Cree® XLamp® CXA2520 LED

PRODUCT DESCRIPTION

The XLamp® CXA2520 LED array expands Cree's family of high-flux, multi-die arrays, offering high performance in an easy-to-use platform. With XLamp LED lighting-class reliability, the CXA2520's uniform emitting surface enables both directional and non-directional lighting applications and luminaire designs. Available in 2-step, 3-step and 4-step color consistency, and featuring a 19-mm optical source, the CXA2520 brings new levels of flux and efficacy to this form factor.

The CX Family LED Design Guide provides basic information on the requirements to use the CXA2520 LED successfully in luminaire designs.

FEATURES

- Available in 4-step, 3-step and 2-step EasyWhite® bins at 2700 K, 3000 K, 3500 K, 4000 K & 5000 K CCT and 4-step EasyWhite bins at 5700 K & 6500 K CCT
- Available in ANSI white bins at 4000 K, 5000 K, 5700 K & 6500 K CCT
- Available in 70-, 80-, 90- and 93-minimum CRI options
- Forward voltage option: 36-V class
- 85 °C binning and characterization
- Maximum drive current: 1250 mA
- 115° viewing angle, uniform chromaticity profile
- Top-side solder connections
- Thermocouple attach point
- NEMA SSL-3 2011 standard flux bins
- RoHS and REACh compliant
- UL® recognized component (E349212)

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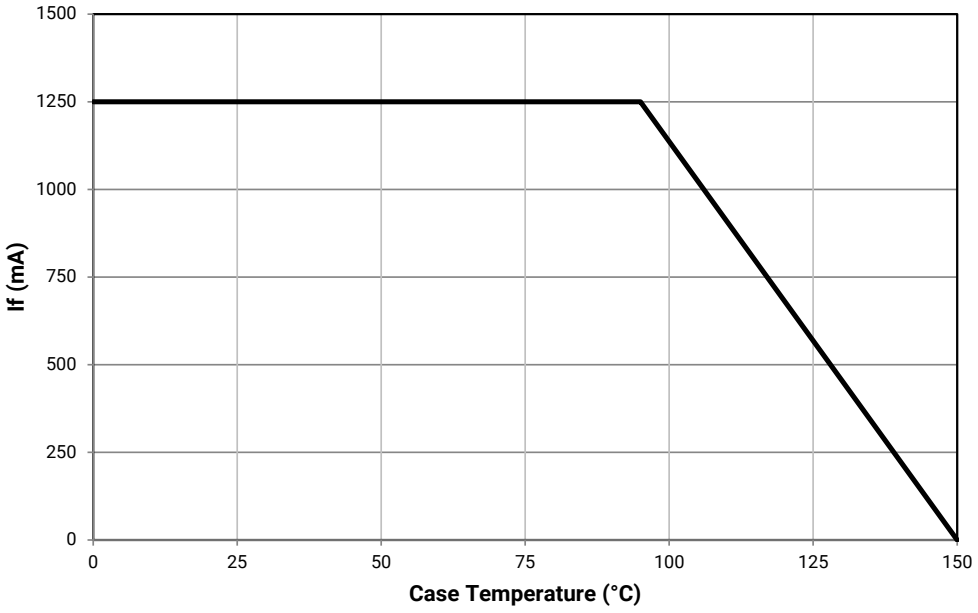
CHARACTERISTICS

Characteristics	Unit	Minimum	Typical	Maximum
Viewing angle (FWHM)	degrees		115	
ESD withstand voltage (HBM per Mil-Std-883D)	V			8000
DC forward current	mA			1250*
Reverse current	mA			0.1
Forward voltage (@ 550 mA, 85 °C)	V		35	
Forward voltage (@ 550 mA, 25 °C)	V			42

* Refer to the Operating Limits section.

OPERATING LIMITS

The maximum current rating of the CXA2520 is dependent on the case temperature (Tc) when the LED has reached thermal equilibrium under steady-state operation. The graph shown below assumes that the system design employs good thermal management (thermal interface material and heat sink) and may vary when poor thermal management is employed. Please refer to the Mechanical Dimensions section on page 15 for the location of the Tc measurement point.



FLUX CHARACTERISTICS, EASYWHITE® ORDER CODES AND BINS (I_F = 550 mA, T_J = 85 °C)

The following table provides order codes for XLamp CXA2520 LEDs. For a complete description of the order code nomenclature, please see the Bin and Order Code Formats section (page 15).

