

PHILIPS

Fortimo

LED

Fortimo SLM C 1208 L15
2024 G7 HE



Datasheet

Fortimo SLM C 1208 L15 2024 G7 HE

Fortimo LED SLM Gen 7 CRI90 HE continues to focus on the combination of Quality of Light and efficacy. The new HE range has a significant improvement on CRI90 efficacy and close the efficacy gap to < 5% vs. CRI80 range. In the meantime, the new HE range will be delivered with 2 SDCM color consistency. The superior efficacy and color consistency of Fortimo SLM G7 HE will further unlock the extraordinary potential of light, facilitate the innovation and inspire the next generation luminaire design at our OEM customers. Please also check the online Easy Design-in Tool for your perfect system combination (www.easydesignintool.com).

Key features and benefits

- Best quality of light available for all application
- 10%-12% efficacy improvement vs. current G7 CRI90 range.
- Excellent color consistency management (2 SDCM)
- System proposition (Module + Driver + Holder)
- Flexibility to optimize luminaire performance (high efficacy or high lm output)
- 50,000 hours lifetime

January 2021



Ordering data

Commercial product name	EOC	12NC	Box quantity
Fortimo SLM C 935 1208 L15 2024 G7 HE	8719514 345966 00	9290 028 73506	20
Fortimo SLM C 940 1208 L15 2024 G7 HE	8719514 346116 00	9290 028 74006	20
Fortimo SLM C 927 1208 L15 2024 G7 HE	8719514 292154 00	9290 028 54306	20
Fortimo SLM C 930 1208 L15 2024 G7 HE	8719514 280489 00	9290 028 34906	20
Fortimo SLM C 930 PW 1208 L15 2024 G7 HE	8719514 280281 00	9290 028 33706	20
Fortimo SLM C 935 PW 1208 L15 2024 G7 HE	8719514 292178 00	9290 028 54406	20
Fortimo SLM C 940 PW 1208 L15 2024 G7 HE	8719514 292192 00	9290 028 54506	20
Fortimo SLM C 930 PC 1208 L15 2024 G7 HE	8719514 280380 00	9290 028 34306	20

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo SLM C 1208 L15 2024 G7 HE	750	see performance window	1500	mA

Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T_c (case temperature at T_c point)	85	see performance window	95	°C

* Nominal value at which typical performance is specified

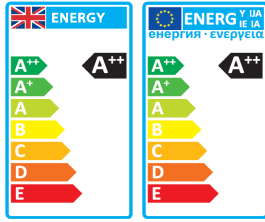
** Value at which life time is specified

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

Optical characteristics - table per color (CCT)

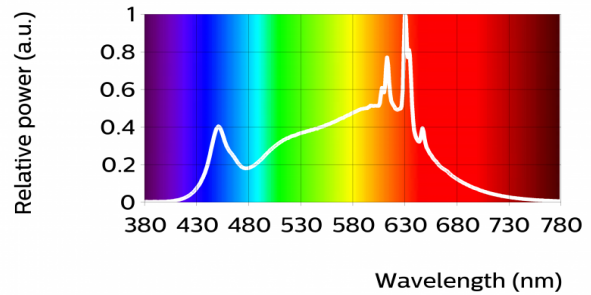
Fortimo SLM C 935 1208 L15 2024 G7 HE

Parameter	Min	Typ	Max	Unit
Luminous flux	3652	3844	4229	lm
Module efficacy		151		lm/W
Correlated color temperature (CCT)		3500		K
Color coordinates (CIEx, CIEy)		(0.407, 0.392)		-
Color consistency			2	SDCM
CRI	90	92		
R9	50			
Photometric code		935/259		
Photobiological safety			RG1 unlimited	



