

Cree® XLamp® XR Family LEDs



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INTRODUCTION

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

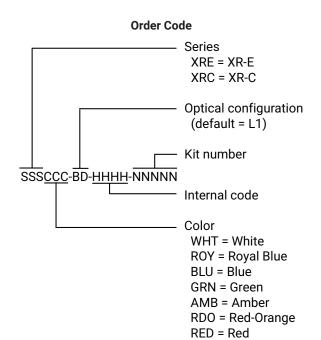
All XLamp LEDs are tested and sorted by color and brightness into a unique bin. Each bin contains LEDs from only one color and brightness group and is uniquely identified by a bin code. White XLamp LEDs are sorted by chromaticity (color) and luminous flux (brightness). Color XLamp LEDs are sorted by dominant wavelength (color) and luminous flux (brightness), or in the case of royal blue, radiant flux (brightness). Amber, red-orange and red LEDs are additionally binned into forward voltage bins. LEDs are shipped on reels containing LEDs from one bin and are always labeled with the appropriate bin code.

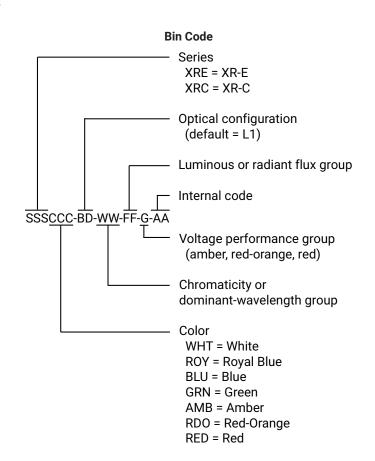
Kits contain LEDs from a number of similar bins and are fully defined by their order codes. A full explanation of the order codes for each family, as well as a list of standard order codes, is provided in this document.



BIN AND ORDER CODE FORMATS

Bin codes and order codes are configured in the following manner:







PERFORMANCE GROUPS - BRIGHTNESS

White XLamp XR-E and XR-C LEDs are tested for luminous flux and placed into one of the following luminous-lux groups:

Group	Minimum Luminous Flux @ 350 mA (lm)	Maximum Luminous Flux @ 350 mA (lm)
M2	39.8	45.7
M3	45.7	51.7
N2	51.7	56.8
N3	56.8	62.0
N4	62.0	67.2
P2	67.2	73.9
P3	73.9	80.6
P4	80.6	87.4
Q2	87.4	93.9
Q3	93.9	100
Q4	100	107
Q5	107	114
R2	114	122

Blue and green XLamp XR-E and XR-C LEDs are tested for luminous flux and placed into one of the following luminous-flux groups:

Group	Minimum Luminous Flux @ 350 mA (lm)	Maximum Luminous Flux @ 350 mA (lm)
G	13.9	18.1
Н	18.1	23.5
J	23.5	30.6
K	30.6	39.8
М	39.8	51.7
N	51.7	67.2
Р	67.2	87.4
Q	87.4	114

Amber, red-orange and red XLamp XR-C LEDs are tested for luminous flux and placed into one of the following luminous-flux groups:

Group	Minimum Luminous Flux @ 350 mA (lm)	Maximum Luminous Flux @ 350 mA (lm)
J	23.5	30.6
K2	30.6	35.2
K3	35.2	39.8
M2	39.8	45.7
M3	45.7	51.7
N2	51.7	56.8
N3	56.8	62.0
N4	62.0	67.2



PERFORMANCE GROUPS - BRIGHTNESS (CONTINUED)

Royal-blue XLamp XR-E LEDs are tested for radiant flux and placed into one of the following radiant-flux groups:

Group	Minimum Radiant Flux (mW) @ 350 mA	Maximum Radiant Flux (mW) @ 350 mA
12	250	300
13	300	350
14	350	425
15	425	500
16	500	600

PERFORMANCE GROUPS - CHROMATICITY

White XLamp LEDs are tested for chromaticity and placed into one of the regions defined by the bounding coordinates below.

White Chromaticity Region Bounding Coordinates

Region	х	у	Region	х	у
	.283	.284		.314	.355
WK	.295	.297	WF	.316	.332
VVK	.298	.288	VVF	.306	.322
	.287	.276		.301	.342
	.292	.306		.317	.319
WA	.295	.297	WP	.329	.330
VVA	.283	.284	VVF	.329	.318
	.279	.291		.318	.308
	.295	.297		.329	.345
WM	.308	.311	WD	.329	.330
VVIVI	.310	.300	VVD	.317	.319
	.298	.288		.316	.332
	.306	.322		.329	.369
WB	.308	.311	WG	.329	.345
VVD	.295	.297	WG	.316	.332
	.292	.306		.314	.355
	.301	.342		.329	.330
WE	.306	.322	WJ	.329	.345
VVE	.292	.306	WJ	.346	.359
	.287	.321		.344	.342
	.308	.311		.348	.384
WN	.317	.319	WH	.346	.359
VVIN	.318	.308	VVII	.329	.345
	.310	.300		.329	.369
	.316	.332			
WC	.317	.319			
VVC	.308	.311			
	.306	.322			



PERFORMANCE GROUPS - CHROMATICITY (CONTINUED)