Nominal CCT	CRI		Minimum Luminous Flux			2-Step		3-Step		4-Step	
	Min	Typ	Group	Flux (lm) @ 85 °C	Flux (lm) @ 25 °C*	Group	Order Code	Group	Order Code	Group	Order Code
6500 K	70	75	R2	2420	2741						CXA2520-0000-000N00R265F
			R4	2600	2916					65F	CXA2520-0000-000N00R465F
			S2	2780	3066						CXA2520-0000-000N00S265F
	80	---	Q4	2260	2560						CXA2520-0000-000N0HQ465F
			R2	2420	2741					65F	CXA2520-0000-000N0HR265F
			R4	2600	2916						CXA2520-0000-000N0HR465F
5700 K	70	75	R2	2420	2741						CXA2520-0000-000N00R257F
			R4	2600	2916					57F	CXA2520-0000-000N00R457F
			S2	2780	3066						CXA2520-0000-000N00S257F
	80	---	Q4	2260	2560						CXA2520-0000-000N0HQ457F
			R2	2420	2741					57F	CXA2520-0000-000N0HR257F
			R4	2600	2916						CXA2520-0000-000N0HR457F
5000 K	70	75	R2	2420	2741	50H	CXA2520-0000-000N00R250H				CXA2520-0000-000N00R250F
			R4	2600	2916		CXA2520-0000-000N00R450H			50F	CXA2520-0000-000N00R450F
			S2	2780	3066		CXA2520-0000-000N00S250H				CXA2520-0000-000N00S250F
	80	---	Q4	2260	2560	50H	CXA2520-0000-000N0HQ450H	50G		50F	CXA2520-0000-000N0HQ450F
			R2	2420	2741		CXA2520-0000-000N0HR250H		CXA2520-0000-000N0HR250G		CXA2520-0000-000N0HR250F
			R4	2600	2916		CXA2520-0000-000N0HR450H		CXA2520-0000-000N0HR450G		CXA2520-0000-000N0HR450F
	90	95	P4	1965	2226	50H	CXA2520-0000-000N0UP450H	50G		50F	CXA2520-0000-000N0UP450F
			Q2	2100	2379		CXA2520-0000-000N0UQ250H		CXA2520-0000-000N0UQ250G		CXA2520-0000-000N0UQ250F
			Q4	2260	2560		CXA2520-0000-000N0UQ450H		CXA2520-0000-000N0UQ450G		CXA2520-0000-000N0UQ450F

Notes

- Cree maintains a tolerance of ±7% on flux and power measurements, ±0.005 on chromaticity (CCx, CCy) measurements and a tolerance of ±2 on CRI measurements. See the Measurements section (page 16).
- Cree XLamp CXA2520 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 bin restrictions specified by the order code.

* Flux values @ 25 °C are calculated and for reference only.

FLUX CHARACTERISTICS, EASYWHITE® ORDER CODES AND BINS (I_F = 550 mA, T_J = 85 °C) - CONTINUED

Nominal CCT	CRI		Minimum Luminous Flux			2-Step		3-Step		4-Step	
	Min	Typ	Group	Flux (lm) @ 85 °C	Flux (lm) @ 25 °C*	Group	Order Code	Group	Order Code	Group	Order Code
4000 K	70	75	R2	2420	2741	40H	CXA2520-0000-000N00R240H			40F	CXA2520-0000-000N00R240F
			R4	2600	2916		CXA2520-0000-000N00R440H				CXA2520-0000-000N00R440F
			S2	2780	3066		CXA2520-0000-000N00S240H				CXA2520-0000-000N00S240F
	80	---	Q4	2260	2560	40H	CXA2520-0000-000N0HQ440H	40G		40F	CXA2520-0000-000N0HQ440F
			R2	2420	2741		CXA2520-0000-000N0HR240H		CXA2520-0000-000N0HR240G		CXA2520-0000-000N0HR240F
			R4	2600	2916		CXA2520-0000-000N0HR440H		CXA2520-0000-000N0HR440G		CXA2520-0000-000N0HR440F
	90	95	P2	1830	2073	40H	CXA2520-0000-000N0UP240H	40G		40F	CXA2520-0000-000N0UP240F
			P4	1965	2226		CXA2520-0000-000N0UP440H		CXA2520-0000-000N0UP440G		CXA2520-0000-000N0UP440F
			Q2	2100	2379		CXA2520-0000-000N0UQ240H		CXA2520-0000-000N0UQ240G		CXA2520-0000-000N0UQ240F
3500 K	80	---	Q4	2260	2560	35H	CXA2520-0000-000N00Q435H	35G		35F	CXA2520-0000-000N00Q435F
			R2	2420	2741		CXA2520-0000-000N00R235H		CXA2520-0000-000N00R235G		CXA2520-0000-000N00R235F
			R4	2600	2916		CXA2520-0000-000N00R435H		CXA2520-0000-000N00R435G		CXA2520-0000-000N00R435F
	93	95	N4	1710	1937	35H	CXA2520-0000-000N0YN435H	35G		35F	CXA2520-0000-000N0YN435F
			P2	1830	2073		CXA2520-0000-000N0YP235H		CXA2520-0000-000N0YP235G		CXA2520-0000-000N0YP235F
			P4	1965	2226		CXA2520-0000-000N0YP435H		CXA2520-0000-000N0YP435G		CXA2520-0000-000N0YP435F

Notes

- Cree maintains a tolerance of ±7% on flux and power measurements, ±0.005 on chromaticity (CCx, CCy) measurements and a tolerance of ±2 on CRI measurements. See the Measurements section (page 16).
- Cree XLamp CXA2520 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 bin restrictions specified by the order code.

