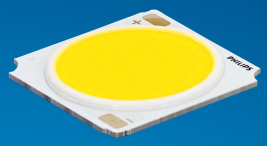
PHILIPS

Fortimo

LED

Fortimo SLM C 9xx 1206
L15 1919 G8N HE



Datasheet

Best combination of quality of light and efficacy with industry standard footprint

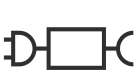
Fortimo LED SLM CRI90 G8N HE

Philips continues to develop its tried and trusted high efficiency COB range of products (since 2020) by introducing the third generation Fortimo SLM G8 HE. The Fortimo SLM CRI90 G8 HE range boasts an impressive 5% increase in efficacy and maintains color consistency of 2 SDCM similar to its predecessor, Fortimo SLM CRI90 G7HE+. Drawing on our four years of industry and R&D experience with high efficacy COB platforms, we have further optimized the quality of light and enhanced the product's robustness.
With the superior efficiency and color consistency, Fortimo SLM G8 HE helps unlock the extraordinary potential of light, facilitating innovation and inspiring the next generation of luminaire design for our OEM customers.
Check out the online Easy Design-in Tool for your perfect system combination (www.easydesignintool.com).

Key features and benefits

- Most widely used footprint to enable ease of use
- Best quality of light available for all applications
- ~5% efficacy improvement vs. current Fortimo SLM G7 HE+ 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

October 2024









Ordering data

Commercial product name	EOC	12NC	EPREL registration #	Box quantity
Fortimo SLM C 927 1206 L15 1919 G8N HE	8720169 382121 00	9290 039 03180	2093616	20
Fortimo SLM C 930 1206 L15 1919 G8N HE	8720169 382152 00	9290 039 03280	2093632	20
Fortimo SLM C 935 1206 L15 1919 G8N HE	8720169 382183 00	9290 039 03380	2093627	20
Fortimo SLM C 940 1206 L15 1919 G8N HE	8720169 382213 00	9290 039 03480	2093617	20
Fortimo SLM C 950 1206 L15 1919 G8N HE	8720169 382244 00	9290 039 03580	2093620	20
Fortimo SLM C 930 PW 1206 L15 1919 G8N HE	8720169 382275 00	9290 039 03680	2093829	20
Fortimo SLM C 935 PW 1206 L15 1919 G8N HE	8720169 382305 00	9290 039 03780	2093881	20
Fortimo SLM C 940 PW 1206 L15 1919 G8N HE	8720169 382336 00	9290 039 03880	2093868	20

Not all products are globally available by default.
Please contact your local sales representative for local availability and activation conditions.

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo SLM C 9xx 1206 L15 1919 G8N HE	540	1080	1080	mA

Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T_c (case temperature at T_c point)	65	95	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

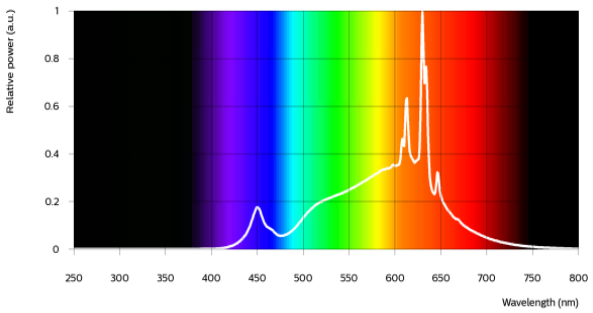
Optical characteristics - table per color (CCT)

Fortimo SLM C 927 1206 L15 1919 G8N HE

Parameter	Min	Typ	Max	Unit
Luminous flux	2793	2940	3234	lm
Efficacy		158		lm/W
Correlated color temperature (CCT)		2700		K
Color coordinates (CIEx, CIEy)		(0.458, 0.410)		-
Color consistency			2	SDCM
CRI	90			
R9	>50			
Photometric code		927/259		
Photobiological safety		RG1 unlimited		

Measurement precision ± 5% for the flux data and ± 6% for the efficacy data. Measurement precision for color coordinates ± 0.005. Measurement precision for CRI ± 1.5.