Region	х	у									
	.3371	.3490		.3376	.3616		.3463	.3687		.3451	.3554
24	.3451	.3554	O.D.	.3463	.3687	20	.3551	.3760	20	.3533	.3620
3A	.3440	.3428	3B	.3451	.3554	3C	.3533	.3620	3D	.3515	.3487
	.3366	.3369		.3371	.3490		.3451	.3554		.3440	.3428
	.3512	.3465		.3529	.3597		.3615	.3659		.3590	.3521
4A	.3529	.3597	4B	.3548	.3736	4C	.3641	.3804	4D	.3615	.3659
4A	.3615	.3659	40	.3641	.3804	40	.3736	.3874	40	.3702	.3722
	.3590	.3521		.3615	.3659		.3702	.3722		.3670	.3578
	.3670	.3578		.3702	.3722		.3825	.3798		.3783	.3646
5A	.3702	.3722	5B	.3736	.3874	5C	.3869	.3958	5D	.3825	.3798
JA	.3825	.3798	36	.3869	.3958	50	.4006	.4044	30	.3950	.3875
	.3783	.3646		.3825	.3798		.3950	.3875		.3898	.3716
	.3889	.3690		.3941	.3848		.4080	.3916		.4017	.3751
6A	.3941	.3848	6B	.3996	.4015	6C	.4146	.4089	6D	.4080	.3916
OA	.4080	.3916	ОВ	.4146	.4089	00	.4299	.4165	OD	.4221	.3984
	.4017	.3751		.4080	.3916		.4221	.3984		.4147	.3814
	.4147	.3814		.4221	.3984		.4342	.4028		.4259	.3853
7A	.4221	.3984	7B	.4299	.4165	7C	.4430	.4212	7D	.4342	.4028
/A	.4342	.4028	76	.4430	.4212	70	.4562	.4260	70	.4465	.4071
	.4259	.3853		.4342	.4028		.4465	.4071		.4373	.3893
	.4373	.3893		.4465	.4071		.4582	.4099		.4483	.3919
8A	.4465	.4071	8B	.4562	.4260	8C	.4687	.4289	9D	.4582	.4099
OA	.4582	.4099	ов	.4687	.4289	80	.4813	.4319	8D	.4700	.4126
	.4483	.3919		.4582	.4099		.4700	.4126		.4593	.3944



PERFORMANCE GROUPS - DOMINANT WAVELENGTH

Color XLamp LEDs are tested for dominant wavelength (DWL) and placed into one of the DWL groups defined below.

Color	DWL Group	Minimum DWL (nm) @ 350 mA	Maximum DWL (nm) @ 350 mA
	D3	450	455
Royal Blue	D4	455	460
	D5	460	465
	В3	465	470
Blue	B4	470	475
ыше	B5	475	480
	В6	480	485
	G2	520	525
Green	G3	525	530
	G4	530	535
Amber	A2	585	590
Ambei	A3	590	595
Rod Orongo	03	610	615
Red-Orange	04	615	620
Dod	R2	620	625
Red	R3	625	630

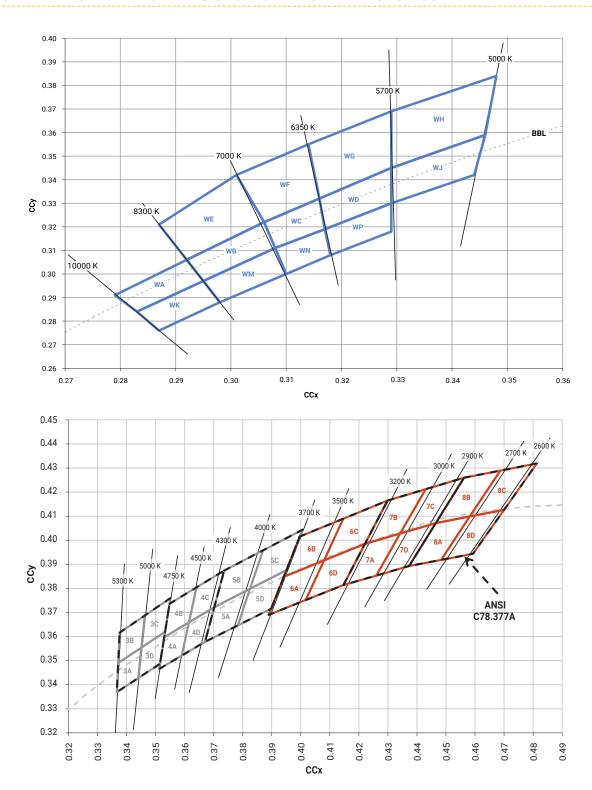
PERFORMANCE GROUPS - FORWARD VOLTAGE

Amber, red-orange and red XLamp LEDs are tested for forward voltage and placed into one of the forward voltage groups defined below.

Forward Voltage Group	Minimum Forward Voltage @ 350 mA	Maximum Forward Voltage @ 350 mA
В	1.75	2.0
С	2.0	2.25
D	2.25	2.5

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





STANDARD ORDER CODES AND BINS (XR-C COOL WHITE)

The following tables list standard kit numbers and performance bins. Kit numbers completely describe an order code's chromaticity regions and luminous flux range.

XLamp XR-C LED Standard Order Codes - White			
Minimum Luminous Flux (lm) @ 350 mA*		Chromaticity Regions	Kit Number
Group	Flux (lm)		
		Cool White (5000 K - 10,000 K)	
		WA, WB, WC, WD, WE, WF, WG, WH, WJ, WK, WM, WN, WP	00801
P3	73.9	WC, WD, WF, WG	00802
		WC, WD, WF, WG, WH, WJ, WN, WP	00803
		WA, WB, WC, WD, WE, WF, WG, WH, WJ, WK, WM, WN, WP	00901
P4	80.6	WC, WD, WF, WG	00902
		WC, WD, WF, WG, WH, WJ, WN, WP	00903
		WA, WB, WC, WD, WE, WF, WG, WH, WJ, WK, WM, WN, WP	00A01
Q2	87.4 WC, WD, V	WC, WD, WF, WG	00A02
		WC, WD, WF, WG, WH, WJ, WN, WP	00A03
		WA, WB, WC, WD, WE, WF, WG, WH, WJ, WK, WM, WN, WP	00B01
Q3	93.9	WC, WD, WF, WG	00B02
		WC, WD, WF, WG, WH, WJ, WN, WP	00B03

For other flux and chromaticity combinations, contact Cree or an authorized distributor.

