Tc-nom 45 °C	2091	149
	Tc-max 80 °C	2010	144
I-max 400mA	Tc 25 °C	3989	129
	Tc-nom 45 °C	3888	127
	Tc-max 80 °C	3732	122



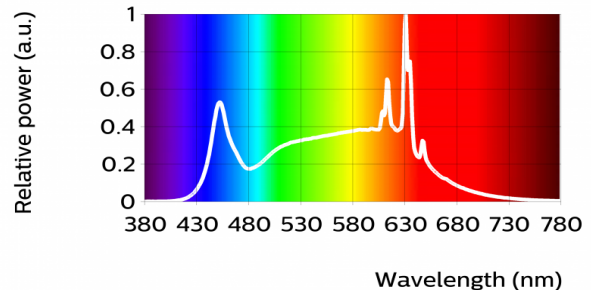
FO strip PR FT 2ft 2200lm 927-965 FC HV5 [4000K]

Parameter	Min	Typ	Max	Unit
Luminous flux	1960	2116	2280	lm
Module efficacy	136	151		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.380, 0.363)		-
CRI	90			
R9	40			
Photometric code		940/359		
Photobiological safety			RG1 unlimited	



Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5
Color coordinates are indicative.

Operation point	940	lm	lm/W
80% I-nom 160mA	Tc 25 °C	1767	159
	Tc-nom 45 °C	1722	156
	Tc-max 80 °C	1655	151
I-nom 200mA	Tc 25 °C	2171	154
	Tc-nom 45 °C	2116	151
	Tc-max 80 °C	2033	146
I-max 400mA	Tc 25 °C	4042	131
	Tc-nom 45 °C	3936	128
	Tc-max 80 °C	3776	124



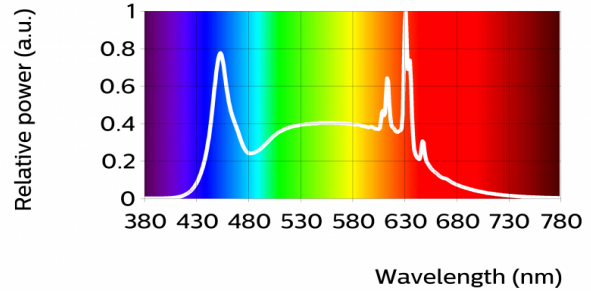
FO strip PR FT 2ft 2200lm 927-965 FC HV5 [5000K]

Parameter	Min	Typ	Max	Unit
Luminous flux	1990	2156	2320	lm
Module efficacy	138	154		lm/W
Correlated color temperature (CCT)		5000		K
Color coordinates (CIEx, CIEy)		(0.346, 0.344)		-
CRI	90			
R9	40			
Photometric code		850/359		
Photobiological safety			RG1 unlimited	



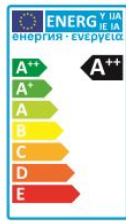
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5
Color coordinates are indicative.

Operation point	950	lm	lm/W
80% I-nom 160mA	Tc 25 °C	1801	162
	Tc-nom 45 °C	1754	159
	Tc-max 80 °C	1683	154
I-nom 200mA	Tc 25 °C	2215	157
	Tc-nom 45 °C	2156	154
	Tc-max 80 °C	2068	148
I-max 400mA	Tc 25 °C	4125	134
	Tc-nom 45 °C	4012	131
	Tc-max 80 °C	3844	127



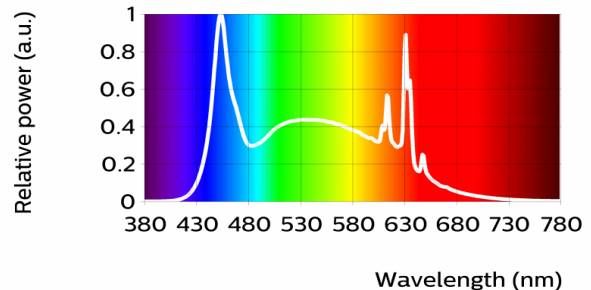
FO strip PR FT 2ft 2200lm 927-965 FC HV5 [6500K]