Operation point	927	lm	lm/W
80% I-nom 432mA	Tc 25 °C	2523	170
	Tc-nom 65 °C	2389	164
	Tc-max 95 °C	2257	156
I-nom 540mA	Tc 25 °C	3107	165
	Tc-nom 65 °C	2940	158
	Tc-max 95 °C	2776	151
I-max 1080mA	Tc 25 °C	5811	143
	Tc-nom 65 °C	5480	136
	Tc-max 95 °C	5156	129

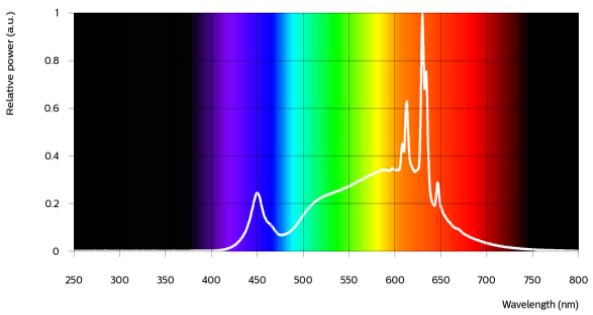


Fortimo SLM C 930 1206 L15 1919 G8N HE

Parameter	Min	Typ	Max	Unit
Luminous flux	2974	3130	3443	lm
Efficacy		168		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.434, 0.403)		-
Color consistency			2	SDCM
CRI	90			
R9	>50			
Photometric code		930/259		
Photobiological safety		RG1 unlimited		

Measurement precision ± 5% for the flux data and ± 6% for the efficacy data. Measurement precision for color coordinates ± 0.005. Measurement precision for CRI ± 1.5.

Operation point	930	lm	lm/W
80% I-nom 432mA	Tc 25 °C	2686	181
	Tc-nom 65 °C	2543	174
	Tc-max 95 °C	2403	166
I-nom 540mA	Tc 25 °C	3308	176
	Tc-nom 65 °C	3130	168
	Tc-max 95 °C	2956	161
I-max 1080mA	Tc 25 °C	6188	152
	Tc-nom 65 °C	5837	145
	Tc-max 95 °C	5492	138



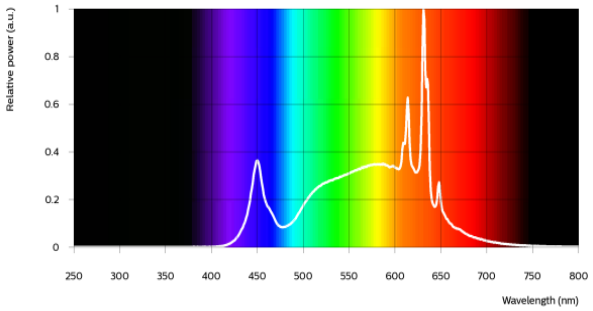
Fortimo SLM C 935 1206 L15 1919 G8N HE

Parameter	Min	Typ	Max	Unit
Luminous flux	3030	3190	3509	lm
Efficacy		172		lm/W
Correlated color temperature (CCT)		3500		K
Color coordinates (CIEx, CIEy)		(0.408, 0.393)		-
Color consistency			2	SDCM
CRI	90			
R9	>50			
Photometric code		935/259		
Photobiological safety		RG1 unlimited		



Measurement precision ± 5% for the flux data and ± 6% for the efficacy data. Measurement precision for color coordinates ± 0.005. Measurement precision for CRI ± 1.5.