^{*} Cree XLamp XR Famly LED 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 or DWL bin restrictions specified by the order code.



STANDARD ORDER CODES AND BINS (XR-C NEUTRAL WHITE)

The following tables list standard kit numbers and performance bins. Kit numbers completely describe an order code's chromaticity regions and luminous flux range.

XLamp XR-C LED Standard Order Codes - White					
	ninous Flux (lm) 0 mA*	Chromaticity Regions	Kit Number	сст	
Group	Flux (lm)				
		Neutral White (3700 K - 5000 K)			
N3	56.8	5C, 5D, 6A, 6B	005F6	3700 K	
		4C, 4D, 5A, 5B	006F5	4300 K	
N4	62.0	5A, 5B, 5C, 5D	006E5	4000 K	
		5C, 5D, 6A, 6B	006F6	3700 K	
		3A, 3B, 3C, 3D	007E3	5000 K	
		3C, 3D, 4A, 4B	007F4	4750 K	
DO	67.0	4A, 4B, 4C, 4D	007E4	4500 K	
P2	67.2	4C, 4D, 5A, 5B	007F5	4300 K	
		5A, 5B, 5C, 5D	007E5	4000 K	
		5C, 5D, 6A, 6B	007F6	3700 K	
		3A, 3B, 3C, 3D	008E3	5000 K	
		3C, 3D, 4A, 4B	008F4	4750 K	
D0	70.0	4A, 4B, 4C, 4D	008E4	4500 K	
P3	73.9	4C, 4D, 5A, 5B	008F5	4300 K	
		5A, 5B, 5C, 5D	008E5	4000 K	
		5C, 5D, 6A, 6B	008F6	3700 K	
		3A, 3B, 3C, 3D	009E3	5000 K	
		3C, 3D, 4A, 4B	009F4	4750 K	
P4	80.6	4A, 4B, 4C, 4D	009E4	4500 K	
		4C, 4D, 5A, 5B	009F5	4300 K	
		5A, 5B, 5C, 5D	009E5	4000 K	
		3A, 3B, 3C, 3D	00AE3	5000 K	
Q2	87.4	3C, 3D, 4A, 4B	00AF4	4750 K	
		4A, 4B, 4C, 4D	00AE4	4500 K	

For other flux and chromaticity combinations, contact Cree or an authorized distributor.

^{*} Cree XLamp XR Famly LED 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 or DWL bin restrictions specified by the order code.



STANDARD ORDER CODES AND BINS (XR-C WARM WHITE)

The following tables list standard kit numbers and performance bins. Kit numbers completely describe an order code's chromaticity regions and luminous flux range.

XLamp XR-C LED Standard Order Codes - White					
Minimum Luminous Flux (lm) @ 350 mA*		Chromaticity Regions	Kit Number	сст	
Group	Flux (lm)				
		Warm White (2600 K - 3700 K)			
N2	51.7	7C, 7D, 8A, 8B	004F8	2900 K	
INZ	51.7	8A, 8B, 8C, 8D	004E8	2700 K	
		6A, 6B, 6C, 6D	005E6	3500 K	
		6C, 6D, 7A, 7B	005F7	3200 K	
N3	56.8	7A, 7B, 7C, 7D	005E7	3000 K	
		7C, 7D, 8A, 8B	005F8	2900 K	
		8A, 8B, 8C, 8D	005E8	2700 K	
		6A, 6B, 6C, 6D	006E6	3500 K	
		6C, 6D, 7A, 7B	006F7	3200 K	
N4	62.0	7A, 7B, 7C, 7D	006E7	3000 K	
		7C, 7D, 8A, 8B	006F8	2900 K	
		8A, 8B, 8C, 8D	006E8	2700 K	
		6A, 6B, 6C, 6D	007E6	3500 K	
P2	67.2	6C, 6D, 7A, 7B	007F7	3200 K	
		7A, 7B, 7C, 7D	007E7	3000 K	
P3	73.9	6A, 6B, 6C, 6D	008E6	3500 K	

For other flux and chromaticity combinations, contact Cree or an authorized distributor.

^{*} Cree XLamp XR Famly LED 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 or DWL bin restrictions specified by the order code.



STANDARD ORDER CODES AND BINS (XR-C COLOR)

The following tables list standard kit numbers and performance bins. Kit numbers completely describe an order code's dominant-wavelength range and luminous- or radiant-flux range.

XLamp XR-C LED Standard Order Codes - Blue, Green, Amber, Red-Orange, Red							
Color	Minimum Luminous Flux (lm) @ 350 mA*		Dominant Wavelength (nm)				
			Minimum		Maximum		Kit Number
	Group	Flux (lm)	Group	DWL (nm)	Group	DWL (nm)	
Blue	G	13.9	В3	465	B4	475	00G01
Blue	Н	18.1	В3	465	B4	475	00H01
			G2	520	G4	535	00M01
	М	39.8	G2	520	G3	530	00M02
Green			G3	525	G4	535	00M03
Green			G2	520	G4	535	00N01
	N	51.7	G2	520	G3	530	00N02
			G3	525	G4	535	00N03
	J	99.5	A2	585	A3	595	00J01
		23.5	A3	590	A3	595	00J03
Amber	K2	30.6	A2	585	A3	595	00K01
Amber			A3	590	A3	595	00K03
	M2	39.8	A2	585	A3	595	00M01
	M2		A3	590	A3	595	00M03
	K2	30.6	03	610	04	620	00K01
			03	610	03	615	00K02
Dad Orongo			04	615	04	620	00K03
Red-Orange	M2	39.8	03	610	04	620	00M01
			03	610	03	615	00M02
			04	615	04	620	00M03
	J	02.5	R2	620	R3	630	00J01
	J	23.5	R2	620	R2	625	00J02
Red	K2	20.6	R2	620	R3	630	00K01
Keu	NZ	30.6	R2	620	R2	625	00K02
	MO	39.8	R2	620	R3	630	00M01
	M2	39.8	R2	620	R2	625	00M02

For other flux and dominant wavelength combinations, contact Cree or an authorized distributor.