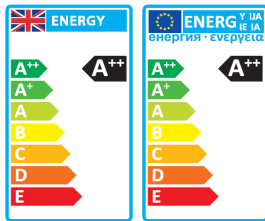
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	935	lm	lm/W
80% I-nom 600mA	Tc 25 °C	3478	169
	Tc-nom 85 °C	3150	157
	Tc-max 95 °C	3087	154
I-nom 750mA	Tc 25 °C	4275	164
	Tc-nom 85 °C	3844	151
	Tc-max 95 °C	3762	148
I-max 1500mA	Tc 25 °C	7826	139
	Tc-nom 85 °C	6875	125
	Tc-max 95 °C	6692	122



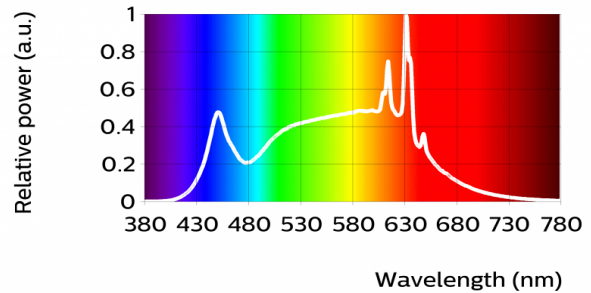
Fortimo SLM C 940 1208 L15 2024 G7 HE

Parameter	Min	Typ	Max	Unit
Luminous flux	3728	3924	4316	lm
Module efficacy		154		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.382, 0.380)		-
Color consistency			2	SDCM
CRI	90	92		
R9	50			
Photometric code		940/259		
Photobiological safety			RG1 unlimited	



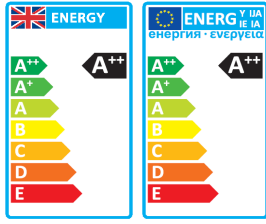
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	940	lm	lm/W
80% I-nom 600mA	Tc 25 °C	3575	174
	Tc-nom 85 °C	3218	160
	Tc-max 95 °C	3157	158
I-nom 750mA	Tc 25 °C	4389	168
	Tc-nom 85 °C	3924	154
	Tc-max 95 °C	3844	151
I-max 1500mA	Tc 25 °C	8016	142
	Tc-nom 85 °C	7032	127
	Tc-max 95 °C	6864	125



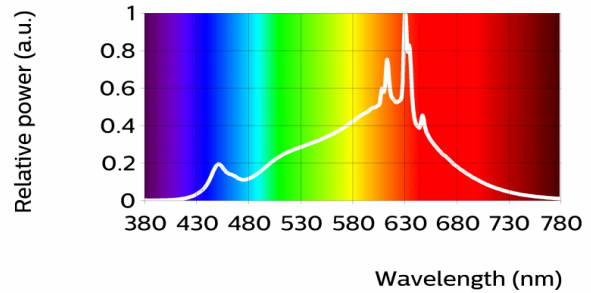
Fortimo SLM C 927 1208 L15 2024 G7 HE

Parameter	Min	Typ	Max	Unit
Luminous flux	3332	3507	3858	lm
Module efficacy		138		lm/W
Correlated color temperature (CCT)		2700		K
Color coordinates (CIEx, CIEy)		(0.458, 0.410)		-
Color consistency			2	SDCM
CRI	90	92		
R9	50			
Photometric code		927/259		
Photobiological safety			RG1 unlimited	



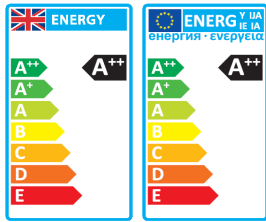
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	927	lm	lm/W
80% I-nom 600mA	Tc 25 °C	3160	154
	Tc-nom 85 °C	2872	143
	Tc-max 95 °C	2813	141
I-nom 750mA	Tc 25 °C	3887	149
	Tc-nom 85 °C	3507	138
	Tc-max 95 °C	3428	135
I-max 1500mA	Tc 25 °C	7127	126
	Tc-nom 85 °C	6262	113
	Tc-max 95 °C	6082	111