Operation point	935	lm	lm/W
80% I-nom 432mA	Tc 25 °C	2737	185
	Tc-nom 65 °C	2592	178
	Tc-max 95 °C	2449	169
I-nom 540mA	Tc 25 °C	3371	179
	Tc-nom 65 °C	3190	172
	Tc-max 95 °C	3013	164
I-max 1080mA	Tc 25 °C	6307	155
	Tc-nom 65 °C	5949	148
	Tc-max 95 °C	5598	140



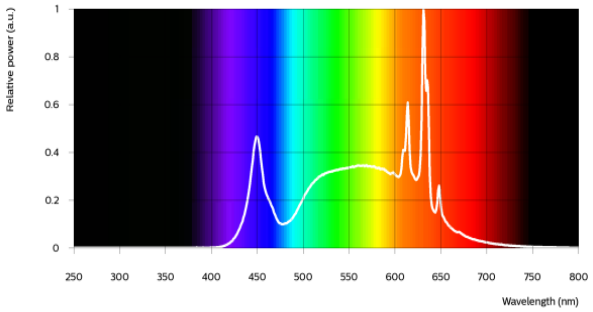
Fortimo SLM C 940 1206 L15 1919 G8N HE

Parameter	Min	Typ	Max	Unit
Luminous flux	3073	3235	3558	lm
Efficacy		174		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.382, 0.380)		-
Color consistency			2	SDCM
CRI	90			
R9	>50			
Photometric code		940/259		
Photobiological safety		RG1 unlimited		



Measurement precision ± 5% for the flux data and ± 6% for the efficacy data. Measurement precision for color coordinates ± 0.005. Measurement precision for CRI ± 1.5.

Operation point	940	lm	lm/W
80% I-nom 432mA	Tc 25 °C	2776	188
	Tc-nom 65 °C	2628	180
	Tc-max 95 °C	2483	171
I-nom 540mA	Tc 25 °C	3419	182
	Tc-nom 65 °C	3235	174
	Tc-max 95 °C	3055	166
I-max 1080mA	Tc 25 °C	6396	157
	Tc-nom 65 °C	6034	150
	Tc-max 95 °C	5678	142



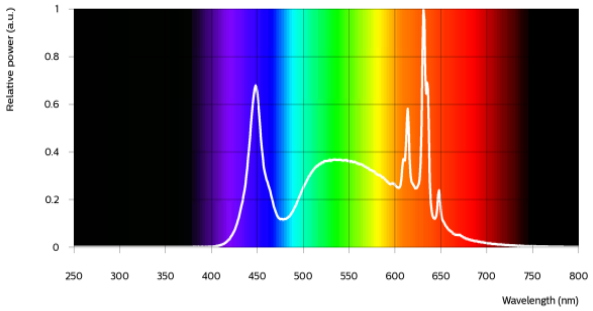
Fortimo SLM C 950 1206 L15 1919 G8N HE

Parameter	Min	Typ	Max	Unit
Luminous flux	3045	3205	3526	lm
Efficacy		172		lm/W
Correlated color temperature (CCT)		5000		K
Color coordinates (CIEx, CIEy)		(0.345, 0.355)		-
Color consistency			2	SDCM
CRI	90			
R9	>50			
Photometric code		950/259		
Photobiological safety		RG1 unlimited		



Measurement precision ± 5% for the flux data and ± 6% for the efficacy data. Measurement precision for color coordinates ± 0.005. Measurement precision for CRI ± 1.5.

Operation point	950	lm	lm/W
80% I-nom 432mA	Tc 25 °C	2750	186
	Tc-nom 65 °C	2604	178
	Tc-max 95 °C	2460	170
I-nom 540mA	Tc 25 °C	3387	180
	Tc-nom 65 °C	3205	172
	Tc-max 95 °C	3027	165
I-max 1080mA	Tc 25 °C	6338	156
	Tc-nom 65 °C	5979	148
	Tc-max 95 °C	5627	141



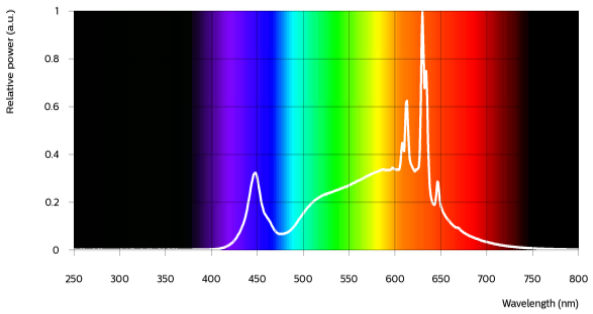
Fortimo SLM C 930 PW 1206 L15 1919 G8N HE

Parameter	Min	Typ	Max	Unit
Luminous flux	2945	3100	3410	lm
Efficacy		167		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.422, 0.386)		-
Color consistency			2	SDCM
CRI	90			
R9	>50			
Photometric code		930/259		
Photobiological safety		RG1 unlimited		



Measurement precision ± 5% for the flux data and ± 6% for the efficacy data. Measurement precision for color coordinates ± 0.005. Measurement precision for CRI ± 1.5.