^{*} Cree XLamp XR Famly LED 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 or DWL bin restrictions specified by the order code.



STANDARD ORDER CODES AND BINS (XR-E COOL WHITE)

The following tables list standard kit numbers and performance bins. Kit numbers completely describe an order code's chromaticity regions and luminous flux range.

XLamp XR-E LED Standard Order Codes - White						
Minimum Luminous Flux (lm) @ 350 mA*		Chromaticity Regions	Kit Number			
Group	Flux (lm)					
		Cool White (5000 K - 10,000 K)				
		WA, WB, WC, WD, WE, WF, WG, WH, WJ, WK, WM, WN, WP	00901			
P4	80.6	WC, WD, WF, WG	00902			
		WC, WD, WF, WG, WH, WJ, WN, WP	00903			
	87.4	WA, WB, WC, WD, WE, WF, WG, WH, WJ, WK, WM, WN, WP	00A01			
Q2		WC, WD, WF, WG	00A02			
		WC, WD, WF, WG, WH, WJ, WN, WP	00A03			
	93.9	WA, WB, WC, WD, WE, WF, WG, WH, WJ, WK, WM, WN, WP	00B01			
Q3		WC, WD, WF, WG	00B02			
		WC, WD, WF, WG, WH, WJ, WN, WP	00B03			
	100	WA, WB, WC, WD, WE, WF, WG, WH, WJ, WK, WM, WN, WP	00C01			
Q4		WC, WD, WF, WG	00C02			
		WC, WD, WF, WG, WH, WJ, WN, WP	00C03			
	107	WA, WB, WC, WD, WE, WF, WG, WH, WJ, WK, WM, WN, WP	00D01			
Q5		WC, WD, WF, WG	00D02			
		WC, WD, WF, WG, WH, WJ, WN, WP	00D03			
		WA, WB, WC, WD, WE, WF, WG, WH, WJ, WK, WM, WN, WP	00E01			
R2	114	WC, WD, WF, WG	00E02			
		WC, WD, WF, WG, WH, WJ, WN, WP	00E03			

For other flux and chromaticity combinations, contact Cree or an authorized distributor.

^{*} Cree XLamp XR Famly LED 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 or DWL bin restrictions specified by the order code.



STANDARD ORDER CODES AND BINS (XR-E NEUTRAL WHITE)

The following tables list standard kit numbers and performance bins. Kit numbers completely describe an order code's chromaticity regions and luminous flux range.