* Flux values @ 25 °C are calculated and for reference only.

FLUX CHARACTERISTICS, EASYWHITE® ORDER CODES AND BINS (I_F = 550 mA, T_J = 85 °C) - CONTINUED

Nominal CCT	CRI		Minimum Luminous Flux			2-Step		3-Step		4-Step	
	Min	Typ	Group	Flux (lm) @ 85 °C	Flux (lm) @ 25 °C*	Group	Order Code	Group	Order Code	Group	Order Code
3000 K	80	---	Q2	2100	2379	30H	CXA2520-0000-000N00Q230H	30G		30F	CXA2520-0000-000N00Q230F
			Q4	2260	2535		CXA2520-0000-000N00Q430H		CXA2520-0000-000N00Q430G		CXA2520-0000-000N00Q430F
			R2	2420	2741		CXA2520-0000-000N00R230H		CXA2520-0000-000N00R230G		CXA2520-0000-000N00R230F
	90	95	N2	1590	1801	30H	CXA2520-0000-000N0UN230H	30G		30F	CXA2520-0000-000N0UN230F
			N4	1710	1937		CXA2520-0000-000N0UN430H		CXA2520-0000-000N0UN430G		CXA2520-0000-000N0UN430F
			P2	1830	2073		CXA2520-0000-000N0UP230H		CXA2520-0000-000N0UP230G		CXA2520-0000-000N0UP230F
	93	95	N2	1590	1801	30H	CXA2520-0000-000N0YN230H	30G		30F	CXA2520-0000-000N0YN230F
			N4	1710	1937		CXA2520-0000-000N0YN430H		CXA2520-0000-000N0YN430G		CXA2520-0000-000N0YN430F
			P2	1830	2073		CXA2520-0000-000N0YP230H		CXA2520-0000-000N0YP230G		CXA2520-0000-000N0YP230F
2700 K	80	---	Q2	2100	2379	27H	CXA2520-0000-000N00Q227H	27G		27F	CXA2520-0000-000N00Q227F
			Q4	2260	2535		CXA2520-0000-000N00Q427H		CXA2520-0000-000N00Q427G		CXA2520-0000-000N00Q427F
			R2	2420	2741		CXA2520-0000-000N00R227H		CXA2520-0000-000N00R227G		CXA2520-0000-000N00R227F
	90	95	M4	1485	1682	27H	CXA2520-0000-000N0UM427H	27G		27F	CXA2520-0000-000N0UM427F
			N2	1590	1801		CXA2520-0000-000N0UN227H		CXA2520-0000-000N0UN227G		CXA2520-0000-000N0UN227F
			N4	1710	1937		CXA2520-0000-000N0UN427H		CXA2520-0000-000N0UN427G		CXA2520-0000-000N0UN427F
	93	95	M4	1485	1682	27H	CXA2520-0000-000N0YM427H	27G		27F	CXA2520-0000-000N0YM427F
			N2	1590	1801		CXA2520-0000-000N0YN227H		CXA2520-0000-000N0YN227G		CXA2520-0000-000N0YN227F
			N4	1710	1937		CXA2520-0000-000N0YN427H		CXA2520-0000-000N0YN427G		CXA2520-0000-000N0YN427F

Notes

- Cree maintains a tolerance of ±7% on flux and power measurements, ±0.005 on chromaticity (CCx, CCy) measurements and a tolerance of ±2 on CRI measurements. See the Measurements section (page 16).
- Cree XLamp CXA2520 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 bin restrictions specified by the order code.

* Flux values @ 25 °C are calculated and for reference only.

FLUX CHARACTERISTICS, ANSI WHITE ORDER CODES AND BINS (I_F = 550 mA, T_J = 85 °C)

The following table provides order codes for XLamp CXA2520 LEDs. For a complete description of the order code nomenclature, please see the Bin and Order Code Formats section (page 15).