Operation point	930	lm	lm/W
80% I-nom 432mA	Tc 25 °C	2660	180
	Tc-nom 65 °C	2518	172
	Tc-max 95 °C	2380	164
I-nom 540mA	Tc 25 °C	3276	174
	Tc-nom 65 °C	3100	167
	Tc-max 95 °C	2928	159
I-max 1080mA	Tc 25 °C	6129	151
	Tc-nom 65 °C	5781	143
	Tc-max 95 °C	5440	136



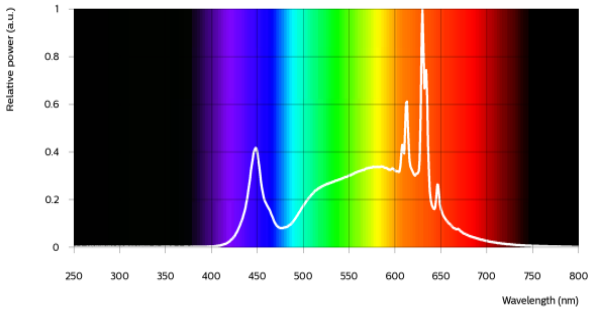
Fortimo SLM C 935 PW 1206 L15 1919 G8N HE

Parameter	Min	Typ	Max	Unit
Luminous flux	3030	3190	3509	lm
Efficacy		172		lm/W
Correlated color temperature (CCT)		3500		K
Color coordinates (CIEx, CIEy)		(0.398, 0.376)		-
Color consistency			2	SDCM
CRI	90			
R9	>50			
Photometric code		935/259		
Photobiological safety		RG1 unlimited		



Measurement precision ± 5% for the flux data and ± 6% for the efficacy data. Measurement precision for color coordinates ± 0.005. Measurement precision for CRI ± 1.5.

Operation point	935	lm	lm/W
80% I-nom 432mA	Tc 25 °C	2737	185
	Tc-nom 65 °C	2592	178
	Tc-max 95 °C	2449	169
I-nom 540mA	Tc 25 °C	3371	179
	Tc-nom 65 °C	3190	172
	Tc-max 95 °C	3013	164
I-max 1080mA	Tc 25 °C	6307	155
	Tc-nom 65 °C	5949	148
	Tc-max 95 °C	5598	140



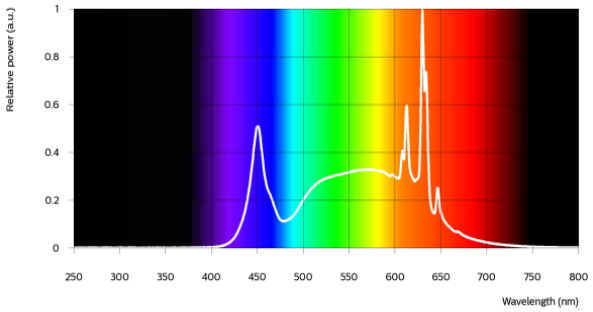
Fortimo SLM C 940 PW 1206 L15 1919 G8N HE

Parameter	Min	Typ	Max	Unit
Luminous flux	3045	3205	3526	lm
Efficacy		172		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.374, 0.364)		-
Color consistency			2	SDCM
CRI	90			
R9	>50			
Photometric code		940/259		
Photobiological safety		RG1 unlimited		