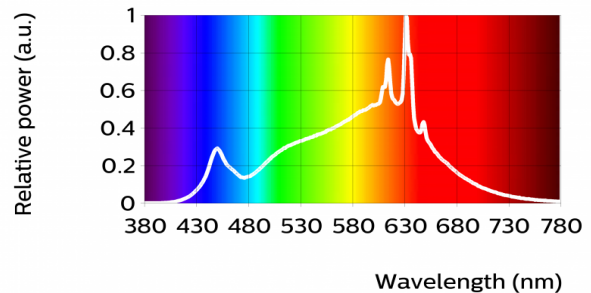
Fortimo SLM C 930 1208 L15 2024 G7 HE

Parameter	Min	Typ	Max	Unit
Luminous flux	3478	3661	4027	lm
Module efficacy		144		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.434, 0.403)		-
Color consistency			2	SDCM
CRI	90	92		
R9	50			
Photometric code		930/259		
Photobiological safety			RG1 unlimited	



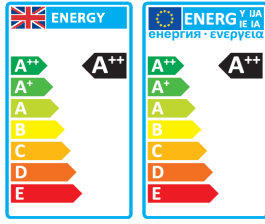
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	930	lm	lm/W
80% I-nom 600mA	Tc 25 °C	3299	161
	Tc-nom 85 °C	2996	149
	Tc-max 95 °C	2934	147
I-nom 750mA	Tc 25 °C	4060	155
	Tc-nom 85 °C	3661	144
	Tc-max 95 °C	3579	141
I-max 1500mA	Tc 25 °C	7457	132
	Tc-nom 85 °C	6551	119
	Tc-max 95 °C	6363	116



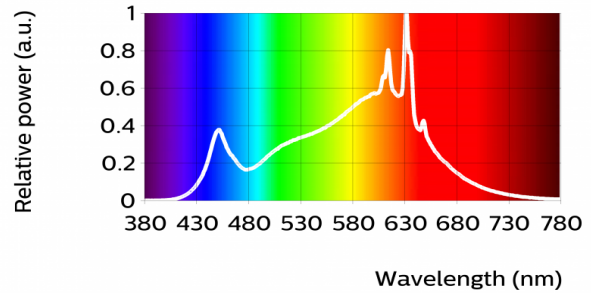
Fortimo SLM C 930 PW 1208 L15 2024 G7 HE

Parameter	Min	Typ	Max	Unit
Luminous flux	3530	3716	4087	lm
Module efficacy		146		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.422, 0.386)		-
Color consistency			2	SDCM
CRI	90	92		
R9	50			
Photometric code		930/259		
Photobiological safety			RG1 unlimited	



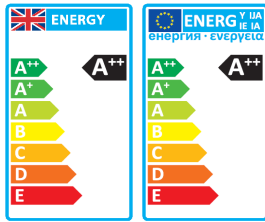
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	930	lm	lm/W
80% I-nom 600mA	Tc 25 °C	3392	166
	Tc-nom 85 °C	3046	152
	Tc-max 95 °C	2982	149
I-nom 750mA	Tc 25 °C	4164	160
	Tc-nom 85 °C	3716	146
	Tc-max 95 °C	3633	143
I-max 1500mA	Tc 25 °C	7576	134
	Tc-nom 85 °C	6617	119
	Tc-max 95 °C	6439	116



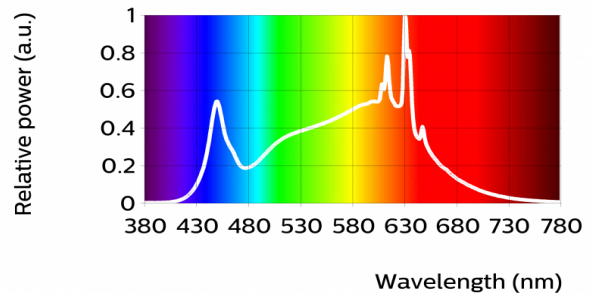
Fortimo SLM C 935 PW 1208 L15 2024 G7 HE

