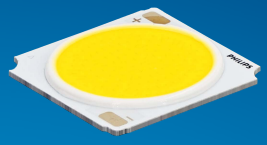
PHILIPS

Fortimo

LED

Fortimo SLM C 9xx 1205
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 1205 L15 1919 G8N HE	8720169 381704 00	9290 039 01780	2093874	20
Fortimo SLM C 930 1205 L15 1919 G8N HE	8720169 381735 00	9290 039 01880	2093784	20
Fortimo SLM C 935 1205 L15 1919 G8N HE	8720169 381766 00	9290 039 01980	2093882	20
Fortimo SLM C 940 1205 L15 1919 G8N HE	8720169 381797 00	9290 039 02080	2093877	20
Fortimo SLM C 950 1205 L15 1919 G8N HE	8720169 381827 00	9290 039 02180	2093625	20
Fortimo SLM C 930 PW 1205 L15 1919 G8N HE	8720169 381858 00	9290 039 02280	2093819	20
Fortimo SLM C 935 PW 1205 L15 1919 G8N HE	8720169 381889 00	9290 039 02380	2093816	20
Fortimo SLM C 940 PW 1205 L15 1919 G8N HE	8720169 381919 00	9290 039 02480	2093833	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 1205 L15 1919 G8N HE	450	900	900	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

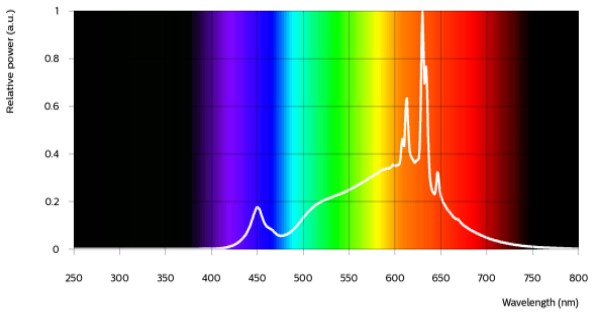
Optical characteristics - table per color (CCT)

Fortimo SLM C 927 1205 L15 1919 G8N HE

Parameter	Min	Typ	Max	Unit
Luminous flux	2375	2500	2750	lm
Efficacy		161		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 360mA	Tc 25 °C	2137	174
	Tc-nom 65 °C	2032	167
	Tc-max 95 °C	1932	160
I-nom 450mA	Tc 25 °C	2630	168
	Tc-nom 65 °C	2500	161
	Tc-max 95 °C	2375	154
I-max 900mA	Tc 25 °C	4913	145
	Tc-nom 65 °C	4658	139
	Tc-max 95 °C	4411	133

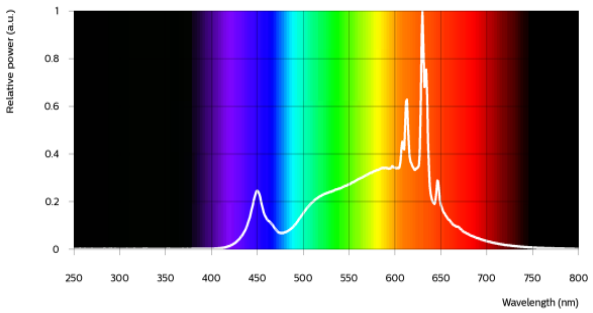


Fortimo SLM C 930 1205 L15 1919 G8N HE

Parameter	Min	Typ	Max	Unit
Luminous flux	2527	2660	2926	lm
Efficacy		172		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 360mA	Tc 25 °C	2273	185
	Tc-nom 65 °C	2162	177
	Tc-max 95 °C	2055	170
I-nom 450mA	Tc 25 °C	2798	178
	Tc-nom 65 °C	2660	172
	Tc-max 95 °C	2527	164
I-max 900mA	Tc 25 °C	5228	154
	Tc-nom 65 °C	4957	148
	Tc-max 95 °C	4696	141