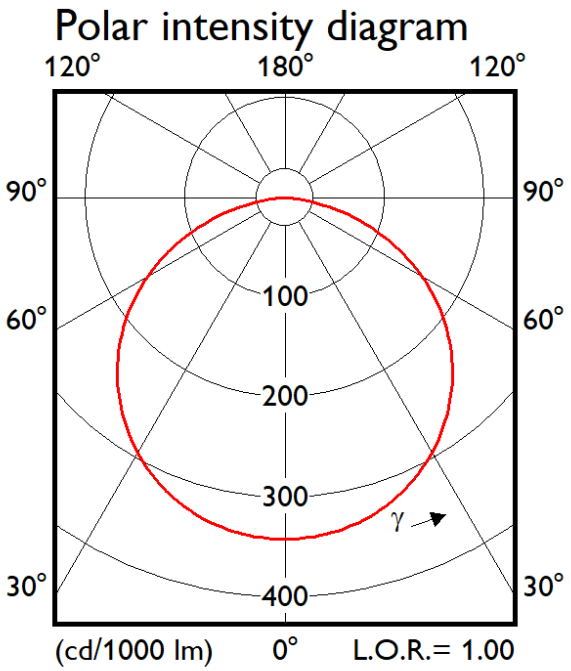


Measurement precision ± 5% for the flux data and ± 6% for the efficacy data. Measurement precision for color coordinates ± 0.005. Measurement precision for CRI ± 1.5.

Operation point	940	lm	lm/W
80% I-nom 432mA	Tc 25 °C	2750	186
	Tc-nom 65 °C	2604	178
	Tc-max 95 °C	2460	170
I-nom 540mA	Tc 25 °C	3387	180
	Tc-nom 65 °C	3205	172
	Tc-max 95 °C	3027	165
I-max 1080mA	Tc 25 °C	6338	156
	Tc-nom 65 °C	5979	148
	Tc-max 95 °C	5627	141



Beam shape


Polar intensity diagram
120°
180°
120°
90°
90°
60°
60°
100
200
300
γ
30°
30°
400
(cd/1000 lm)
0°
L.O.R.= 1.00

Electrical characteristics

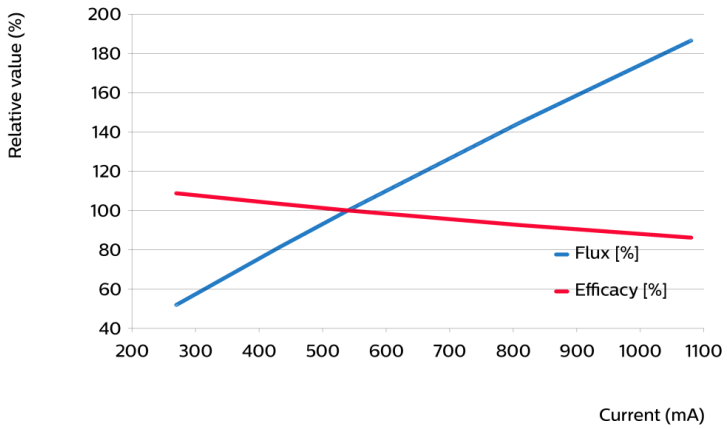
Parameter	Min	Typ	Max	Unit
Forward voltage	32.5	34.5	37.0	V
Power consumption	17.6	18.6	20.0	W = kWh/1000h
Number of modules in series per chain			1	
Number of modules per chain			1	
Number of modules in parallel			1	

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

Tuning information

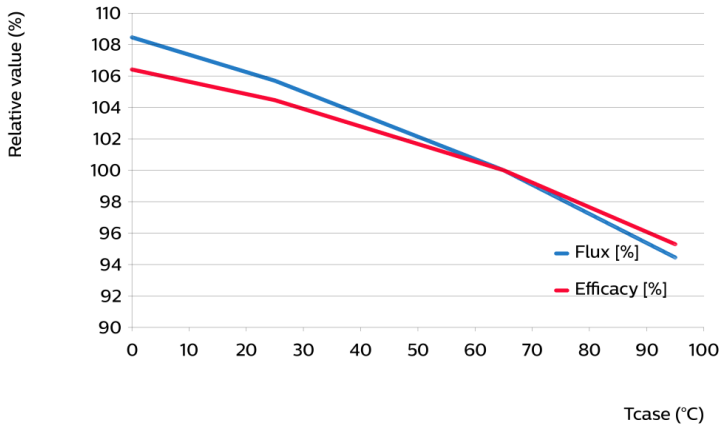
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
1080	186	86
810	145	93
540	100	100
432	81	103
270	52	109