Parameter	Min	Typ	Max	Unit
Luminous flux	3680	3874	4262	lm
Module efficacy		152		lm/W
Correlated color temperature (CCT)		3500		K
Color coordinates (CIEx, CIEy)		(0.398, 0.376)		-
Color consistency			2	SDCM
CRI	90	92		
R9	50			
Photometric code		935/259		
Photobiological safety			RG1 unlimited	



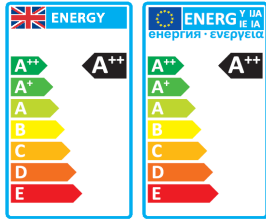
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	935	lm	lm/W
80% I-nom 600mA	Tc 25 °C	3532	173
	Tc-nom 85 °C	3187	159
	Tc-max 95 °C	3123	156
I-nom 750mA	Tc 25 °C	4327	167
	Tc-nom 85 °C	3874	152
	Tc-max 95 °C	3791	149
I-max 1500mA	Tc 25 °C	7820	138
	Tc-nom 85 °C	6838	123
	Tc-max 95 °C	6657	120



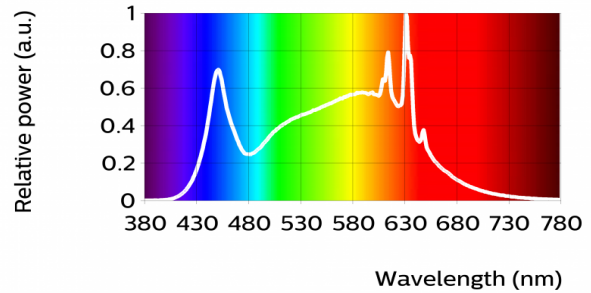
Fortimo SLM C 940 PW 1208 L15 2024 G7 HE

Parameter	Min	Typ	Max	Unit
Luminous flux	3738	3935	4328	lm
Module efficacy		154		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.374, 0.364)		-
Color consistency			2	SDCM
CRI	90	92		
R9	50			
Photometric code		940/259		
Photobiological safety			RG1 unlimited	



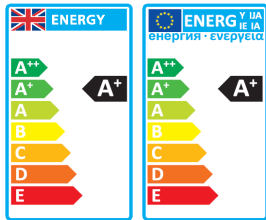
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	940	lm	lm/W
80% I-nom 600mA	Tc 25 °C	3570	174
	Tc-nom 85 °C	3219	160
	Tc-max 95 °C	3149	157
I-nom 750mA	Tc 25 °C	4392	168
	Tc-nom 85 °C	3935	154
	Tc-max 95 °C	3843	151
I-max 1500mA	Tc 25 °C	8067	143
	Tc-nom 85 °C	7052	128
	Tc-max 95 °C	6847	124



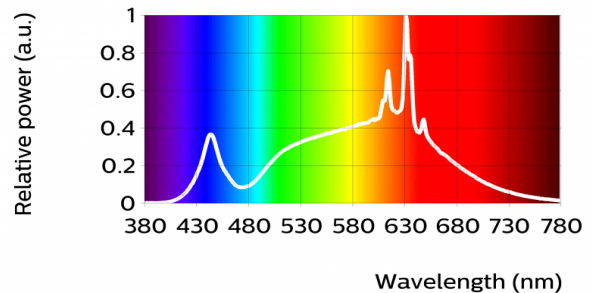
Fortimo SLM C 930 PC 1208 L15 2024 G7 HE

