Cree® XLamp® XM-L Family LEDs

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INTRODUCTION

This document describes the product nomenclature required to select and order Cree's XLamp XM-L family of LEDs. XLamp XM-L family LEDs are tested and sorted into bins which are then combined into orderable kits identified by an order code.

All XLamp LEDs are tested and sorted by color and brightness into a unique bin. Each bin contains LEDs from only one color and brightness group and is uniquely identified by a bin code. White XLamp LEDs are sorted by chromaticity (color) and luminous flux (brightness). High Voltage White XLamp LEDs are sorted by chromaticity, luminous flux and voltage. LEDs are shipped on reels containing LEDs from one bin and are always labeled with the appropriate bin code.

Kits contain LEDs from a number of similar bins and are fully defined by their order codes. A full explanation of the order codes for XLamp XM-L family LEDs, as well as a list of standard order codes, is provided in this document.

WWW.CREE.COM/XLAMP

BIN AND ORDER-CODE FORMAT

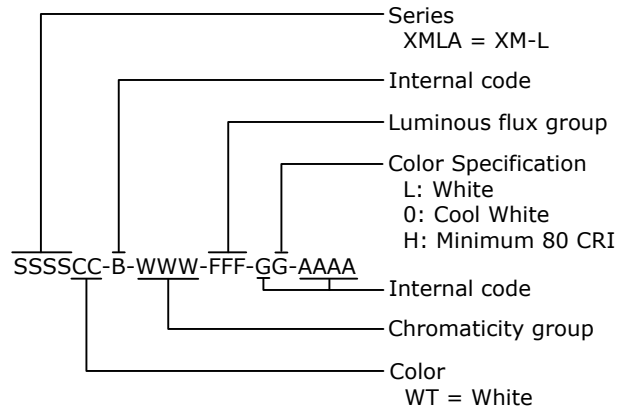Bin codes and order codes for XM-L White LEDs are configured in the following manner:

Order Code

SSSSCC-BD-HHHH-NNNNNNNNN

- Series
  XMLA = XM-L
- Internal code
- Kit number
- Color
  WT = White

Bin Code

SSSSCC-B-WWW-FFF-GG-AAAA

- Series
  XMLA = XM-L
- Internal code
- Luminous flux group
- Color Specification
  L: White
  0: Cool White
  H: Minimum 80 CRI
- Internal code
- Chromaticity group
- Color
  WT = White

Bin codes and order codes for XM-L High Voltage White LEDs are configured in the following manner:

Order Code

SSSCCC-BD-HHHH-NNNNRFFGG

- Series
  XML = XM-L
- Configuration
  B: Voltage class
  D: Reel size
- Color specification
  L: White
  H: Minimum 80 CRI
- Chromaticity
- Flux
- Internal code
- Color
  HVW = High Voltage White

Bin Code

SSSCCC-B-WWW-FFF-VR-AAAA

- Series
  XML = XM-L
- Configuration
  B: Voltage class
- Luminous flux group
- Color specification
  L: White
  H: Minimum 80 CRI
- Internal code
- Vf bin
  0: Default
- Chromaticity group
- Color
  HVW = High Voltage White

PERFORMANCE GROUPS – BRIGHTNESS

XLamp XM-L White LEDs are tested for luminous flux and placed into one of the following luminous-flux groups:

Group Code	Min. Luminous Flux @ 700 mA (lm) Tj = 25°C	Max. Luminous Flux @ 700 mA (lm) T,j= 25°C
S6	182	200
T2	200	220
T3	220	240
T4	240	260
T5	260	280
T6	280	300
U2	300	320

XLamp XM-L High Voltage White LEDs are tested for luminous flux and placed into one of the following luminous-flux groups:

Group Code	Min. Luminous Flux @ 44 mA (lm) Tj = 85°C	Max. Luminous Flux @ 44 mA (lm) Tj = 85°C
R5	139	148
S2	148	156
S3	156	164
S4	164	172
S5	172	182
S6	182	200
T2	200	220
T3	220	240
T4	240	260
T5	260	280
T6	280	300

PERFORMANCE GROUPS – CHROMATICITY

Region	x	y	Region	x	y	Region	x	y	Region	x	y
0A	0.2950	0.2970	0B	0.2920	0.3060	0C	0.2984	0.3133	0D	0.2984	0.3133
	0.2920	0.3060		0.2895	0.3135		0.2962	0.3220		0.3048	0.3207
	0.2984	0.3133		0.2962	0.3220		0.3028	0.3304		0.3068	0.3113
	0.3009	0.3042		0.2984	0.3133		0.3048	0.3207		0.3009	0.3042
0R	0.2980	0.2880	0S	0.2895	0.3135	0T	0.2962	0.3220	0U	0.3037	0.2937
	0.2950	0.2970		0.2870	0.3210		0.2937	0.3312		0.3009	0.3042
	0.3009	0.3042		0.2937	0.3312		0.3005	0.3415		0.3068	0.3113
	0.3037	0.2937		0.2962	0.3220		0.3028	0.3304		0.3093	0.2993

PERFORMANCE GROUPS – CHROMATICITY (CONTINUED)