Nominal CCT	CRI		Minimum Luminous Flux			Chromaticity Regions	Order Code
	Min	Typ	Group	Flux (lm) @ 85 °C	Flux (lm) @ 25 °C*		
6500 K	70	75	R2	2420	2741	1A0, 1B0, 1C0, 1D0, 65F	CXA2520-0000-000N00R20E1
			R4	2600	2916		CXA2520-0000-000N00R40E1
			S2	2780	3066		CXA2520-0000-000N00S20E1
	80	---	Q4	2260	2560	1A0, 1B0, 1C0, 1D0, 65F	CXA2520-0000-000N0HQ40E1
			R2	2420	2741		CXA2520-0000-000N0HR20E1
			R4	2600	2916		CXA2520-0000-000N0HR40E1
5700 K	70	75	R2	2420	2741	2A0, 2B0, 2C0, 2D0, 57F	CXA2520-0000-000N00R20E2
			R4	2600	2916		CXA2520-0000-000N00R40E2
			S2	2780	3066		CXA2520-0000-000N00S20E2
	80	---	Q4	2260	2560	2A0, 2B0, 2C0, 2D0, 57F	CXA2520-0000-000N0HQ40E2
			R2	2420	2741		CXA2520-0000-000N0HR20E2
			R4	2600	2916		CXA2520-0000-000N0HR40E2
5000 K	70	75	R2	2420	2741	3A0, 3B0, 3C0, 3D0, 50F	CXA2520-0000-000N00R20E3
			R4	2600	2916		CXA2520-0000-000N00R40E3
			S2	2780	3066		CXA2520-0000-000N00S20E3
	80	---	Q4	2260	2560	3A0, 3B0, 3C0, 3D0, 50F	CXA2520-0000-000N0HQ40E3
			R2	2420	2741		CXA2520-0000-000N0HR20E3
			R4	2600	2916		CXA2520-0000-000N0HR40E3
4000 K	70	75	R2	2420	2741	5A0, 5B0, 5C0, 5D0, 40F	CXA2520-0000-000N00R20E5
			R4	2600	2916		CXA2520-0000-000N00R40E5
			S2	2780	3066		CXA2520-0000-000N00S20E5

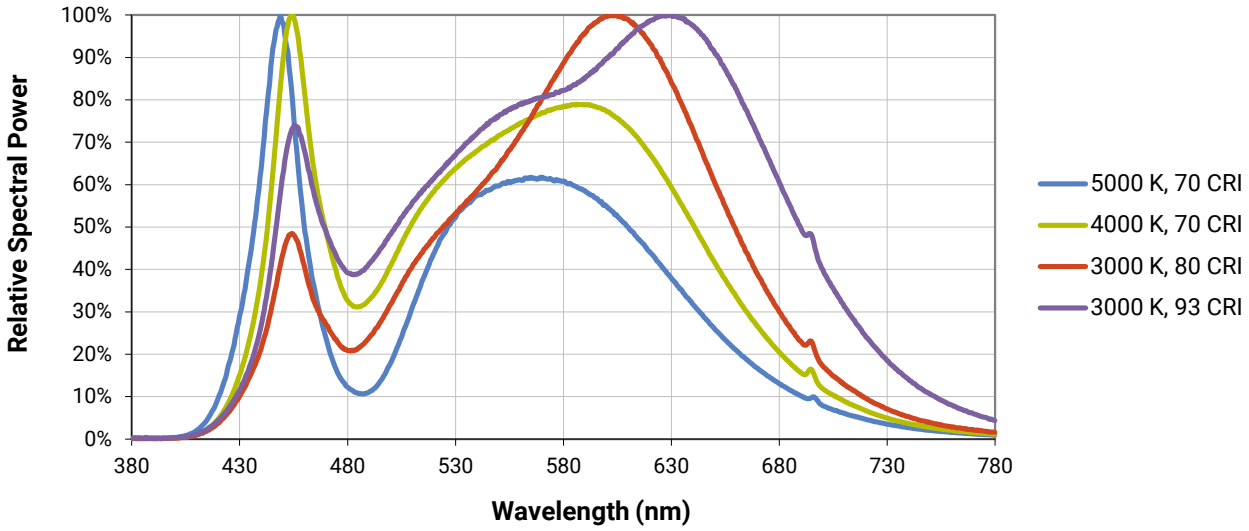
Notes

- Cree maintains a tolerance of ±7% on flux and power measurements, ±0.005 on chromaticity (CCx, CCy) measurements and a tolerance of ±2 on CRI measurements. See the Measurements section (page 16).
- Cree XLamp CXA2520 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 bin restrictions specified by the order code.

* Flux values @ 25 °C are calculated and for reference only.