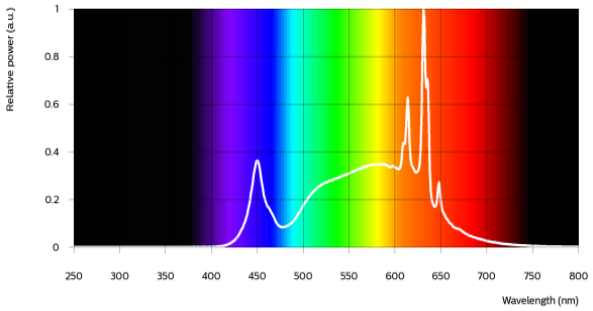


Fortimo SLM C 935 1205 L15 1919 G8N HE

Parameter	Min	Typ	Max	Unit
Luminous flux	2574	2710	2981	lm
Efficacy		175		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 360mA	Tc 25 °C	2316	188
	Tc-nom 65 °C	2203	181
	Tc-max 95 °C	2094	173
I-nom 450mA	Tc 25 °C	2850	182
	Tc-nom 65 °C	2710	175
	Tc-max 95 °C	2575	167
I-max 900mA	Tc 25 °C	5327	157
	Tc-nom 65 °C	5051	151
	Tc-max 95 °C	4785	144

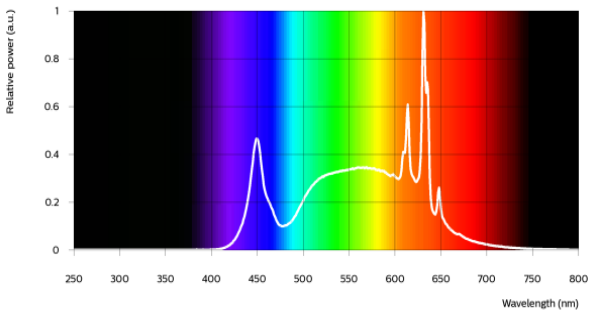


Fortimo SLM C 940 1205 L15 1919 G8N HE

Parameter	Min	Typ	Max	Unit
Luminous flux	2612	2750	3025	lm
Efficacy		177		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 360mA	Tc 25 °C	2350	191
	Tc-nom 65 °C	2235	183
	Tc-max 95 °C	2125	176
I-nom 450mA	Tc 25 °C	2892	184
	Tc-nom 65 °C	2750	177
	Tc-max 95 °C	2613	170
I-max 900mA	Tc 25 °C	5406	159
	Tc-nom 65 °C	5126	153
	Tc-max 95 °C	4856	146

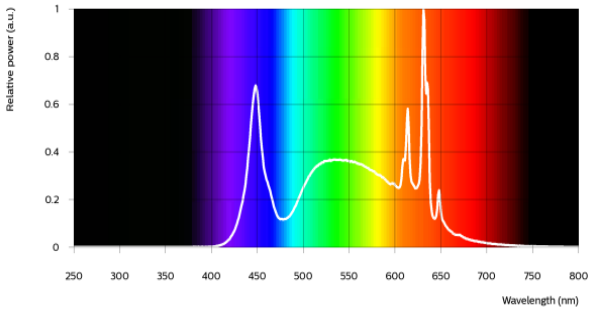


Fortimo SLM C 950 1205 L15 1919 G8N HE

Parameter	Min	Typ	Max	Unit
Luminous flux	2589	2725	2998	lm
Efficacy		176		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 360mA	Tc 25 °C	2328	189
	Tc-nom 65 °C	2215	182
	Tc-max 95 °C	2106	174
I-nom 450mA	Tc 25 °C	2866	183
	Tc-nom 65 °C	2725	176
	Tc-max 95 °C	2589	168
I-max 900mA	Tc 25 °C	5357	158
	Tc-nom 65 °C	5081	152
	Tc-max 95 °C	4814	145

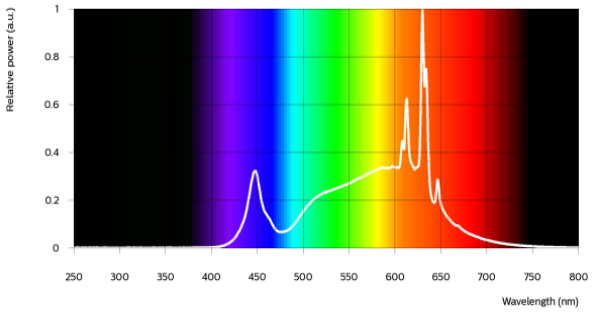


Fortimo SLM C 930 PW 1205 L15 1919 G8N HE

Parameter	Min	Typ	Max	Unit
Luminous flux	2498	2630	2893	lm
Efficacy		170		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 360mA	Tc 25 °C	2247	183
	Tc-nom 65 °C	2138	175
	Tc-max 95 °C	2032	168
I-nom 450mA	Tc 25 °C	2766	176
	Tc-nom 65 °C	2630	170
	Tc-max 95 °C	2499	162
I-max 900mA	Tc 25 °C	5170	152
	Tc-nom 65 °C	4902	146
	Tc-max 95 °C	4644	140