Region	x	y	Region	x	y	Region	x	y	Region	x	y
1A	0.3048	0.3207	1B	0.3028	0.3304	1C	0.3115	0.3391	1D	0.3130	0.3290
	0.3130	0.3290		0.3115	0.3391		0.3205	0.3481		0.3213	0.3373
	0.3144	0.3186		0.3130	0.3290		0.3213	0.3373		0.3221	0.3261
	0.3068	0.3113		0.3048	0.3207		0.3130	0.3290		0.3144	0.3186
1R	0.3068	0.3113	1S	0.3005	0.3415	1T	0.3099	0.3509	1U	0.3144	0.3186
	0.3144	0.3186		0.3099	0.3509		0.3196	0.3602		0.3221	0.3261
	0.3161	0.3059		0.3115	0.3391		0.3205	0.3481		0.3231	0.3120
	0.3093	0.2993		0.3028	0.3304		0.3115	0.3391		0.3161	0.3059
2A	0.3215	0.3350	2B	0.3207	0.3462	2C	0.3290	0.3538	2D	0.3290	0.3417
	0.3290	0.3417		0.3290	0.3538		0.3376	0.3616		0.3371	0.3490
	0.3290	0.3300		0.3290	0.3417		0.3371	0.3490		0.3366	0.3369
	0.3222	0.3243		0.3215	0.3350		0.3290	0.3417		0.3290	0.3300
2R	0.3222	0.3243	2S	0.3196	0.3602	2T	0.3290	0.3690	2U	0.3290	0.3300
	0.3290	0.3300		0.3290	0.3690		0.3381	0.3762		0.3366	0.3369
	0.3290	0.3180		0.3290	0.3538		0.3376	0.3616		0.3361	0.3245
	0.3231	0.3120		0.3207	0.3462		0.3290	0.3538		0.3290	0.3180
3A	0.3371	0.3490	3B	0.3376	0.3616	3C	0.3463	0.3687	3D	0.3451	0.3554
	0.3451	0.3554		0.3463	0.3687		0.3551	0.3760		0.3533	0.3620
	0.3440	0.3427		0.3451	0.3554		0.3533	0.3620		0.3515	0.3487
	0.3366	0.3369		0.3371	0.3490		0.3451	0.3554		0.3440	0.3427
3R	0.3366	0.3369	3S	0.3381	0.3762	3T	0.3480	0.3840	3U	0.3440	0.3428
	0.3440	0.3428		0.3480	0.3840		0.3571	0.3907		0.3515	0.3487
	0.3429	0.3307		0.3463	0.3687		0.3551	0.3760		0.3495	0.3339
	0.3361	0.3245		0.3376	0.3616		0.3463	0.3687		0.3429	0.3307
4A	0.3530	0.3597	4B	0.3548	0.3736	4C	0.3641	0.3804	4D	0.3615	0.3659
	0.3615	0.3659		0.3641	0.3804		0.3736	0.3874		0.3702	0.3722
	0.3590	0.3521		0.3615	0.3659		0.3702	0.3722		0.3670	0.3578
	0.3512	0.3465		0.3530	0.3597		0.3615	0.3659		0.3590	0.3521
4R	0.3512	0.3465	4S	0.3571	0.3907	4T	0.3668	0.3957	4U	0.3590	0.3521
	0.3590	0.3521		0.3668	0.3957		0.3771	0.4034		0.3670	0.3578
	0.3567	0.3389		0.3641	0.3804		0.3736	0.3874		0.3640	0.3440
	0.3495	0.3339		0.3548	0.3736		0.3641	0.3804		0.3567	0.3389
5A1	0.3670	0.3578	5A2	0.3686	0.3649	5A3	0.3744	0.3685	5A4	0.3726	0.3612
	0.3686	0.3649		0.3702	0.3722		0.3763	0.3760		0.3744	0.3685
	0.3744	0.3685		0.3763	0.3760		0.3825	0.3798		0.3804	0.3721
	0.3726	0.3612		0.3744	0.3685		0.3804	0.3721		0.3783	0.3646
5B1	0.3702	0.3722	5B2	0.3719	0.3797	5B3	0.3782	0.3837	5B4	0.3763	0.3760
	0.3719	0.3797		0.3736	0.3874		0.3802	0.3916		0.3782	0.3837
	0.3782	0.3837		0.3802	0.3916		0.3869	0.3958		0.3847	0.3877
	0.3763	0.3760		0.3782	0.3837		0.3847	0.3877		0.3825	0.3798

PERFORMANCE GROUPS – CHROMATICITY (CONTINUED)

Region	x	y	Region	x	y	Region	x	y	Region	x	y
5C1	0.3825	0.3798	5C2	0.3847	0.3877	5C3	0.3912	0.3917	5C4	0.3887	0.3836
	0.3847	0.3877		0.3869	0.3958		0.3937	0.4001		0.3912	0.3917
	0.3912	0.3917		0.3937	0.4001		0.4006	0.4044		0.3978	0.3958
	0.3887	0.3836		0.3912	0.3917		0.3978	0.3958		0.3950	0.3875
5D1	0.3783	0.3646	5D2	0.3804	0.3721	5D3	0.3863	0.3758	5D4	0.3840	0.3681
	0.3804	0.3721		0.3825	0.3798		0.3887	0.3836		0.3863	0.3758
	0.3863	0.3758		0.3887	0.3836		0.3950	0.3875		0.3924	0.3794
	0.3840	0.3681		0.3863	0.3758		0.3924	0.3794		0.3898	0.3716
6A1	0.3889	0.3690	6A2	0.3915	0.3768	6A3	0.3981	0.3800	6A4	0.3953	0.3720
	0.3915	0.3768		0.3941	0.3848		0.4010	0.3882		0.3981	0.3800
	0.3981	0.3800		0.4010	0.3882		0.4080	0.3916		0.4048	0.3832
	0.3953	0.3720		0.3981	0.3800		0.4048	0.3832		0.4017	0.3751
6B1	0.3941	0.3848	6B2	0.3968	0.3930	6B3	0.4040	0.3966	6B4	0.4010	0.3882
	0.3968	0.3930		0.3996	0.4015		0.4071	0.4052		0.4040	0.3966
	0.4040	0.3966		0.4071	0.4052		0.4146	0.4089		0.4113	0.4001
	0.4010	0.3882		0.4040	0.3966		0.4113	0.4001		0.4080	0.3916
6C1	0.4080	0.3916	6C2	0.4113	0.4001	6C3	0.4186	0.4037	6C4	0.4150	0.3950
	0.4113	0.4001		0.4146	0.4089		0.4222	0.4127		0.4186	0.4037
	0.4186	0.4037		0.4222	0.4127		0.4299	0.4165		0.4259	0.4073
	0.4150	0.3950		0.4186	0.4037		0.4259	0.4073		0.4221	0.3984
6D1	0.4017	0.3751	6D2	0.4048	0.3832	6D3	0.4116	0.3865	6D4	0.4082	0.3782
	0.4048	0.3832		0.4080	0.3916		0.4150	0.3950		0.4116	0.3865
	0.4116	0.3865		0.4150	0.3950		0.4221	0.3984		0.4183	0.3898
	0.4082	0.3782		0.4116	0.3865		0.4183	0.3898		0.4147	0.3814
7A1	0.4147	0.3814	7A2	0.4183	0.3898	7A3	0.4242	0.3919	7A4	0.4203	0.3833
	0.4183	0.3898		0.4221	0.3984		0.4281	0.4006		0.4242	0.3919
	0.4242	0.3919		0.4281	0.4006		0.4342	0.4028		0.4300	0.3939
	0.4203	0.3833		0.4242	0.3919		0.4300	0.3939		0.4259	0.353
7B1	0.4221	0.3984	7B2	0.4259	0.4073	7B3	0.4322	0.4096	7B4	0.4281	0.4006
	0.4259	0.4073		0.4299	0.4165		0.4364	0.4188		0.4322	0.4096
	0.4322	0.4096		0.4364	0.4188		0.4430	0.4212		0.4385	0.4119
	0.4281	0.4006		0.4322	0.4096		0.4385	0.4119		0.4342	0.4028
7C1	0.4342	0.4028	7C2	0.4385	0.4119	7C3	0.4449	0.4141	7C4	0.4403	0.4049
	0.4385	0.4119		0.4430	0.4212		0.4496	0.4236		0.4449	0.4141
	0.4449	0.4141		0.4496	0.4236		0.4562	0.4260		0.4513	0.4164
	0.4403	0.4049		0.4449	0.4141		0.4513	0.4164		0.4465	0.4071
7D1	0.4259	0.3853	7D2	0.4300	0.3939	7D3	0.4359	0.3960	7D4	0.4316	0.3873
	0.4300	0.3939		0.4342	0.4028		0.4403	0.4049		0.4359	0.3960
	0.4359	0.3960		0.4403	0.4049		0.4465	0.4071		0.4418	0.3981
	0.4316	0.3873		0.4359	0.3960		0.4418	0.3981		0.4373	0.3893