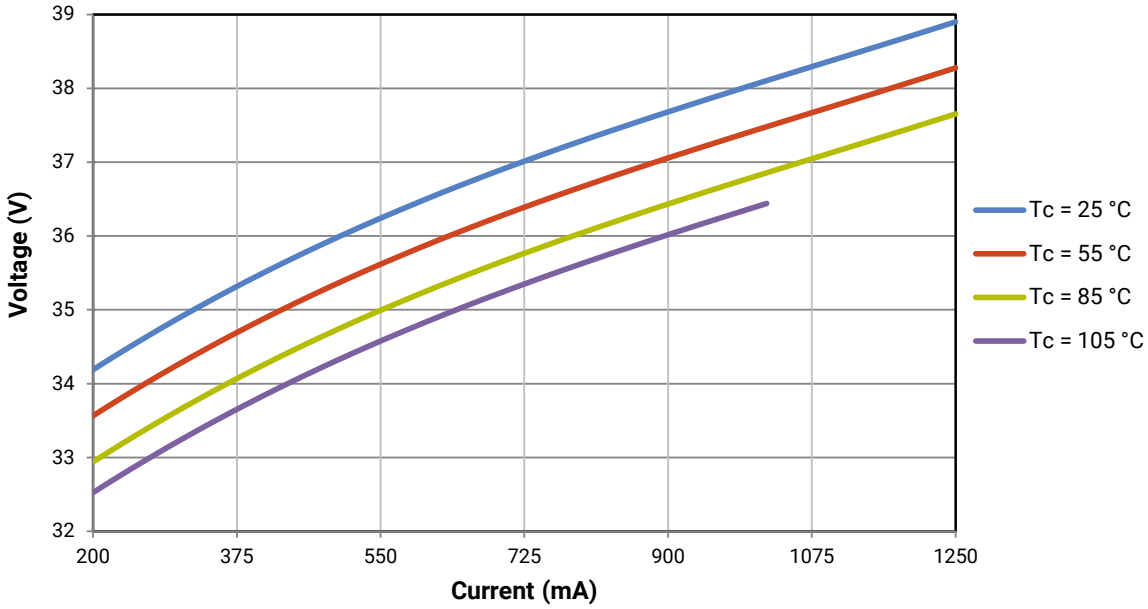
RELATIVE SPECTRAL POWER DISTRIBUTION

The following graph is the result of a series of pulsed measurements at 550 mA and T_J = 85 °C.



ELECTRICAL CHARACTERISTICS

The following graph is the result of a series of steady-state measurements.