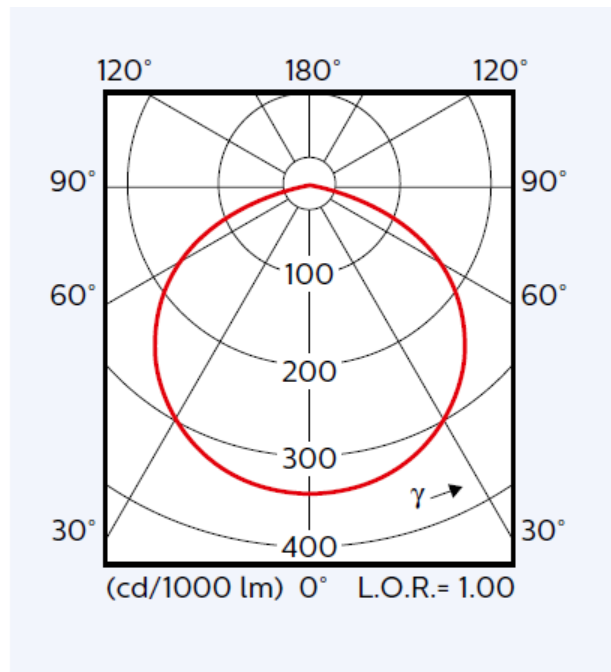
Parameter	Min	Typ	Max	Unit
Luminous flux	3218	3387	3726	lm
Module efficacy		133		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.422, 0.386)		-
Color consistency			2	SDCM
CRI	91	93		
R9	70			
Photometric code		930/259		
Photobiological safety			RG1 unlimited	



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

Operation point	930	lm	lm/W
80% I-nom 600mA	Tc 25 °C	3072	150
	Tc-nom 85 °C	2775	138
	Tc-max 95 °C	2715	136
I-nom 750mA	Tc 25 °C	3773	145
	Tc-nom 85 °C	3387	133
	Tc-max 95 °C	3310	130
I-max 1500mA	Tc 25 °C	6893	122
	Tc-nom 85 °C	6051	110
	Tc-max 95 °C	5881	107





Electrical characteristics

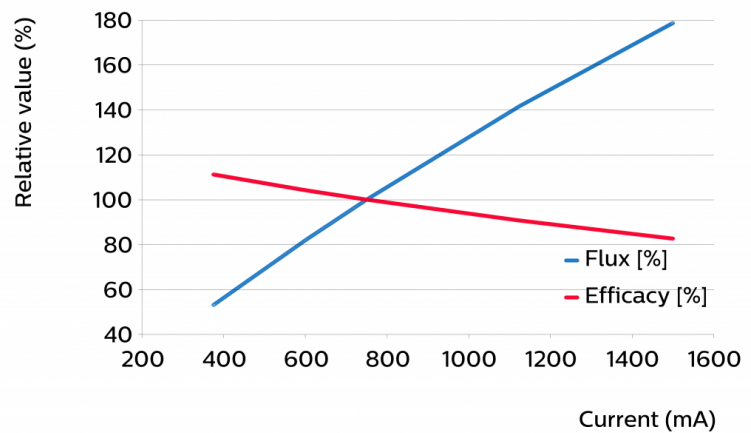
Parameter	Min	Typ	Max	Unit
Forward voltage	31.7	34.0	36.7	V
Power consumption	23.8	25.5	27.5	W = kWh/1000h
Number of modules in series per chain			1	
Number of modules per chain			1	
Number of modules in parallel			1	

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

Tuning information

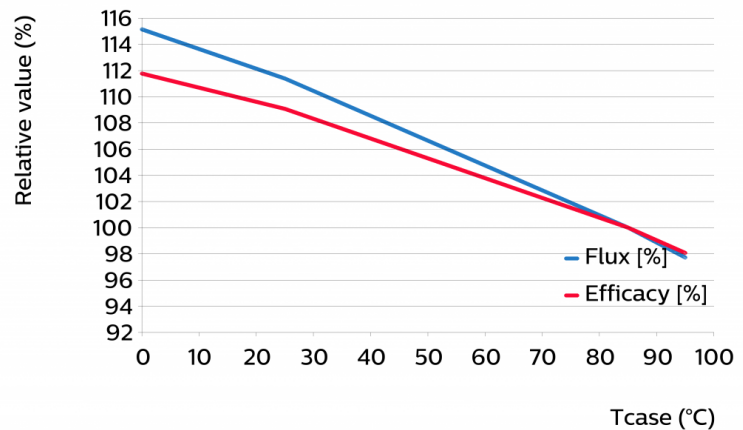
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
1500	179	83
1125	142	91
750	100	100
600	82	104
375	53	111