PERFORMANCE GROUPS – CHROMATICITY (CONTINUED)

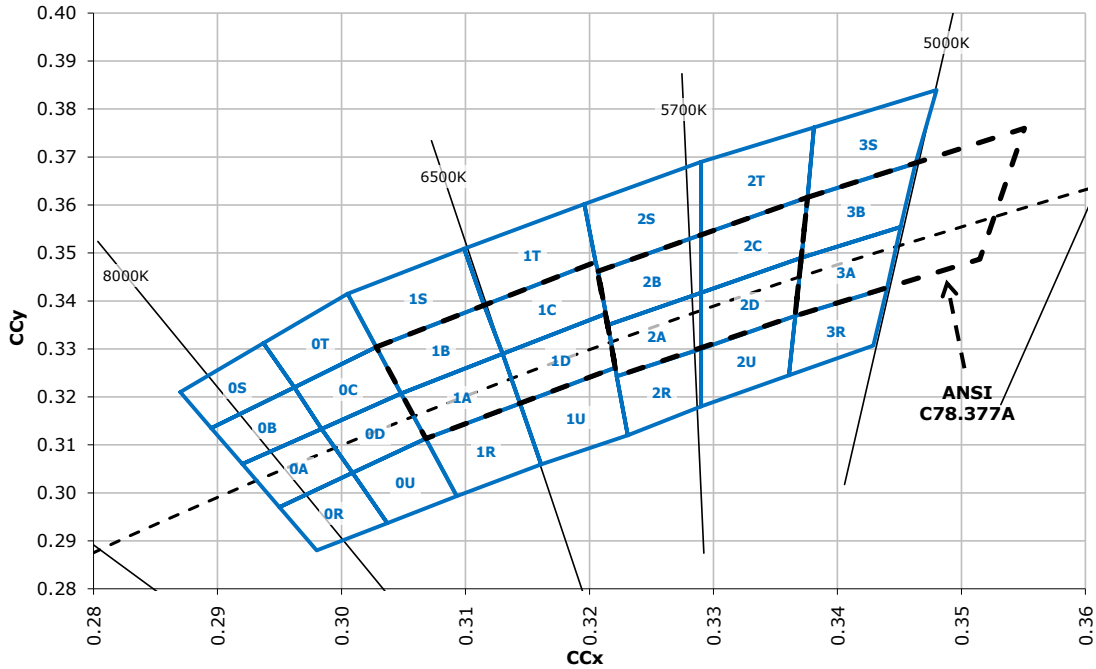| Region	x	y	Region	x	y	Region	x	y	Region	x	y
8A1	0.4373	0.3893	8A2	0.4418	0.3981	8A3	0.4475	0.3994	8A4	0.4428	0.3906
	0.4418	0.3981		0.4465	0.4071		0.4523	0.4085		0.4475	0.3994
	0.4475	0.3994		0.4523	0.4085		0.4582	0.4099		0.4532	0.4008
	0.4428	0.3906		0.4475	0.3994		0.4532	0.4008		0.4483	0.3919
8B1	0.4465	0.4071	8B2	0.4513	0.4164	8B3	0.4573	0.4178	8B4	0.4523	0.4085
	0.4513	0.4164		0.4562	0.4260		0.4624	0.4274		0.4573	0.4178
	0.4573	0.4178		0.4624	0.4274		0.4687	0.4289		0.4634	0.4193
	0.4523	0.4085		0.4573	0.4178		0.4634	0.4193		0.4582	0.4099
8C1	0.4582	0.4099	8C2	0.4634	0.4193	8C3	0.4695	0.4207	8C4	0.4641	0.4112
	0.4634	0.4193		0.4687	0.4289		0.4750	0.4304		0.4695	0.4207
	0.4695	0.4207		0.4750	0.4304		0.4813	0.4319		0.4756	0.4221
	0.4641	0.4112		0.4695	0.4207		0.4756	0.4221		0.4700	0.4126
8D1	0.4483	0.3919	8D2	0.4532	0.4008	8D3	0.4589	0.4021	8D4	0.4538	0.3931
	0.4532	0.4008		0.4582	0.4099		0.4641	0.4112		0.4589	0.4021
	0.4589	0.4021		0.4641	0.4112		0.4700	0.4126		0.4646	0.4034
	0.4538	0.3931		0.4589	0.4021		0.4646	0.4034		0.4593	0.3944