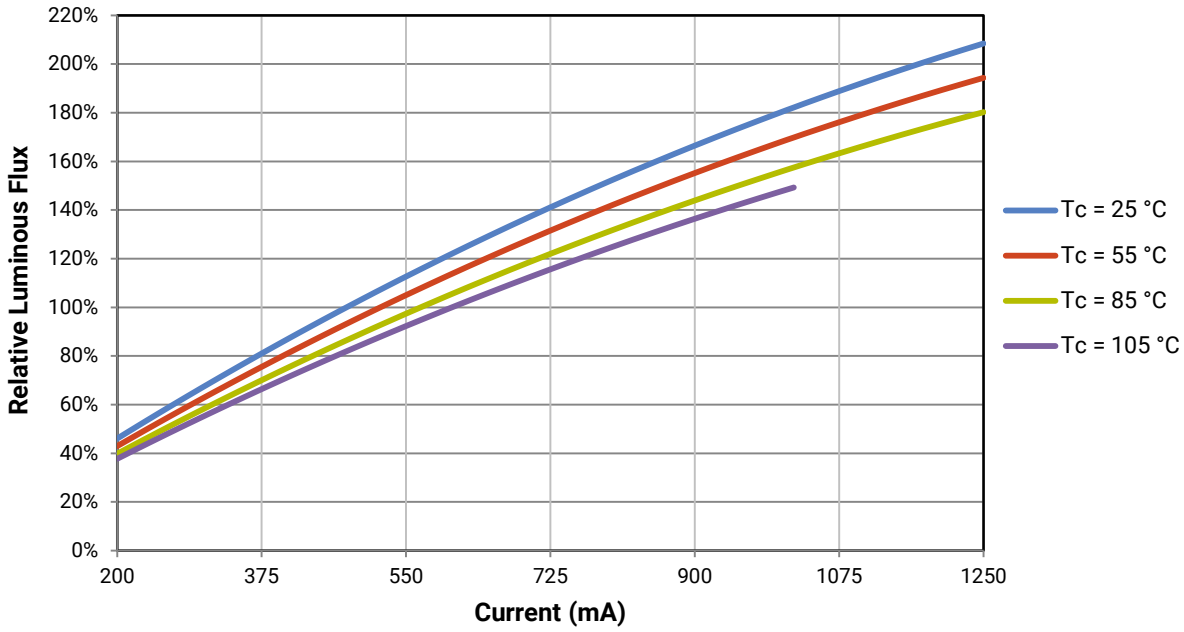


RELATIVE LUMINOUS FLUX

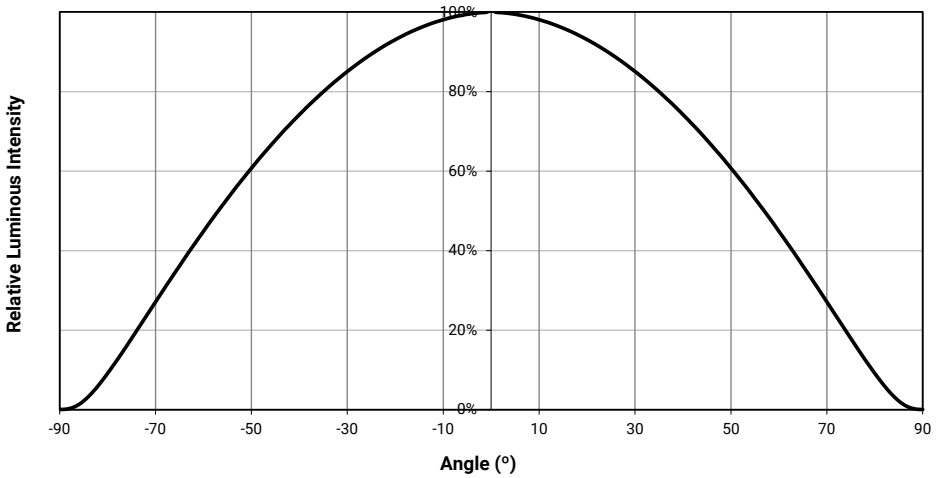
The relative luminous flux values provided below are the ratio of:

- Measurements of CXA2520 at steady-state operation at the given conditions, divided by
- Flux measured during binning, which is a pulsed measurement at 550 mA at T_J = 85 °C.

For example, at steady-state operation of Tc = 25 °C, I_F = 725 mA, the relative luminous flux ratio is 140% in the chart below. A CXA2520 LED that measures 2100 lm during binning will deliver 3300 lm (2940 * 1.4) at steady-state operation of Tc = 25 °C, I_F = 725 mA.



TYPICAL SPATIAL DISTRIBUTION



PERFORMANCE GROUPS - BRIGHTNESS (I_F = 550 mA, T_J = 85 °C)

XLamp CXA2520 LEDs are tested for luminous flux and placed into one of the following bins.

Group Code	Minimum Luminous Flux	Maximum Luminous Flux
M4	1485	1590
N2	1590	1710
N4	1710	1830
P2	1830	1965
P4	1965	2100
Q2	2100	2260
Q4	2260	2420
R2	2420	2600
R4	2600	2780
S2	2780	2990
S4	2990	3200

PERFORMANCE GROUPS - CHROMATICITY (T_J = 85 °C)

XLamp CXA2520 LEDs are tested for chromaticity and placed into one of the regions defined by the following bounding coordinates.

EasyWhite Color Temperatures – 2-Step			
Code	**CCT**	**x**	**y**
50H	5000 K	0.3429	0.3507
		0.3434	0.3571
		0.3475	0.3604
		0.3469	0.3539
40H	4000 K	0.3784	0.3741
		0.3804	0.3818
		0.3867	0.3857
		0.3844	0.3778
35H	3500 K	0.4030	0.3857
		0.4061	0.3941
		0.4132	0.3976
		0.4099	0.3890
30H	3000 K	0.4291	0.3973
		0.4333	0.4062
		0.4395	0.4084
		0.4351	0.3994
27H	2700 K	0.4528	0.4046
		0.4578	0.4138
		0.4638	0.4152
		0.4586	0.4060

EasyWhite Color Temperatures – 3-Step Ellipse						
Bin Code	**CCT**	**Center Point**		**Major Axis**	**Minor Axis**	**Rotation Angle (°)**
		x	**y**	**a**	**b**	
50G	5000 K	0.3447	0.3553	0.00840	0.00312	65.0
40G	4000 K	0.3818	0.3797	0.00939	0.00402	53.7
35G	3500 K	0.4073	0.3917	0.00927	0.00414	54.0
30G	3000 K	0.4338	0.4030	0.00834	0.00408	53.2
27G	2700 K	0.4577	0.4099	0.00834	0.00420	48.5

PERFORMANCE GROUPS - CHROMATICITY (T_J = 85 °C) - CONTINUED

EasyWhite Color Temperatures – 4-Step			
Code	**CCT**	**x**	**y**
65F	6500 K	0.3097	0.3196
		0.3079	0.3297
		0.3164	0.3382
		0.3176	0.3275
57F	5700 K	0.3253	0.3325
		0.3249	0.3439
		0.3331	0.3514
		0.3330	0.3393
50F	5000 K	0.3407	0.3459
		0.3415	0.3586
		0.3499	0.3654
		0.3484	0.3521
40F	4000 K	0.3744	0.3685
		0.3782	0.3837
		0.3912	0.3917
		0.3863	0.3758
35F	3500 K	0.3981	0.3800
		0.4040	0.3966
		0.4186	0.4037
		0.4116	0.3865
30F	3000 K	0.4242	0.3919
		0.4322	0.4096
		0.4449	0.4141
		0.4359	0.3960
27F	2700 K	0.4475	0.3994
		0.4573	0.4178
		0.4695	0.4207
		0.4589	0.4021