Minimum Luminous Flux (Im) @ 350 mA* Chromaticity Regions	XLamp XR-E LED Standard Order Codes - White								
Neutral White (3700 K - 5000 K) N4 62.0 5C, 5D, 6A, 6B 006F6 3700 K 4C, 4D, 5A, 5B 007F5 4300 K P2 67.2 5A, 5B, 5C, 5D 007E5 4000 K SC, 5D, 6A, 6B 007F6 3700 K 3A, 3B, 3C, 3D 008E3 5000 K 3C, 3D, 4A, 4B 008F4 4750 K 4A, 4B, 4C, 4D 008E4 4500 K 5C, 5D, 6A, 6B 008F6 3700 K 3A, 3B, 3C, 3D 009E3 5000 K 3C, 3D, 4A, 4B 009F4 4750 K 4A, 4B, 4C, 4D 009E4 4500 K 3C, 3D, 4A, 4B 009F4 4750 K 4A, 4B, 4C, 4D 009E4 4500 K 4C, 4D, 5A, 5B 009F5 4300 K 5C, 5D, 6A, 6B 009F6 3700 K 5C, 5D, 6A, 6B 009F6 3700 K 3A, 3B, 3C, 3D 009E3 5000 K 3C, 3D, 4A, 4B 009F4 4750 K 4A, 4B, 4C, 4D 009E4 4500 K 5C, 5D, 6A, 6B 009F6 3700 K 3A, 3B, 3C, 3D 00AE3 5000 K 3C, 3D, 4A, 4B 00AF4 4750 K 4A, 4B, 4C, 4D 00AE4 4500 K 4C, 4D, 5A, 5B 00AF5 4300 K 5C, 5D, 6A, 6B 00AF6 3700 K 3A, 3B, 3C, 3D 00AE3 5000 K 3C, 3D, 4A, 4B 00AF4 4750 K 4C, 4D, 5A, 5B 00AF5 4300 K 5C, 5D, 6A, 6B 00AF6 3700 K 3A, 3B, 3C, 3D 00BE3 5000 K 3C, 3D, 4A, 4B 00BF4 4750 K 4C, 4D, 5A, 5B 00BF5 4300 K 4C, 4D, 5A, 5B 00BF5 4300 K 3C, 3D, 4A, 4B 00BF4 4750 K 4C, 4D, 5A, 5B 00BF5 4300 K 3C, 3D, 4A, 4B 00BF4 4750 K 4C, 4D, 5A, 5B 00BF5 4300 K 3C, 3D, 4A, 4B 00BF4 4750 K 4C, 4D, 5A, 5B 00BF5 4300	@ 350 mA*		Chromaticity Regions	Kit Number	сст				
N4 62.0 5C, 5D, 6A, 6B 006F6 3700 K 4C, 4D, 5A, 5B 007F5 4300 K 4200									
P2 67.2 5A, 5B 007F5 4300 K									
P2 67.2 5A, 5B, 5C, 5D 007E5 4000 K 5C, 5D, 6A, 6B 007F6 3700 K 3A, 3B, 3C, 3D 008E3 5000 K 3C, 3D, 4A, 4B 008F4 4750 K 4A, 4B, 4C, 4D 008E4 4500 K 5A, 5B, 5C, 5D 008E5 4000 K 5C, 5D, 6A, 6B 008F6 3700 K 3A, 3B, 3C, 3D 009E3 5000 K 5C, 5D, 6A, 6B 008F6 3700 K 3A, 3B, 3C, 3D 009E3 5000 K 3C, 3D, 4A, 4B 009F4 4750 K 4A, 4B, 4C, 4D 009E4 4500 K 4A, 4B, 4C, 4D 009E4 4500 K 5C, 5D, 6A, 6B 009F5 4300 K 4A, 4B, 4C, 4D 009E5 4000 K 5C, 5D, 6A, 6B 009F6 3700 K 5C, 5D, 6A, 6B 009F6 3700 K 5C, 5D, 6A, 6B 009F6 3700 K 3A, 3B, 3C, 3D 00AE3 5000 K 3C, 3D, 4A, 4B 00AF4 4750 K 4A, 4B, 4C, 4D 00AE4 4500 K 3C, 3D, 4A, 4B 00AF5 4300 K 5C, 5D, 6A, 6B 00AF6 3700 K 5C, 5D, 6A, 6B 00AF6 3	N4	62.0							
P3									
P3	P2	67.2							
P3			· · · ·						
P3					5000 K				
P3 73.9 4C, 4D, 5A, 5B 008F5 4300 K 5A, 5B, 5C, 5D 008E5 4000 K 5C, 5D, 6A, 6B 008F6 3700 K 3A, 3B, 3C, 3D 009E3 5000 K 3C, 3D, 4A, 4B 009F4 4750 K 4A, 4B, 4C, 4D 009E4 4500 K 5C, 5D, 6A, 6B 009F6 3700 K 4C, 4D, 5A, 5B 009F5 4300 K 5C, 5D, 6A, 6B 009F6 3700 K 5C, 5D, 6A, 6B 009F6 3700 K 3A, 3B, 3C, 3D 00AE3 5000 K 3C, 3D, 4A, 4B 00AF4 4750 K 4A, 4B, 4C, 4D 00AE4 4500 K 4C, 4D, 5A, 5B 00AF5 4300 K 5A, 5B, 5C, 5D 00AE5 4000 K 5C, 5D, 6A, 6B 00AF6 3700 K 5C, 5D, 6A, 6B 00AF6 3			3C, 3D, 4A, 4B	008F4	4750 K				
P4 80.6	P3	73 9	4A, 4B, 4C, 4D	008E4	4500 K				
P4 80.6 5C, 5D, 6A, 6B 008F6 3700 K 3A, 3B, 3C, 3D 009E3 5000 K 3C, 3D, 4A, 4B 009F4 4750 K 4A, 4B, 4C, 4D 009E4 4500 K 5A, 5B, 5C, 5D 009E5 4000 K 3C, 3D, 4A, 4B 009F6 3700 K 5C, 5D, 6A, 6B 009F6 3700 K 3A, 3B, 3C, 3D 00AE3 5000 K 3C, 3D, 4A, 4B 00AF4 4750 K 4A, 4B, 4C, 4D 00AE4 4500 K 4C, 4D, 5A, 5B 00AF5 4300 K 5A, 5B, 5C, 5D 00AE5 4000 K 5C, 5D, 6A, 6B 00AF6 3700 K 5A, 5B, 5C, 5D 00AE5 4000 K 5C, 5D, 6A, 6B 00AF6 3700 K 3A, 3B, 3C, 3D 00BE3 5000 K 3C, 3D, 4A, 4B 00BF4 4750 K		70.5	4C, 4D, 5A, 5B	008F5	4300 K				