PERFORMANCE GROUPS – VOLTAGE

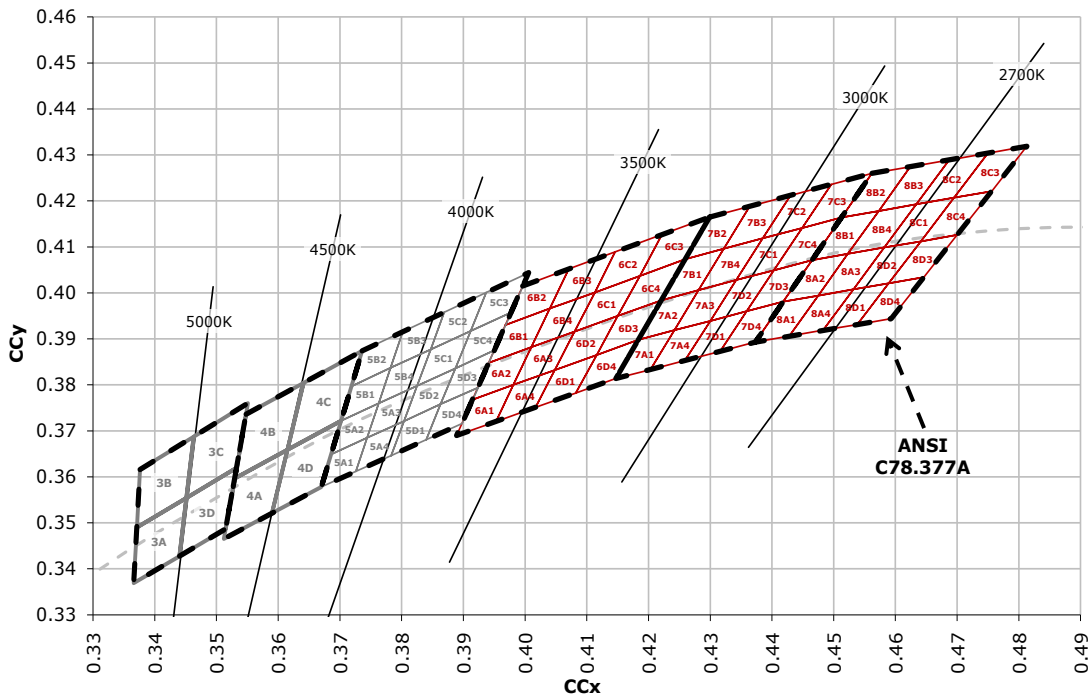XLamp XM-L High Voltage White LEDs are classified into one of the following voltage classes:

Forward Voltage Class	Min. Forward Voltage @ 44 mA (V) Tj = 85°C	Max. Forward Voltage @ 44 mA (V) T,j= 85°C
0	No voltage bin	
1	40.0	42.5
2	42.5	45.0
3	45.0	47.5
4	47.5	50.0
5	50.0	52.5
6	52.5	55.0

CREE'S STANDARD CHROMATICITY REGIONS PLOTTED ON THE 1931 CIE CURVE

ANSI Cool White

ANSI Neutral and Warm White

The following tables of order codes list flux minimums and chromaticity regions for XLamp XM-L LEDs. For other flux and chromaticity combinations, contact Cree or an authorized distributor.

STANDARD ORDER CODES AND BINS (XM-L ANSI COOL WHITE)

XLamp XM-L LED Standard Order Codes - White			
Min. Luminous Flux (lm) @ 700 mA, Tj=25°C*		Chromaticity Regions	Order Code
Group	Flux (lm)		
ANSI Cool White (5000 K – 8300 K)			
T5	260	0A, 0B, 0C, 0D, 0R, 0S, 0T, 0U, 1A, 1B, 1C, 1D, 1R, 1S, 1T, 1U, 2A, 2B, 2C, 2D, 2R, 2S, 2T, 2U, 3A, 3B, 3R, 3S	XMLAWT-00-0000-0000T5051
		1A, 1B, 1C, 1D, 1R, 1S, 1T, 1U, 2A, 2B, 2C, 2D, 2R, 2S, 2T, 3A, 3B, 3S	XMLAWT-00-0000-0000T5053
		1A, 1B, 1C, 1D, 2A, 2B, 2C, 2D	XMLAWT-00-0000-0000T5050
T6	280	0A, 0B, 0C, 0D, 0R, 0S, 0T, 0U, 1A, 1B, 1C, 1D, 1R, 1S, 1T, 1U, 2A, 2B, 2C, 2D, 2R, 2S, 2T, 2U, 3A, 3B, 3R, 3S	XMLAWT-00-0000-0000T6051
		1A, 1B, 1C, 1D, 1R, 1S, 1T, 1U, 2A, 2B, 2C, 2D, 2R, 2S, 2T, 3A, 3B, 3S	XMLAWT-00-0000-0000T6053

STANDARD ORDER CODES AND BINS (XM-L ANSI NEUTRAL WHITE)

XLamp XM-L LED Standard Order Codes - White				
Min. Luminous Flux (lm) @ 700 mA, Tj=25°C*		Chromaticity Regions	Order Code	CCT
Group	Flux (lm)			
ANSI Neutral White (3700 K – 5000 K)				
T2	200	5C1, 5C2, 5C3, 5C4, 5D1, 5D2, 5D3, 5D4, 6A1, 6A2, 6A3, 6A4, 6B1, 6B2, 6B3, 6B4	XMLAWT-00-0000-000LT20F6	3700 K
T3	220	4C, 4D, 5A1, 5A2, 5A3, 5A4, 5B1, 5B2, 5B3, 5B4	XMLAWT-00-0000-000LT30F5	4300 K
		5A1, 5A2, 5A3, 5A4, 5B1, 5B2, 5B3, 5B4, 5C1, 5C2, 5C3, 5C4, 5D1, 5D2, 5D3, 5D4	XMLAWT-00-0000-000LT30E5	4000 K
		5C1, 5C2, 5C3, 5C4, 5D1, 5D2, 5D3, 5D4, 6A1, 6A2, 6A3, 6A4, 6B1, 6B2, 6B3, 6B4	XMLAWT-00-0000-000LT30F6	3700 K
T4	240	3A, 3B, 3C, 3D	XMLAWT-00-0000-000LT40E3	5000 K
		3C, 3D, 4A, 4B	XMLAWT-00-0000-000LT40F4	4750 K
		4A, 4B, 4C, 4D	XMLAWT-00-0000-000LT40E4	4500 K
		4C, 4D, 5A1, 5A2, 5A3, 5A4, 5B1, 5B2, 5B3, 5B4	XMLAWT-00-0000-000LT40F5	4300 K
		5A1, 5A2, 5A3, 5A4, 5B1, 5B2, 5B3, 5B4, 5C1, 5C2, 5C3, 5C4, 5D1, 5D2, 5D3, 5D4	XMLAWT-00-0000-000LT40E5	4000 K
		5C1, 5C2, 5C3, 5C4, 5D1, 5D2, 5D3, 5D4, 6A1, 6A2, 6A3, 6A4, 6B1, 6B2, 6B3, 6B4	XMLAWT-00-0000-000LT40F6	3700 K
T5	260	3A, 3B, 3C, 3D	XMLAWT-00-0000-000LT50E3	5000 K
		3C, 3D, 4A, 4B	XMLAWT-00-0000-000LT50F4	4750 K
		4A, 4B, 4C, 4D	XMLAWT-00-0000-000LT50E4	4500 K
T6	280	3A, 3B, 3C, 3D	XMLAWT-00-0000-000LT60E3	5000 K

* Cree XLamp XM-L order codes specify only a minimum flux bin and not a maximum. Cree may ship reels in flux bins higher than the minimum specified by the order code without advance notice. Shipments will always adhere to the chromaticity restrictions specified by the order code.