PERFORMANCE GROUPS - CHROMATICITY (T_J = 85 °C) - CONTINUED

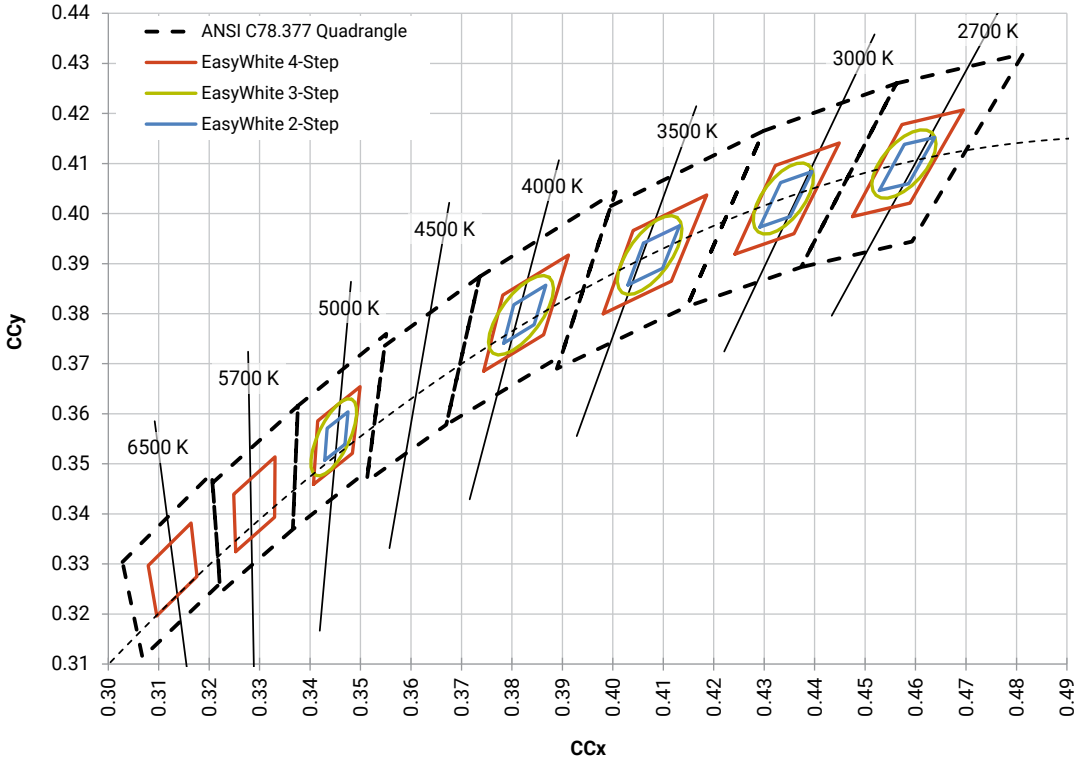
ANSI White Bins				
Code	CCT	Bin Code	x	y
0E1	6500 K	1A0	0.3048	0.3207
			0.3130	0.3290
			0.3144	0.3186
			0.3068	0.3113
		1B0	0.3028	0.3304
			0.3115	0.3391
			0.3130	0.3290
			0.3048	0.3207
		1C0	0.3115	0.3391
			0.3205	0.3481
			0.3213	0.3373
			0.3130	0.3290
		1D0	0.3130	0.3290
			0.3213	0.3373
			0.3221	0.3261
			0.3144	0.3186

ANSI White Bins				
Code	CCT	Bin Code	x	y
0E2	5700 K	2A0	0.3215	0.3350
			0.3290	0.3417
			0.3290	0.3300
			0.3222	0.3243
		2B0	0.3207	0.3462
			0.3290	0.3538
			0.3290	0.3417
			0.3215	0.3350
		2C0	0.3290	0.3538
			0.3376	0.3616
			0.3371	0.3490
			0.3290	0.3417
		2D0	0.3290	0.3417
			0.3371	0.3490
			0.3366	0.3369
			0.3290	0.3300