P4 80.6 3A, 3B, 3C, 3D 009E3 5000 K 3C, 3D, 4A, 4B 009F4 4750 K 4A, 4B, 4C, 4D 009E4 4500 K 4C, 4D, 5A, 5B 009F5 4300 K 5A, 5B, 5C, 5D 009E5 4000 K 5C, 5D, 6A, 6B 009F6 3700 K 3C, 3D, 4A, 4B 00AE3 5000 K 3C, 3D, 4A, 4B 00AE3 5000 K 4A, 4B, 4C, 4D 00AE4 4750 K 4A, 4B, 4C, 4D 00AE5 4300 K 5A, 5B, 5C, 5D 00AE5 4300 K 5A, 5B, 5C, 5D 00AE5 4000 K 5C, 5D, 6A, 6B 00AF6 3700 K 3A, 3B, 3C, 3D 00BE3 5000 K 3C, 3D, 4A, 4B 00BF4 4750 K 400 K 5C, 5D, 6A, 6B 00AF6 3700 K 3A, 3B, 3C, 3D 00BE3 5000 K 4C, 4D, 5A, 5B 00BF4 4750 K 4750 K 4C, 4D, 5A, 5B 00BF5 4300 K 4C, 4D, 5A, 5B, 5C, 5D 00BE5 4000 K			5A, 5B, 5C, 5D	008E5	4000 K				
P4 80.6 3C, 3D, 4A, 4B 009F4 4750 K 4A, 4B, 4C, 4D 009E4 4500 K 4C, 4D, 5A, 5B 009F5 4300 K 5A, 5B, 5C, 5D 009E5 4000 K 5C, 5D, 6A, 6B 009F6 3700 K 3A, 3B, 3C, 3D 00AE3 5000 K 4A, 4B, 4C, 4D 00AF4 4750 K 4A, 4B, 4C, 4D 00AE4 4500 K 4C, 4D, 5A, 5B 00AF5 4300 K 4C, 4D, 5A, 5B 00AF5 4300 K 5A, 5B, 5C, 5D 00AE5 4000 K 5C, 5D, 6A, 6B 00AF6 3700 K 3A, 3B, 3C, 3D 00BE3 5000 K 3C, 3D, 4A, 4B 00BF4 4750 K 4A, 4B, 4C, 4D 00BE4 4750 K 4A, 4B, 4C, 4D 00BE5 4000 K 5C, 5D, 6A, 6B 00AF6 3700 K 3C, 3D, 4A, 4B 00BF4 4750 K 40, 4D, 5A, 5B 00BF5 4300 K 4C, 4D, 5A, 5B 00BF5 4300 K 4750 K			5C, 5D, 6A, 6B	008F6	3700 K				
P4 80.6 4A, 4B, 4C, 4D 009E4 4500 K 4C, 4D, 5A, 5B 009F5 4300 K 5A, 5B, 5C, 5D 009E5 4000 K 5C, 5D, 6A, 6B 009F6 3700 K 3A, 3B, 3C, 3D 00AE3 5000 K 3C, 3D, 4A, 4B 00AF4 4750 K 4C, 4D, 5A, 5B 00AF5 4300 K 5A, 5B, 5C, 5D 00AE5 4000 K 5C, 5D, 6A, 6B 00AF5 4300 K 5A, 5B, 5C, 5D 00AE5 4000 K 5C, 5D, 6A, 6B 00AF6 3700 K 5C, 5D, 6A, 6B 00AF6 3700 K 3A, 3B, 3C, 3D 00BE3 5000 K 3C, 3D, 4A, 4B 00BF4 4750 K			3A, 3B, 3C, 3D	009E3	5000 K				
P4 80.6 4C, 4D, 5A, 5B 009F5 4300 K 5A, 5B, 5C, 5D 009E5 4000 K 5C, 5D, 6A, 6B 009F6 3700 K 3A, 3B, 3C, 3D 00AE3 5000 K 4C, 4D, 5A, 5B 00AF4 4750 K 4A, 4B, 4C, 4D 00AE4 4500 K 4C, 4D, 5A, 5B 00AF5 4300 K 5A, 5B, 5C, 5D 00AE5 4000 K 5C, 5D, 6A, 6B 00AF6 3700 K 5C, 5D, 6A, 6B 00AF6 3700 K 3A, 3B, 3C, 3D 00BE3 5000 K 3C, 3D, 4A, 4B 00BF4 4750 K 4A, 4B, 4C, 4D 00BE4 4500 K 4A, 4B, 4C, 4D 00BE4 4500 K 4A, 4B, 4C, 4D 00BE4 4500 K 4B, 4B, 4C, 4D 00BE4 4500 K 4C, 4D, 5A, 5B 00BF5 4300 K 4C, 4D, 5A, 5B, 5C, 5D 00BE5 4000 K 4C, 4D, 5A, 5B, 5C, 5D 00BE5 4000 K 4C, 4D, 5A, 5B, 5C, 5D 00BE5 4000 K 4C, 4D, 5A, 5B, 5C, 5D 00BE5 4000 K 4C, 4D, 5A, 5B, 5C, 5D 00BE5 4000 K 4C, 4D, 5A, 5B, 5C, 5D 00BE5 4000 K 4C, 4D, 5A, 5B, 5C, 5D 00BE5 4000 K 4C, 4D, 5A, 5B, 5C, 5D 00BE5 4000 K 4C, 4D, 5A, 5B, 5C, 5D 00BE5 4000 K 4C, 4D, 5A, 5B, 5C, 5D 00BE5 4000 K 4C, 4D, 5A, 5B, 5C, 5D 00BE5 4000 K 4C, 4D, 5A, 5B, 5C, 5D 00BE5 4000 K 4C, 4D, 5A, 5B, 5C, 5D 00BE5 4000 K 4C, 4D, 5A, 5B, 5C, 5D 00BE5 4000 K 4C, 4D, 5A, 5B, 5C, 5		80.6	3C, 3D, 4A, 4B	009F4	4750 K				
4C, 4D, 5A, 5B 009F5 4300 K 5A, 5B, 5C, 5D 009E5 4000 K 5C, 5D, 6A, 6B 009F6 3700 K 3A, 3B, 3C, 3D 00AE3 5000 K 3C, 3D, 4A, 4B 00AF4 4750 K 4A, 4B, 4C, 4D 00AE4 4500 K 5C, 5D, 6A, 6B 00AF5 4300 K 5A, 5B, 5C, 5D 00AE5 4000 K 5C, 5D, 6A, 6B 00AF6 3700 K 3A, 3B, 3C, 3D 00BE3 5000 K 3C, 3D, 4A, 4B 00BF4 4750 K Q3 93.9 4A, 4B, 4C, 4D 00BE4 4500 K 4C, 4D, 5A, 5B 00BF5 4300 K 4C, 4D, 5A, 5B, 5C, 5D 00BE5 4000 K 4C, 4D, 5A, 5B, 5C, 5D 00BE5 4000 K 4C, 4D, 5A, 5B, 5C, 5D 00BE5 4000 K 4C, 4D, 5A, 5B, 5C, 5D 00BE5 4000 K 4C, 4D, 5A, 5B, 5C, 5D 00BE5 4000 K 4C, 4D, 5A, 5B, 5C, 5D 00BE5 4000 K 4C, 4D, 5A, 5B, 5C, 5D 00BE5 4000 K 4C, 4D, 5A, 5B, 5C, 5D 00BE5 4000 K 4C, 4D, 5A, 5B, 5C, 5D 00BE5 4000 K 4C, 4D, 5A, 5B, 5C, 5D 00BE5 4000 K 4C, 4D, 5A, 5B, 5C, 5D 00BE5 4000 K 4C, 4D, 5A, 5B, 5C, 5D 00BE5 4000 K 4C, 4D, 5A, 5B, 5C, 5D 00BE5 4000 K 4C, 4D, 5A, 5B, 5C, 5D 00BE5 4000 K 4C, 4D, 5A, 5B, 5C, 5D	D4		4A, 4B, 4C, 4D	009E4	4500 K				