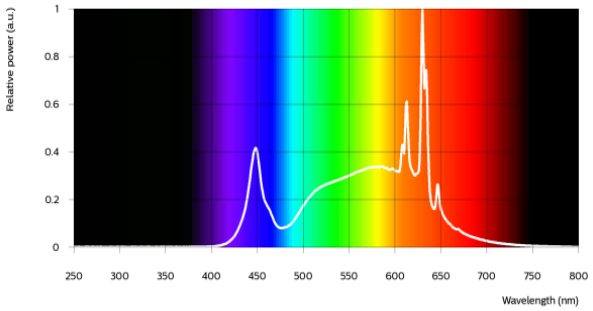


Fortimo SLM C 935 PW 1205 L15 1919 G8N HE

Parameter	Min	Typ	Max	Unit
Luminous flux	2574	2710	2981	lm
Efficacy		175		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 360mA	Tc 25 °C	2316	188
	Tc-nom 65 °C	2203	181
	Tc-max 95 °C	2094	173
I-nom 450mA	Tc 25 °C	2850	182
	Tc-nom 65 °C	2710	175
	Tc-max 95 °C	2575	167
I-max 900mA	Tc 25 °C	5327	157
	Tc-nom 65 °C	5051	151
	Tc-max 95 °C	4785	144

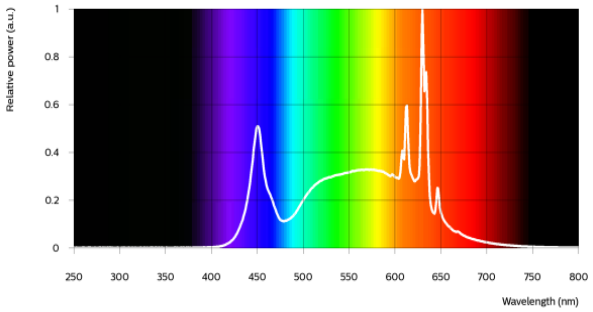


Fortimo SLM C 940 PW 1205 L15 1919 G8N HE

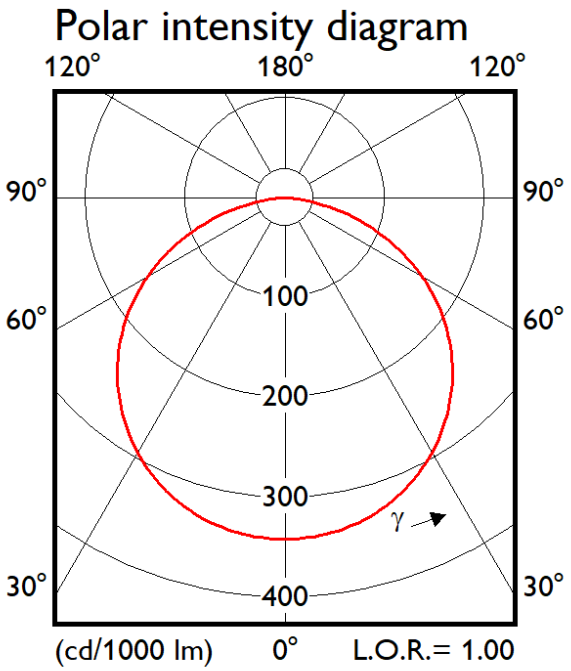
Parameter	Min	Typ	Max	Unit
Luminous flux	2589	2725	2998	lm
Efficacy		176		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.374, 0.364)		-
Color consistency			2	SDCM
CRI	90			
R9	>50			
Photometric code		940/259		
Photobiological safety		RG1 unlimited		

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 360mA	Tc 25 °C	2328	189
	Tc-nom 65 °C	2215	182
	Tc-max 95 °C	2106	174
I-nom 450mA	Tc 25 °C	2866	183
	Tc-nom 65 °C	2725	176
	Tc-max 95 °C	2589	168
I-max 900mA	Tc 25 °C	5357	158
	Tc-nom 65 °C	5081	152
	Tc-max 95 °C	4814	145