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STANDARD ORDER CODES AND BINS (XM-L ANSI WARM WHITE)

Group	Flux (lm)	Chromaticity Regions	Order Code	CCT
ANSI Warm White (2700 K – 3700 K)				
S6	182	7C1, 7C2, 7C3, 7C4, 7D1, 7D2, 7D3, 7D4, 8A1, 8A2, 8A3, 8A4, 8B1, 8B2, 8B3, 8B4	XMLAWT-00-0000-000LS60F8	2900 K
S6	182	8A1, 8A2, 8A3, 8A4, 8B1, 8B2, 8B3, 8B4, 8C1, 8C2, 8C3, 8C4, 8D1, 8D2, 8D3, 8D4	XMLAWT-00-0000-000LS60E8	2700 K
T2	200	6A1, 6A2, 6A3, 6A4, 6B1, 6B2, 6B3, 6B4, 6C1, 6C2, 6C3, 6C4, 6D1, 6D2, 6D3, 6D4	XMLAWT-00-0000-000LT20E6	3500 K
T2	200	6C1, 6C2, 6C3, 6C4, 6D1, 6D2, 6D3, 6D4, 7A1, 7A2, 7A3, 7A4, 7B1, 7B2, 7B3, 7B4	XMLAWT-00-0000-000LT20F7	3200 K
T2	200	7A1, 7A2, 7A3, 7A4, 7B1, 7B2, 7B3, 7B4, 7C1, 7C2, 7C3, 7C4, 7D1, 7D2, 7D3, 7D4	XMLAWT-00-0000-000LT20E7	3000 K
T2	200	7C1, 7C2, 7C3, 7C4, 7D1, 7D2, 7D3, 7D4, 8A1, 8A2, 8A3, 8A4, 8B1, 8B2, 8B3, 8B4	XMLAWT-00-0000-000LT20F8	2900 K
T2	200	8A1, 8A2, 8A3, 8A4, 8B1, 8B2, 8B3, 8B4, 8C1, 8C2, 8C3, 8C4, 8D1, 8D2, 8D3, 8D4	XMLAWT-00-0000-000LT20E8	2700 K
T3	220	6A1, 6A2, 6A3, 6A4, 6B1, 6B2, 6B3, 6B4, 6C1, 6C2, 6C3, 6C4, 6D1, 6D2, 6D3, 6D4	XMLAWT-00-0000-000LT30E6	3500 K
T3	220	6C1, 6C2, 6C3, 6C4, 6D1, 6D2, 6D3, 6D4, 7A1, 7A2, 7A3, 7A4, 7B1, 7B2, 7B3, 7B4	XMLAWT-00-0000-000LT30F7	3200 K
T3	220	7A1, 7A2, 7A3, 7A4, 7B1, 7B2, 7B3, 7B4, 7C1, 7C2, 7C3, 7C4, 7D1, 7D2, 7D3, 7D4	XMLAWT-00-0000-000LT30E7	3000 K
T4	240	6A1, 6A2, 6A3, 6A4, 6B1, 6B2, 6B3, 6B4, 6C1, 6C2, 6C3, 6C4, 6D1, 6D2, 6D3, 6D4	XMLAWT-00-0000-000LT40E6	3500 K

STANDARD ORDER CODES AND BINS (XM-L ANSI WARM WHITE – 80 CRI)

Group	Flux (lm)	Chromaticity Regions	Order Code	CCT
ANSI Warm White (2700 K – 3700 K)				
S6	182	7C1, 7C2, 7C3, 7C4, 7D1, 7D2, 7D3, 7D4, 8A1, 8A2, 8A3, 8A4, 8B1, 8B2, 8B3, 8B4	XMLAWT-00-0000-000HS60F8	2900 K
S6	182	8A1, 8A2, 8A3, 8A4, 8B1, 8B2, 8B3, 8B4, 8C1, 8C2, 8C3, 8C4, 8D1, 8D2, 8D3, 8D4	XMLAWT-00-0000-000HS60E8	2700 K
T2	200	6C1, 6C2, 6C3, 6C4, 6D1, 6D2, 6D3, 6D4, 7A1, 7A2, 7A3, 7A4, 7B1, 7B2, 7B3, 7B4	XMLAWT-00-0000-000HT20F7	3200 K
T2	200	7A1, 7A2, 7A3, 7A4, 7B1, 7B2, 7B3, 7B4, 7C1, 7C2, 7C3, 7C4, 7D1, 7D2, 7D3, 7D4	XMLAWT-00-0000-000HT20E7	3000 K
T2	200	7C1, 7C2, 7C3, 7C4, 7D1, 7D2, 7D3, 7D4, 8A1, 8A2, 8A3, 8A4, 8B1, 8B2, 8B3, 8B4	XMLAWT-00-0000-000HT20F8	2900 K
T2	200	8A1, 8A2, 8A3, 8A4, 8B1, 8B2, 8B3, 8B4, 8C1, 8C2, 8C3, 8C4, 8D1, 8D2, 8D3, 8D4	XMLAWT-00-0000-000HT20E8	2700 K
T3	220	6C1, 6C2, 6C3, 6C4, 6D1, 6D2, 6D3, 6D4, 7A1, 7A2, 7A3, 7A4, 7B1, 7B2, 7B3, 7B4	XMLAWT-00-0000-000HT30F7	3200 K
T3	220	7A1, 7A2, 7A3, 7A4, 7B1, 7B2, 7B3, 7B4, 7C1, 7C2, 7C3, 7C4, 7D1, 7D2, 7D3, 7D4	XMLAWT-00-0000-000HT30E7	3000 K

* Cree XLamp XM-L order codes specify only a minimum flux bin and not a maximum. Cree may ship reels in flux bins higher than the minimum specified by the order code without advance notice. Shipments will always adhere to the chromaticity restrictions specified by the order code.