Parameter	Min	Typ	Max	Unit
Luminous flux	2040	2200	2370	lm
Module efficacy	141	157		lm/W
Correlated color temperature (CCT)		6500		K
Color coordinates (CIEx, CIEy)		(0.313, 0.325)		-
Color consistency			3	SDCM
CRI	90			
R9	40			
Photometric code		965/359		
Photobiological safety			RG1 unlimited	



Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	965	lm	lm/W
80% I-nom 160mA	Tc 25 °C	1841	166
	Tc-nom 45 °C	1789	162
	Tc-max 80 °C	1714	157
I-nom 200mA	Tc 25 °C	2263	160
	Tc-nom 45 °C	2200	157
	Tc-max 80 °C	2107	151
I-max 400mA	Tc 25 °C	4219	138
	Tc-nom 45 °C	4098	134
	Tc-max 80 °C	3920	129



Electrical characteristics

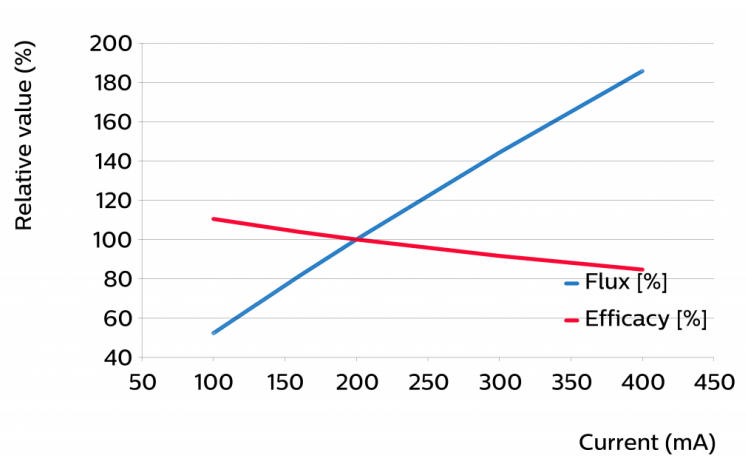
Parameter	Min	Typ	Max	Unit
Forward voltage	68.4	70.2	72.0	V
Power consumption	13.7	14.0	14.4	W = kWh/1000h
Number of modules in series per chain			4	

Measurement precision for Vf +/- 3%. Measurement precision for power +/- 3.3%.

Tuning information

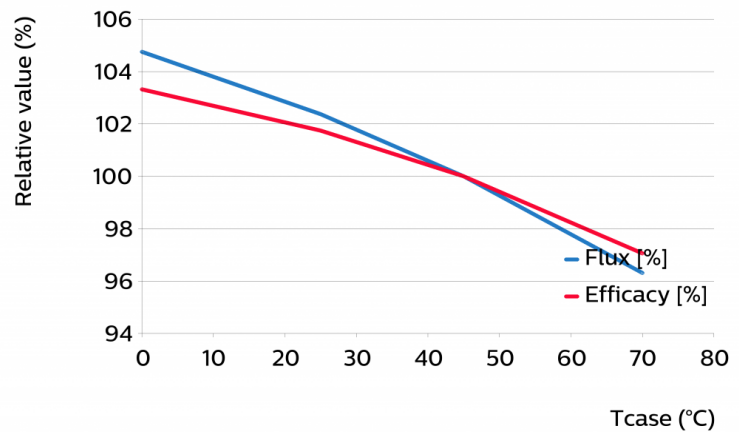
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
400	186	85
300	144	92
200	100	100
160	81	104
100	52	110



Flux and efficacy versus temperature at Tc (at I nominal)