Q2 87.4 37.0 K 47.50 K <td>P4</td> <td>4C, 4D, 5A, 5B</td> <td>009F5</td> <td>4300 K</td>	P4		4C, 4D, 5A, 5B	009F5	4300 K				
Q2 87.4 3A, 3B, 3C, 3D 00AE3 5000 K 3C, 3D, 4A, 4B 00AF4 4750 K 4A, 4B, 4C, 4D 00AE4 4500 K 4C, 4D, 5A, 5B 00AF5 4300 K 5A, 5B, 5C, 5D 00AE5 4000 K 5C, 5D, 6A, 6B 00AF6 3700 K 3A, 3B, 3C, 3D 00BE3 5000 K Q3 93.9 4A, 4B, 4C, 4D 00BE4 4500 K Q4 100 3C, 3D, 4A, 4B 00CF4 4750 K Q4 100 3C, 3D, 4A, 4B 00CF4 4750 K			5A, 5B, 5C, 5D	009E5	4000 K				
Q2 87.4 3C, 3D, 4A, 4B 00AF4 4750 K 4A, 4B, 4C, 4D 00AE4 4500 K 4C, 4D, 5A, 5B 00AF5 4300 K 5A, 5B, 5C, 5D 00AE5 4000 K 5C, 5D, 6A, 6B 00AF6 3700 K 3A, 3B, 3C, 3D 00BE3 5000 K 3C, 3D, 4A, 4B 00BF4 4750 K Q3 93.9 4A, 4B, 4C, 4D 00BE4 4500 K 4C, 4D, 5A, 5B 00BF5 4300 K 5A, 5B, 5C, 5D 00BE5 4000 K 3A, 3B, 3C, 3D 00CE3 5000 K Q4 100 3C, 3D, 4A, 4B 00CF4 4750 K			5C, 5D, 6A, 6B	009F6	3700 K				
Q2 87.4 4A, 4B, 4C, 4D 00AE4 4500 K 4C, 4D, 5A, 5B 00AF5 4300 K 5A, 5B, 5C, 5D 00AE5 4000 K 5C, 5D, 6A, 6B 00AF6 3700 K 3A, 3B, 3C, 3D 00BE3 5000 K 3C, 3D, 4A, 4B 00BF4 4750 K Q3 93.9 4A, 4B, 4C, 4D 00BE4 4500 K 4C, 4D, 5A, 5B 00BF5 4300 K 5A, 5B, 5C, 5D 00BE5 4000 K Q4 100 3C, 3D, 4A, 4B 00CF4 4750 K			3A, 3B, 3C, 3D	00AE3	5000 K				
Q2 87.4 4C, 4D, 5A, 5B 00AF5 4300 K 5A, 5B, 5C, 5D 00AE5 4000 K 5C, 5D, 6A, 6B 00AF6 3700 K 3A, 3B, 3C, 3D 00BE3 5000 K Q3 93.9 4A, 4B, 4C, 4D 00BE4 4500 K 4C, 4D, 5A, 5B 00BF5 4300 K 5A, 5B, 5C, 5D 00BE5 4000 K Q4 100 3C, 3D, 4A, 4B 00CF4 4750 K			3C, 3D, 4A, 4B	00AF4	4750 K				
4C, 4D, 5A, 5B 00AF5 4300 K 5A, 5B, 5C, 5D 00AE5 4000 K 5C, 5D, 6A, 6B 00AF6 3700 K 3A, 3B, 3C, 3D 00BE3 5000 K 3C, 3D, 4A, 4B 00BF4 4750 K 4500 K 4C, 4D, 5A, 5B 00BF5 4300 K 5A, 5B, 5C, 5D 00BE5 4000 K 3A, 3B, 3C, 3D 00CE3 5000 K Q4 100 3C, 3D, 4A, 4B 00CF4 4750 K		07.4	4A, 4B, 4C, 4D	00AE4	4500 K				
Q3 93.9 4A, 4B, 4C, 4D 00BE3 5000 K 4C, 4D, 5A, 5B 00BE5 4300 K 5A, 3B, 3C, 3D 00BE4 4500 K 4C, 4D, 5A, 5B 00BE4 4500 K 5A, 5B, 5C, 5D 00BE5 4000 K 3A, 3B, 3C, 3D 00CE3 5000 K Q4 100 3C, 3D, 4A, 4B 00CF4 4750 K	Q2	87.4	4C, 4D, 5A, 5B	00AF5	4300 K				
3A, 3B, 3C, 3D 00BE3 5000 K 3C, 3D, 4A, 4B 00BF4 4750 K Q3 93.9 4A, 4B, 4C, 4D 00BE4 4500 K 4C, 4D, 5A, 5B 00BF5 4300 K 5A, 5B, 5C, 5D 00BE5 4000 K 3A, 3B, 3C, 3D 00CE3 5000 K Q4 100 3C, 3D, 4A, 4B 00CF4 4750 K			5A, 5B, 5C, 5D	00AE5	4000 K				
Q3 93.9 4A, 4B 00BF4 4750 K 44, 4B, 4C, 4D 00BE4 4500 K 4C, 4D, 5A, 5B 00BF5 4300 K 5A, 5B, 5C, 5D 00BE5 4000 K 3A, 3B, 3C, 3D 00CE3 5000 K Q4 100 3C, 3D, 4A, 4B 00CF4 4750 K			5C, 5D, 6A, 6B	00AF6	3700 K				
Q3 93.9 4A, 4B, 4C, 4D 00BE4 4500 K 4C, 4D, 5A, 5B 00BF5 4300 K 5A, 5B, 5C, 5D 00BE5 4000 K 3A, 3B, 3C, 3D 00CE3 5000 K Q4 100 3C, 3D, 4A, 4B 00CF4 4750 K			3A, 3B, 3C, 3D	00BE3	5000 K				
4C, 4D, 5A, 5B 00BF5 4300 K 5A, 5B, 5C, 5D 00BE5 4000 K 3A, 3B, 3C, 3D 00CE3 5000 K Q4 100 3C, 3D, 4A, 4B 00CF4 4750 K			3C, 3D, 4A, 4B	00BF4	4750 K				
5A, 5B, 5C, 5D 00BE5 4000 K 3A, 3B, 3C, 3D 00CE3 5000 K Q4 100 3C, 3D, 4A, 4B 00CF4 4750 K	Q3	93.9	4A, 4B, 4C, 4D	00BE4	4500 K				
3A, 3B, 3C, 3D 00CE3 5000 K Q4 100 3C, 3D, 4A, 4B 00CF4 4750 K			4C, 4D, 5A, 5B	00BF5	4300 K				
Q4 100 3C, 3D, 4A, 4B 00CF4 4750 K			5A, 5B, 5C, 5D	00BE5	4000 K				
			3A, 3B, 3C, 3D	00CE3	5000 K				
4A 4B 4C 4D 00CE4 4E00 K	Q4	100	3C, 3D, 4A, 4B	00CF4	4750 K				
4A, 4D, 4D 000E4 4500 K			4A, 4B, 4C, 4D	00CE4	4500 K				