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STANDARD ORDER CODES AND BINS (XM-L HIGH VOLTAGE ANSI COOL WHITE)

XLamp XM-L LED Standard Order Codes - White			
Min. Luminous Flux (lm) @ 44 mA, Tj=85°C*		**Chromaticity Regions**	**Order Code**
Group	**Flux (lm)**		
ANSI Cool White (5000 K – 8300 K)			
T2	200	0A, 0B, 0C, 0D, 0R, 0S, 0T, 0U, 1A, 1B, 1C, 1D, 1R, 1S, 1T, 1U, 2A, 2B, 2C, 2D, 2R, 2S, 2T, 2U, 3A, 3B, 3R, 3S	XMLHVW-Q0-0000-0000LT251
		1A, 1B, 1C, 1D, 1R, 1S, 1T, 1U, 2A, 2B, 2C, 2D, 2R, 2S, 2T, 3A, 3B, 3S	XMLHVW-Q0-0000-0000LT253
		1A, 1B, 1C, 1D, 2A, 2B, 2C, 2D	XMLHVW-Q0-0000-0000LT250
T3	220	0A, 0B, 0C, 0D, 0R, 0S, 0T, 0U, 1A, 1B, 1C, 1D, 1R, 1S, 1T, 1U, 2A, 2B, 2C, 2D, 2R, 2S, 2T, 2U, 3A, 3B, 3R, 3S	XMLHVW-Q0-0000-0000LT351
		1A, 1B, 1C, 1D, 1R, 1S, 1T, 1U, 2A, 2B, 2C, 2D, 2R, 2S, 2T, 3A, 3B, 3S	XMLHVW-Q0-0000-0000LT353
		1A, 1B, 1C, 1D, 2A, 2B, 2C, 2D	XMLHVW-Q0-0000-0000LT350
T4	240	0A, 0B, 0C, 0D, 0R, 0S, 0T, 0U, 1A, 1B, 1C, 1D, 1R, 1S, 1T, 1U, 2A, 2B, 2C, 2D, 2R, 2S, 2T, 2U, 3A, 3B, 3R, 3S	XMLHVW-Q0-0000-0000LT451
		1A, 1B, 1C, 1D, 1R, 1S, 1T, 1U, 2A, 2B, 2C, 2D, 2R, 2S, 2T, 3A, 3B, 3S	XMLHVW-Q0-0000-0000LT453
		1A, 1B, 1C, 1D, 2A, 2B, 2C, 2D	XMLHVW-Q0-0000-0000LT450

STANDARD ORDER CODES AND BINS (XM-L HIGH VOLTAGE ANSI NEUTRAL WHITE)

XLamp XM-L LED Standard Order Codes - White				
Min. Luminous Flux (lm) @ 44 mA, Tj=85°C*		**Chromaticity Regions**	**Order Code**	**CCT**
Group	**Flux (lm)**			
ANSI Neutral White (3700 K – 5000 K)				
S4	164	5C1, 5C2, 5C3, 5C4, 5D1, 5D2, 5D3, 5D4, 6A1, 6A2, 6A3, 6A4, 6B1, 6B2, 6B3, 6B4	XMLHVW-Q0-0000-0000LS4F6	3700 K
S5	172	4C, 4D, 5A1, 5A2, 5A3, 5A4, 5B1, 5B2, 5B3, 5B4	XMLHVW-Q0-0000-00000LS5F5	4300 K
		5A1, 5A2, 5A3, 5A4, 5B1, 5B2, 5B3, 5B4, 5C1, 5C2, 5C3, 5C4, 5D1, 5D2, 5D3, 5D4	XMLHVW-Q0-0000-0000LS5E5	4000 K
		5C1, 5C2, 5C3, 5C4, 5D1, 5D2, 5D3, 5D4, 6A1, 6A2, 6A3, 6A4, 6B1, 6B2, 6B3, 6B4	XMLHVW-Q0-0000-0000LS5F6	3700 K
S6	182	3A, 3B, 3C, 3D	XMLHVW-Q0-0000-0000LS6E3	5000 K
		3C, 3D, 4A, 4B	XMLHVW-Q0-0000-0000LS6F4	4750 K
		4A, 4B, 4C, 4D	XMLHVW-Q0-0000-0000LS6E4	4500 K
		4C, 4D, 5A1, 5A2, 5A3, 5A4, 5B1, 5B2, 5B3, 5B4	XMLHVW-Q0-0000-0000LS6F5	4300 K
		5A1, 5A2, 5A3, 5A4, 5B1, 5B2, 5B3, 5B4, 5C1, 5C2, 5C3, 5C4, 5D1, 5D2, 5D3, 5D4	XMLHVW-Q0-0000-0000LS6E5	4000 K
		5C1, 5C2, 5C3, 5C4, 5D1, 5D2, 5D3, 5D4, 6A1, 6A2, 6A3, 6A4, 6B1, 6B2, 6B3, 6B4	XMLHVW-Q0-0000-0000LS6F6	3700 K
T2	200	3A, 3B, 3C, 3D	XMLHVW-Q0-0000-0000LT2E3	5000 K
		3C, 3D, 4A, 4B	XMLHVW-Q0-0000-0000LT2F4	4750 K
		4A, 4B, 4C, 4D	XMLHVW-Q0-0000-0000LT2E4	4500 K
		4C, 4D, 5A1, 5A2, 5A3, 5A4, 5B1, 5B2, 5B3, 5B4	XMLHVW-Q0-0000-0000LT2F5	4300 K
		5A1, 5A2, 5A3, 5A4, 5B1, 5B2, 5B3, 5B4, 5C1, 5C2, 5C3, 5C4, 5D1, 5D2, 5D3, 5D4	XMLHVW-Q0-0000-0000LT2E5	4000 K
T3	220	3A, 3B, 3C, 3D	XMLHVW-Q0-0000-0000LT3E3	5000 K
		3C, 3D, 4A, 4B	XMLHVW-Q0-0000-0000LT3F4	4750 K
		4A, 4B, 4C, 4D	XMLHVW-Q0-0000-0000LT3E4	4500 K

* Cree XLamp XM-L order codes specify only a minimum flux bin and not a maximum. Cree may ship reels in flux bins higher than the minimum specified by the order code without advance notice. Shipments will always adhere to the chromaticity restrictions specified by the order code.