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

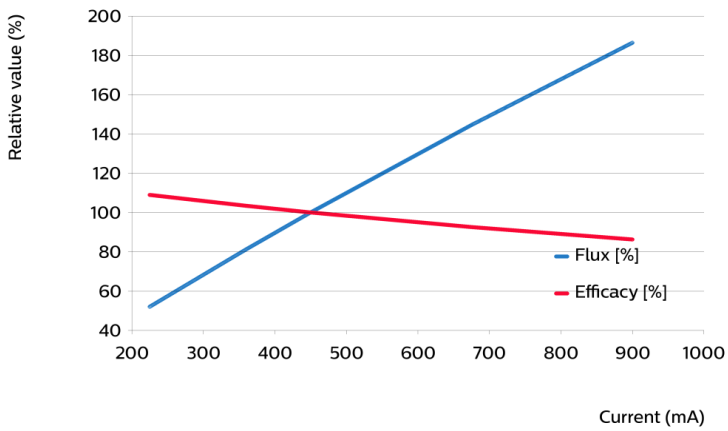
Parameter	Min	Typ	Max	Unit
Forward voltage	32.5	34.5	37.0	V
Power consumption	14.6	15.5	16.7	W = kWh/1000h
Number of modules in series per chain			1	
Number of modules per chain			1	
Number of modules in parallel			1	

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

Tuning information

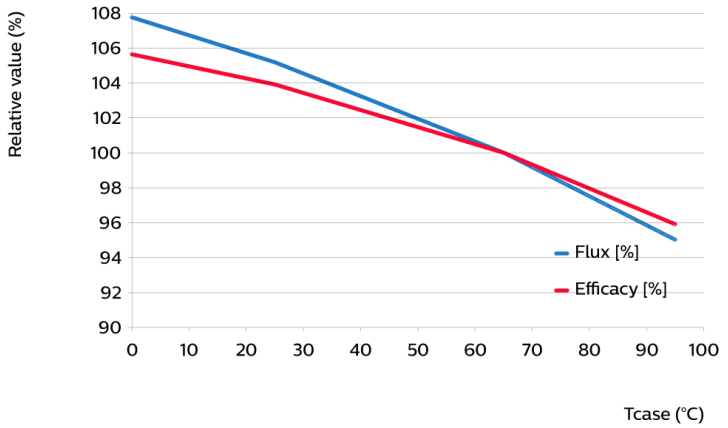
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
900	186	86
675	145	93
450	100	100
360	81	103
225	52	109



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

Tc [°C]	Flux [%]	Efficacy [%]
95	95	96
65	100	100
25	105	104
0	108	106



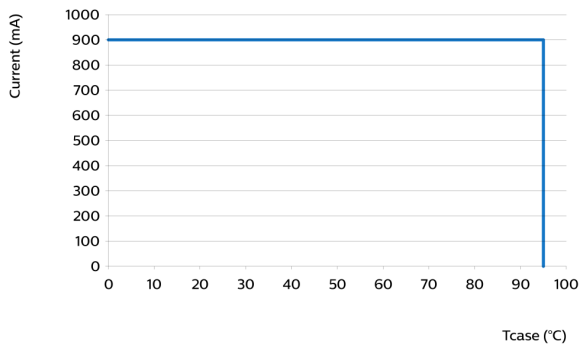
Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I-nom 360mA	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 450mA	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 900mA	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

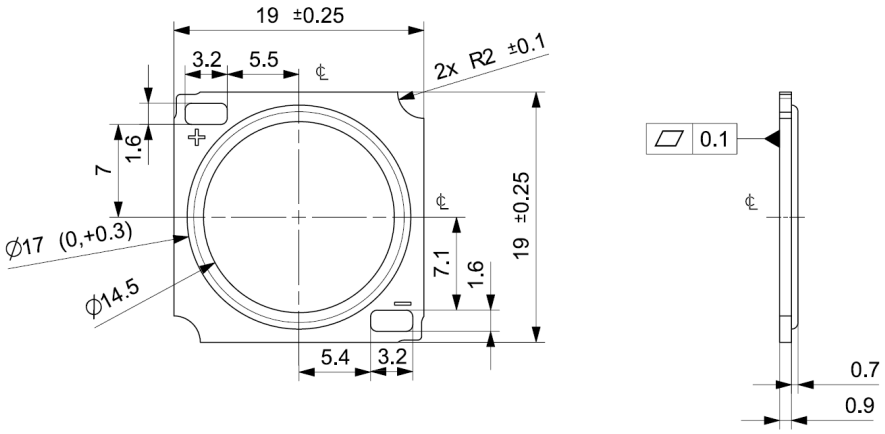
Parameter	Value	Unit
M70F50 nominal	>66000	hours

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		0.98		gram



Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		900	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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