For other flux and chromaticity combinations, contact Cree or an authorized distributor.

^{*} Cree XLamp XR Famly LED 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 or DWL bin restrictions specified by the order code.



STANDARD ORDER CODES AND BINS (XR-E WARM WHITE)

The following tables list standard kit numbers and performance bins. Kit numbers completely describe an order code's chromaticity regions and luminous flux range.

XLamp XR-E LED Standard Order Codes - White								
Minimum Luminous Flux (lm) @ 350 mA*		Chromaticity Regions	Kit Number	сст				
Group	Flux (lm)							
	Warm White (2600 K - 3700 K)							
		6C, 6D, 7A, 7B	005F7	3200 K				
N3	56.8	7A, 7B, 7C, 7D	005E7	3000 K				
IN3	30.8	7C, 7D, 8A, 8B	005F8	2900 K				
		8A, 8B, 8C, 8D	005E8	2700 K				
		6A, 6B, 6C, 6D	006E6	3500 K				
		6C, 6D, 7A, 7B	006F7	3200 K				
N4	62.0	7A, 7B, 7C, 7D	006E7	3000 K				
		7C, 7D, 8A, 8B	006F8	2900 K				
		8A, 8B, 8C, 8D	006E8	2700 K				
		6A, 6B, 6C, 6D	007E6	3500 K				
		6C, 6D, 7A, 7B	007F7	3200 K				
P2	67.2	7A, 7B, 7C, 7D	007E7	3000 K				
		7C, 7D, 8A, 8B	007F8	2900 K				
		8A, 8B, 8C, 8D	007E8	2700 K				
		6A, 6B, 6C, 6D	008E6	3500 K				
	73.9	6C, 6D, 7A, 7B	008F7	3200 K				
P3		7A, 7B, 7C, 7D	008E7	3000 K				
		7C, 7D, 8A, 8B	008F8	2900 K				
		8A, 8B, 8C, 8D	008E8	2700 K				
		6A, 6B, 6C, 6D	009E6	3500 K				
P4	80.6	6C, 6D, 7A, 7B	009F7	3200 K				
		7A, 7B, 7C, 7D	009E7	3000 K				
Q2	87.4	6A, 6B, 6C, 6D	00AE6	3500 K				

For other flux and chromaticity combinations, contact Cree or an authorized distributor.

^{*} Cree XLamp XR Famly LED 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 or DWL bin restrictions specified by the order code.



STANDARD ORDER CODES AND BINS (XR-E COLOR)

The following tables list standard kit numbers and performance bins. Kit numbers completely describe an order code's dominant-wavelength range and luminous- or radiant-flux range.

XLamp XR-E LED Standard Order Codes - Royal Blue							
Color	Minimum Radiant Flux (mW) @ 350 mA*		Dominant Wavelength (nm)				
			Minimum		Maximum		Kit Number
	Group	Flux (mW)	Group	DWL (nm)	Group	DWL (nm)	
			D3	450	D5	465	00701
	12	250	D3	450	D4	460	00702
			D4	455	D5	465	00703
	13	300	D3	450	D5	465	00801
			D3	450	D4	460	00802
David Dhia			D4	455	D5	465	00803
Royal Blue	14	350	D3	450	D5	465	00901
			D3	450	D4	460	00902
			D4	455	D5	465	00903
	15	425	D3	450	D5	465	00A01
			D3	450	D4	460	00A02
			D4	455	D5	465	00A03

XLamp XR-E LED Standard Order Codes - Blue and Green							
	Minimum Radiant Flux (mW) @ 350 mA*			Dominant Wavelength (nm)			
Color			Minimum		Maximum		Kit Number
	Group	Flux (mW)	Group	DWL (nm)	Group	DWL (nm)	
		23.5	В3	465	В6	485	00J01
			В3	465	B5	480	00J02
	J		B4	470	B5	480	00J03
Blue			В3	465	B4	475	00J04
blue			В3	465	B6	485	00K01
	K	30.6	В3	465	B5	480	00K02
	K	30.6	B4	470	B5	480	00K03
			В3	465	B4	475	00K04
	Р	67.2	G2	520	G4	535	00P01
Green			G2	520	G3	530	00P02
			G3	525	G4	535	00P03

For other flux and dominant wavelength combinations, contact Cree or an authorized distributor.

^{*} Cree XLamp XR Famly LED 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 or DWL bin restrictions specified by the order code.