STANDARD ORDER CODES AND BINS (XM-L HIGH VOLTAGE ANSI WARM WHITE)

XLamp XM-L LED Standard Order Codes - White				
Min. Luminous Flux (lm) @ 44 mA, Tj=85°C*		**Chromaticity Regions**	**Order Code**	**CCT**
Group	**Flux (lm)**			
ANSI Warm White (2700 K – 3700 K)				
S2	148	7C1, 7C2, 7C3, 7C4, 7D1, 7D2, 7D3, 7D4, 8A1, 8A2, 8A3, 8A4, 8B1, 8B2, 8B3, 8B4	XMLHVW-Q0-0000-0000LS2F8	2900 K
		8A1, 8A2, 8A3, 8A4, 8B1, 8B2, 8B3, 8B4, 8C1, 8C2, 8C3, 8C4, 8D1, 8D2, 8D3, 8D4	XMLHVW-Q0-0000-0000LS2E8	2700 K
S3	156	6C1, 6C2, 6C3, 6C4, 6D1, 6D2, 6D3, 6D4, 7A1, 7A2, 7A3, 7A4, 7B1, 7B2, 7B3, 7B4	XMLHVW-Q0-0000-0000LS3F7	3200 K
		7A1, 7A2, 7A3, 7A4, 7B1, 7B2, 7B3, 7B4, 7C1, 7C2, 7C3, 7C4, 7D1, 7D2, 7D3, 7D4	XMLHVW-Q0-0000-0000LS3E7	3000 K
		7C1, 7C2, 7C3, 7C4, 7D1, 7D2, 7D3, 7D4, 8A1, 8A2, 8A3, 8A4, 8B1, 8B2, 8B3, 8B4	XMLHVW-Q0-0000-0000LS3F8	2900 K
		8A1, 8A2, 8A3, 8A4, 8B1, 8B2, 8B3, 8B4, 8C1, 8C2, 8C3, 8C4, 8D1, 8D2, 8D3, 8D4	XMLHVW-Q0-0000-0000LS3E8	2700 K
S4	164	6A1, 6A2, 6A3, 6A4, 6B1, 6B2, 6B3, 6B4, 6C1, 6C2, 6C3, 6C4, 6D1, 6D2, 6D3, 6D4	XMLHVW-Q0-0000-0000LS4E6	3500 K
		6C1, 6C2, 6C3, 6C4, 6D1, 6D2, 6D3, 6D4, 7A1, 7A2, 7A3, 7A4, 7B1, 7B2, 7B3, 7B4	XMLHVW-Q0-0000-0000LS4F7	3200 K
		7A1, 7A2, 7A3, 7A4, 7B1, 7B2, 7B3, 7B4, 7C1, 7C2, 7C3, 7C4, 7D1, 7D2, 7D3, 7D4	XMLHVW-Q0-0000-0000LS4E7	3000 K
		7C1, 7C2, 7C3, 7C4, 7D1, 7D2, 7D3, 7D4, 8A1, 8A2, 8A3, 8A4, 8B1, 8B2, 8B3, 8B4	XMLHVW-Q0-0000-0000LS4F8	2900 K
		8A1, 8A2, 8A3, 8A4, 8B1, 8B2, 8B3, 8B4, 8C1, 8C2, 8C3, 8C4, 8D1, 8D2, 8D3, 8D4	XMLHVW-Q0-0000-0000LS4E8	2700 K
S5	172	6A1, 6A2, 6A3, 6A4, 6B1, 6B2, 6B3, 6B4, 6C1, 6C2, 6C3, 6C4, 6D1, 6D2, 6D3, 6D4	XMLHVW-Q0-0000-0000LS5E6	3500 K
		6C1, 6C2, 6C3, 6C4, 6D1, 6D2, 6D3, 6D4, 7A1, 7A2, 7A3, 7A4, 7B1, 7B2, 7B3, 7B4	XMLHVW-Q0-0000-0000LS5F7	3200 K
		7A1, 7A2, 7A3, 7A4, 7B1, 7B2, 7B3, 7B4, 7C1, 7C2, 7C3, 7C4, 7D1, 7D2, 7D3, 7D4	XMLHVW-Q0-0000-0000LS5E7	3000 K
		7C1, 7C2, 7C3, 7C4, 7D1, 7D2, 7D3, 7D4, 8A1, 8A2, 8A3, 8A4, 8B1, 8B2, 8B3, 8B4	XMLHVW-Q0-0000-0000LS5F8	2900 K
		8A1, 8A2, 8A3, 8A4, 8B1, 8B2, 8B3, 8B4, 8C1, 8C2, 8C3, 8C4, 8D1, 8D2, 8D3, 8D4	XMLHVW-Q0-0000-0000LS5E8	2700 K
S6	182	6A1, 6A2, 6A3, 6A4, 6B1, 6B2, 6B3, 6B4, 6C1, 6C2, 6C3, 6C4, 6D1, 6D2, 6D3, 6D4	XMLHVW-Q0-0000-0000LS6E6	3500 K
		6C1, 6C2, 6C3, 6C4, 6D1, 6D2, 6D3, 6D4, 7A1, 7A2, 7A3, 7A4, 7B1, 7B2, 7B3, 7B4	XMLHVW-Q0-0000-0000LS6F7	3200 K
		7A1, 7A2, 7A3, 7A4, 7B1, 7B2, 7B3, 7B4, 7C1, 7C2, 7C3, 7C4, 7D1, 7D2, 7D3, 7D4	XMLHVW-Q0-0000-0000LS6E7	3000 K

STANDARD ORDER CODES AND BINS (XM-L HIGH VOLTAGE ANSI NEUTRAL WHITE – CRI 80)

XLamp XM-L LED Standard Order Codes - White				
Min. Luminous Flux (lm) @ 44 mA, Tj=85°C*		**Chromaticity Regions**	**Order Code**	**CCT**
Group	**Flux (lm)**			
ANSI Neutral White (3700 K – 5000 K)				
S4	164	5C1, 5C2, 5C3, 5C4, 5D1, 5D2, 5D3, 5D4, 6A1, 6A2, 6A3, 6A4, 6B1, 6B2, 6B3, 6B4	XMLHVW-Q0-0000-0000HS4F6	3700 K
S5	172	4C, 4D, 5A1, 5A2, 5A3, 5A4, 5B1, 5B2, 5B3, 5B4	XMLHVW-Q0-0000-0000HS5F5	4300 K
		5A1, 5A2, 5A3, 5A4, 5B1, 5B2, 5B3, 5B4, 5C1, 5C2, 5C3, 5C4, 5D1, 5D2, 5D3, 5D4	XMLHVW-Q0-0000-0000HS5E5	4000 K
		5C1, 5C2, 5C3, 5C4, 5D1, 5D2, 5D3, 5D4, 6A1, 6A2, 6A3, 6A4, 6B1, 6B2, 6B3, 6B4	XMLHVW-Q0-0000-0000HS5F6	3700 K
S6	182	4C, 4D, 5A1, 5A2, 5A3, 5A4, 5B1, 5B2, 5B3, 5B4	XMLHVW-Q0-0000-0000HS6F5	4300 K
		5A1, 5A2, 5A3, 5A4, 5B1, 5B2, 5B3, 5B4, 5C1, 5C2, 5C3, 5C4, 5D1, 5D2, 5D3, 5D4	XMLHVW-Q0-0000-0000HS6E5	4000 K
		5C1, 5C2, 5C3, 5C4, 5D1, 5D2, 5D3, 5D4, 6A1, 6A2, 6A3, 6A4, 6B1, 6B2, 6B3, 6B4	XMLHVW-Q0-0000-0000HS6F6	3700 K

* Cree XLamp XM-L order codes specify only a minimum flux bin and not a maximum. Cree may ship reels in flux bins higher than the minimum specified by the order code without advance notice. Shipments will always adhere to the chromaticity restrictions specified by the order code.