Tc [°C]	Flux [%]	Efficacy [%]
70	96	97
45	100	100
25	102	102
0	105	103



Lumen maintenance

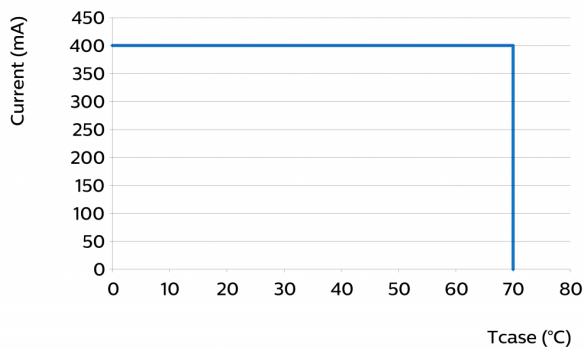
Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I-nom 160mA	Tc 25°C	>60	>60	>60	>60	>60	>60	45	44	44
	Tc_nom 45°C	>60	>60	>60	>60	>60	>60	39	38	38
	Tc_life 70°C	>60	>60	>60	>60	>60	>60	33	32	32
I_nom 200mA	Tc 25°C	>60	>60	>60	>60	>60	>60	44	43	43
	Tc_nom 45°C	>60	>60	>60	>60	>60	>60	38	37	37
	Tc_life 70°C	>60	>60	>60	>60	>60	>60	32	31	31
I_life 400mA	Tc 25°C	>60	>60	>60	>60	>60	>60	40	40	39
	Tc_nom 45°C	>60	>60	>60	>60	>60	>60	35	34	34
	Tc_life 70°C	>60	>60	>60	>60	>60	>60	29	28	28

Lifetime

Parameter	Value	Unit
M70F50 nominal	>60000	hours
M70F50 life	>60000	hours

Switching cycles in accordance to EU 1194/2012: >15000.

Performance Window

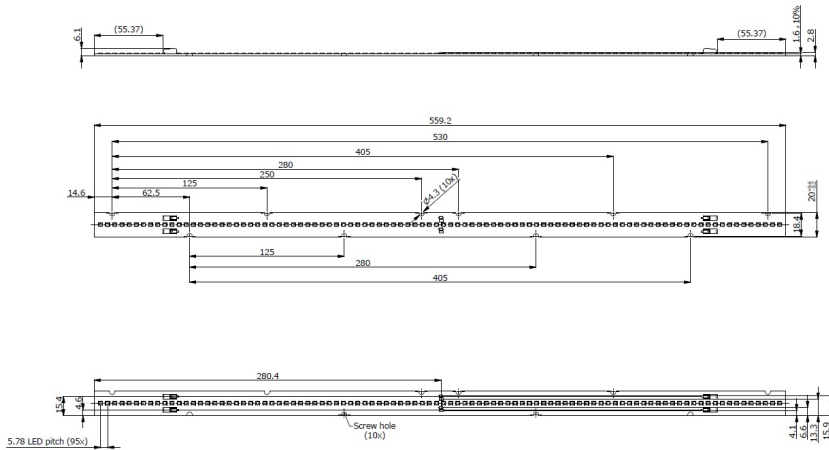


Wiring

Specification item	Value	Unit	Condition
Input wire cross-section	0.25...0.75	mm ²	solid wire
	18...24	AWG	solid wire
Input wire strip length	7.5...8.5	mm	
Input wire cross-section	0.33...0.5	mm ²	stranded wire
	20...22	AWG	stranded wire
Input wire strip length	7.5...8.5	mm	

Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	558.9	559.2	559.5	mm
Width	19.8	20	20.6	mm
Height PCB	1.4	1.6	1.8	mm
Height total		6.1		mm
Product mass		40		gram



Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		400	mA
Case temperature (Tc-max)		80	°C
ESD (direct contact)	8		kV
Working voltage		350	V _{dc}

Application information

Certificates and Standards

CE
ENEC
ENEC+

Environmental

RoHS/REACH

Application

Dimming	Yes
---------	-----



© 2020 Signify Holding, IBRS 10461, 5600VB, NL. All rights reserved. The information provided herein is subject to change, without notice. Signify does not give any representation or warranty as to the accuracy or completeness of the information included herein and shall not be liable for any action in reliance thereon. The information presented in this document is not intended as any commercial offer and does not form part of any quotation or contract, unless otherwise agreed by Signify.

www.philips.com/oem

Philips and the Philips Shield Emblem are registered trademarks of Koninklijke Philips N.V. All other trademarks are owned by Signify Holding or their respective owners.

12/11/2020