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

Tc [°C]	Flux [%]	Efficacy [%]
95	94	95
65	100	100
25	106	104
0	108	106



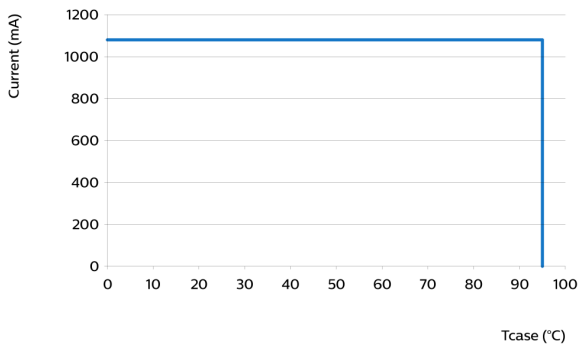
Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I-nom 432mA	Tc 50°C	>66	>66	>66	>66	>66	>66	>66	>66	>66
	Tc 65°C	>66	>66	>66	>66	>66	>66	>66	>66	>66
	Tc 95°C	>66	>66	>66	>66	>66	>66	>66	>66	>66
I-nom 540mA	Tc 50°C	>66	>66	>66	>66	>66	>66	>66	>66	>66
	Tc 65°C	>66	>66	>66	>66	>66	>66	>66	>66	>66
	Tc 95°C	>66	>66	>66	>66	>66	>66	>66	>66	62
I-max 1080mA	Tc 50°C	>66	>66	>66	>66	>66	>66	50	42	39
	Tc 65°C	>66	>66	>66	>66	>66	62	38	32	29
	Tc 95°C	>66	>66	60	49	41	38	23	19	17

Lifetime

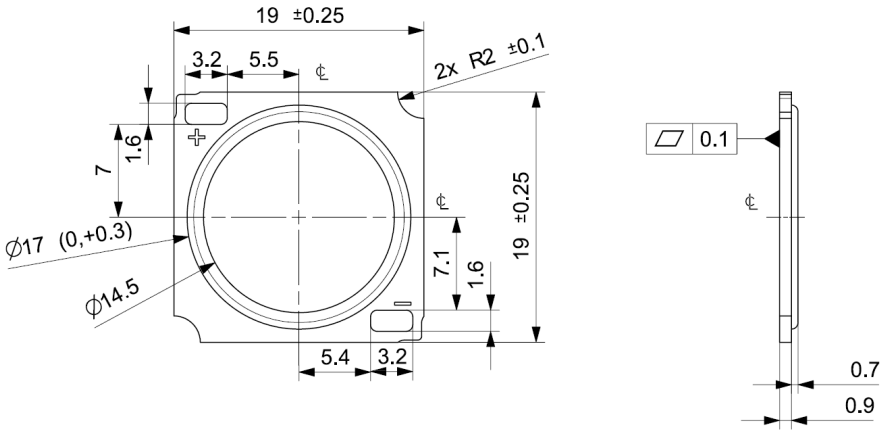
Parameter	Value	Unit
M70F50 nominal	>66000	hours

Performance Window



Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	18.75	19	19.25	mm
Width	18.75	19	19.25	mm
Height	0.8	0.9	1	mm
Height	1.3	1.6	1.9	mm
Product mass		1		gram



Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		1080	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

At illumination levels exceeding 1342 lux risk group classification may be RG2.

Application information

Certificates and Standards
CB
CE
ENEC
ENEC+
EPRS 001
IEC 62031
UKCA
UL
UL 8750

Environmental
RoHS/REACH

Application	
Dimming	Yes



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11/10/2024

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