STANDARD ORDER CODES AND BINS (XM-L HIGH VOLTAGE ANSI WARM WHITE – CRI 80)

XLamp XM-L LED Standard Order Codes - White			
Min. Luminous Flux (lm) @ 44 mA, Tj=85°C*	**Chromaticity Regions**	**Order Code**	**CCT**
Group / **Flux (lm)**			
ANSI Warm White (2700 K – 3700 K)			
S2 / 148	7C1, 7C2, 7C3, 7C4, 7D1, 7D2, 7D3, 7D4, 8A1, 8A2, 8A3, 8A4, 8B1, 8B2, 8B3, 8B4	XMLHVW-Q0-0000-0000HS2F8	2900 K
	8A1, 8A2, 8A3, 8A4, 8B1, 8B2, 8B3, 8B4, 8C1, 8C2, 8C3, 8C4, 8D1, 8D2, 8D3, 8D4	XMLHVW-Q0-0000-0000HS2E8	2700 K
S3 / 156	6C1, 6C2, 6C3, 6C4, 6D1, 6D2, 6D3, 6D4, 7A1, 7A2, 7A3, 7A4, 7B1, 7B2, 7B3, 7B4	XMLHVW-Q0-0000-0000HS3F7	3200 K
	7A1, 7A2, 7A3, 7A4, 7B1, 7B2, 7B3, 7B4, 7C1, 7C2, 7C3, 7C4, 7D1, 7D2, 7D3, 7D4	XMLHVW-Q0-0000-0000HS3E7	3000 K
	7C1, 7C2, 7C3, 7C4, 7D1, 7D2, 7D3, 7D4, 8A1, 8A2, 8A3, 8A4, 8B1, 8B2, 8B3, 8B4	XMLHVW-Q0-0000-0000HS3F8	2900 K
	8A1, 8A2, 8A3, 8A4, 8B1, 8B2, 8B3, 8B4, 8C1, 8C2, 8C3, 8C4, 8D1, 8D2, 8D3, 8D4	XMLHVW-Q0-0000-0000HS3E8	2700 K
S4 / 162	6A1, 6A2, 6A3, 6A4, 6B1, 6B2, 6B3, 6B4, 6C1, 6C2, 6C3, 6C4, 6D1, 6D2, 6D3, 6D4	XMLHVW-Q0-0000-0000HS4E6	3500 K
	6C1, 6C2, 6C3, 6C4, 6D1, 6D2, 6D3, 6D4, 7A1, 7A2, 7A3, 7A4, 7B1, 7B2, 7B3, 7B4	XMLHVW-Q0-0000-0000HS4F7	3200 K
	7A1, 7A2, 7A3, 7A4, 7B1, 7B2, 7B3, 7B4, 7C1, 7C2, 7C3, 7C4, 7D1, 7D2, 7D3, 7D4	XMLHVW-Q0-0000-0000HS4E7	3000 K
	7C1, 7C2, 7C3, 7C4, 7D1, 7D2, 7D3, 7D4, 8A1, 8A2, 8A3, 8A4, 8B1, 8B2, 8B3, 8B4	XMLHVW-Q0-0000-0000HS4F8	2900 K
	8A1, 8A2, 8A3, 8A4, 8B1, 8B2, 8B3, 8B4, 8C1, 8C2, 8C3, 8C4, 8D1, 8D2, 8D3, 8D4	XMLHVW-Q0-0000-0000HS4E8	2700 K
S5 / 174	6A1, 6A2, 6A3, 6A4, 6B1, 6B2, 6B3, 6B4, 6C1, 6C2, 6C3, 6C4, 6D1, 6D2, 6D3, 6D4	XMLHVW-Q0-0000-0000HS5E6	3500 K
	6C1, 6C2, 6C3, 6C4, 6D1, 6D2, 6D3, 6D4, 7A1, 7A2, 7A3, 7A4, 7B1, 7B2, 7B3, 7B4	XMLHVW-Q0-0000-0000HS5F7	3200 K
	7A1, 7A2, 7A3, 7A4, 7B1, 7B2, 7B3, 7B4, 7C1, 7C2, 7C3, 7C4, 7D1, 7D2, 7D3, 7D4	XMLHVW-Q0-0000-0000HS5E7	3000 K
	7C1, 7C2, 7C3, 7C4, 7D1, 7D2, 7D3, 7D4, 8A1, 8A2, 8A3, 8A4, 8B1, 8B2, 8B3, 8B4	XMLHVW-Q0-0000-0000HS5F8	2900 K
	8A1, 8A2, 8A3, 8A4, 8B1, 8B2, 8B3, 8B4, 8C1, 8C2, 8C3, 8C4, 8D1, 8D2, 8D3, 8D4	XMLHVW-Q0-0000-0000HS5E8	2700 K
S6 / 182	6A1, 6A2, 6A3, 6A4, 6B1, 6B2, 6B3, 6B4, 6C1, 6C2, 6C3, 6C4, 6D1, 6D2, 6D3, 6D4	XMLHVW-Q0-0000-0000HS6E6	3500 K
	6C1, 6C2, 6C3, 6C4, 6D1, 6D2, 6D3, 6D4, 7A1, 7A2, 7A3, 7A4, 7B1, 7B2, 7B3, 7B4	XMLHVW-Q0-0000-0000HS6F7	3200 K
	7A1, 7A2, 7A3, 7A4, 7B1, 7B2, 7B3, 7B4, 7C1, 7C2, 7C3, 7C4, 7D1, 7D2, 7D3, 7D4	XMLHVW-Q0-0000-0000HS6E7	3000 K

* Cree XLamp XM-L order codes specify only a minimum flux bin and not a maximum. Cree may ship reels in flux bins higher than the minimum specified by the order code without advance notice. Shipments will always adhere to the chromaticity restrictions specified by the order code.