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

Tc [°C]	Flux [%]	Efficacy [%]
95	98	98
85	100	100
25	111	109
0	115	112



Lumen maintenance

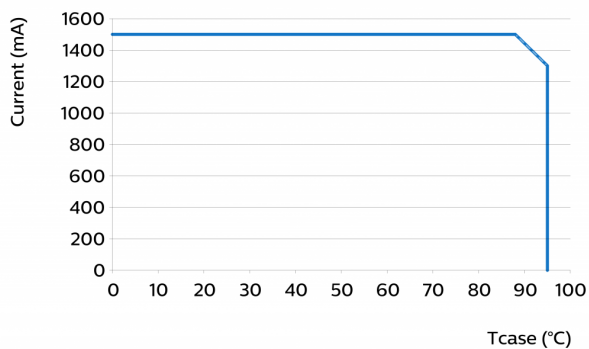
Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I nom 600 mA	Tc 65°C	>50	>50	>50	>50	>50	>50	>50	>50	40
	Tc nom 85°C	>50	>50	>50	>50	47	38	34	22	18
	Tc max 95°C	>50	>50	41	49	32	26	23	15	12
I nom 750 mA	Tc 65°C	>50	>50	>50	>50	>50	>50	>50	45	36
	Tc nom 85°C	>50	>50	>50	>50	43	34	31	20	16
	Tc max 95°C	>50	47	38	45	29	24	21	14	11
I max 1500 mA	Tc 65°C	>50	>50	>50	>50	>50	42	37	24	20
	Tc nom 85°C	>50	39	31	37	24	20	18	12	9
	Tc max 95°C	42	27	22	26	17	14	12	8	7

Lifetime

Parameter	Value	Unit
C10 at Tc life	50000	hours
M70F50 nominal	>50000	hours
M70F50 life	>50000	hours

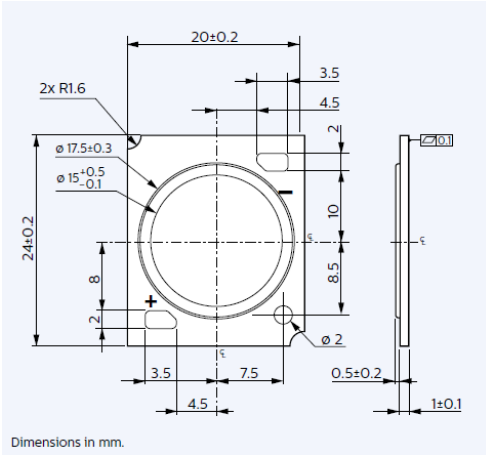
Switching cycles in accordance to EU 1194/2012: >15000.

Performance Window



Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	23.8	24	24.2	mm
Width	19.8	20	20.2	mm
Height PCB	0.9	1	1.1	mm
Height including dam	1.2	1.5	1.8	mm
Product mass		1.23		gram



Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		1500	mA
Case temperature (Tc-max)		95	°C
ESD (direct contact)	8		kV
Working voltage		60	V _{dc}
Ambient temperature	-20	40	°C
Storage temperature	-40	80	°C

Application information

Certificates and Standards

IEC 62031:2008/A1:2012/A2:2014

EN 62031:2008/A1:2013/A2:2015

Relevant clauses of IEC 62471:2006 (Incl. IEC/TR 62471-2: 2009 and IEC/TR 62778: 2014)

Relevant clauses of IEC 60838-1:2004/A1:2008/A2:2011 with IEC 60838-2-2:2006 /A1:2012

Relevant clauses of EN 62471:2008 (With IEC/TR 62471-2: 2009 and IEC/TR 62778: 2014)

Relevant clauses of EN 60838-1:2004/A1:2008/A2:2011 with EN 60838-2-2:2006/A1:2012

UL 8750

ENEC+

CE

Application

Dimming

Yes



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