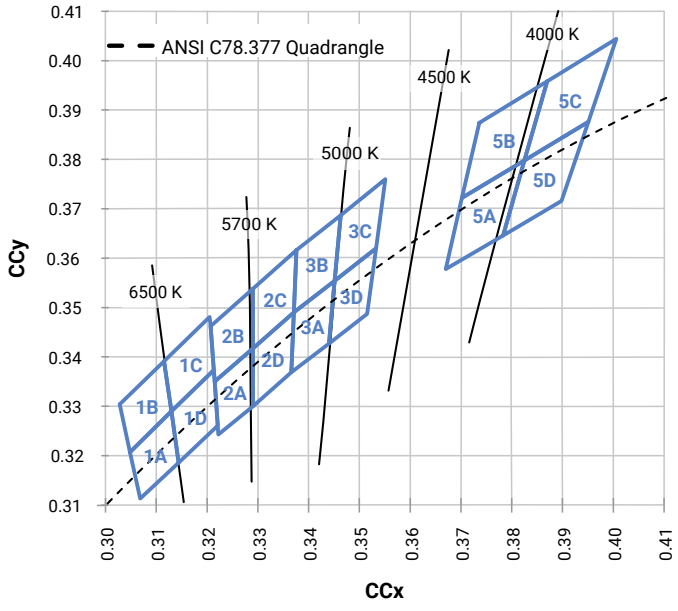
ANSI White Bins				
Code	CCT	Bin Code	x	y
0E3	5000 K	3A0	.3371	.3490
			.3451	.3554
			.3440	.3427
			.3366	.3369
		3B0	.3376	.3616
			.3463	.3687
			.3451	.3554
			.3371	.3490
		3C0	.3463	.3687
			.3551	.3760
			.3533	.3620
			.3451	.3554
		3D0	.3451	.3554
			.3533	.3620
			.3515	.3487
			.3440	.3427

ANSI White Bins				
Code	CCT	Bin Code	x	y
0E5	4000 K	5A0	.3670	.3578
			.3702	.3722
			.3825	.3798
			.3783	.3646
		5B0	.3702	.3722
			.3736	.3874
			.3869	.3958
			.3825	.3798
		5C0	.3825	.3798
			.3869	.3958
			.4006	.4044
			.3950	.3875
		5D0	.3783	.3646
			.3825	.3798
			.3950	.3875
			.3898	.3716

CREE EASYWHITE® BINS PLOTTED ON THE 1931 CIE COLOR SPACE (T_J = 85 °C)



CREE ANSI WHITE BINS PLOTTED ON THE 1931 CIE COLOR SPACE (T_J = 85 °C)



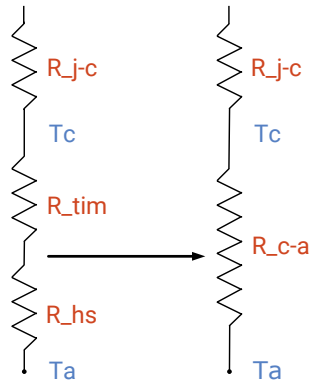
THERMAL DESIGN

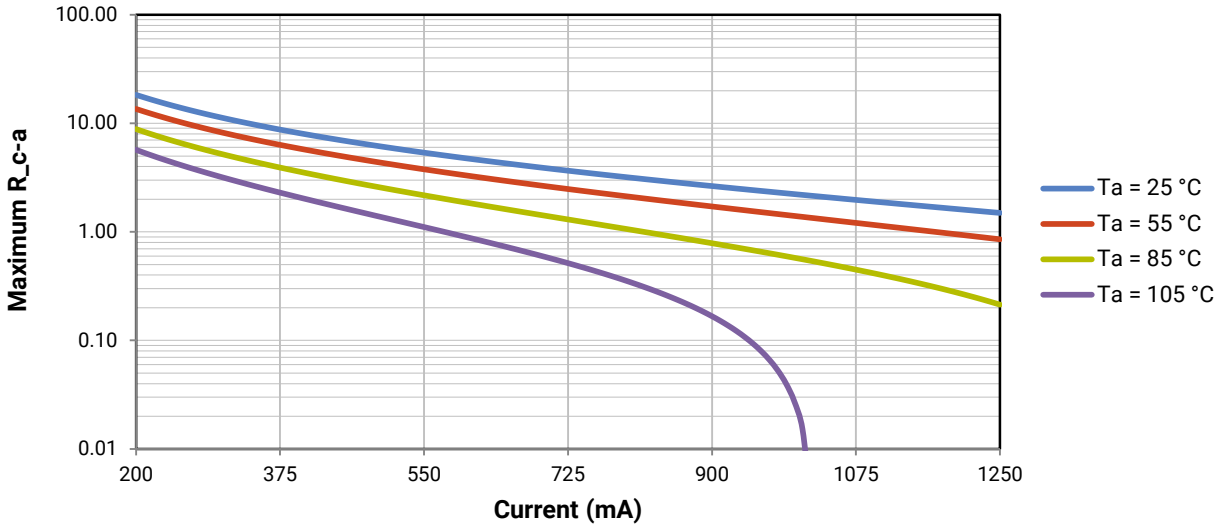
The CXA family of LED arrays can include over a hundred different LED die inside one package, and thus over a hundred different junction temperatures (T_J). Cree has intentionally removed junction-temperature-based operating limits and replaced the commonplace maximum T_J calculations with maximum ratings based on forward current (I_F) and case temperature (Tc). No additional calculations are required to ensure the CXA LED is being operated within its designed limits. Please refer to page 2 for the Operating Limit specification.

There is no need to calculate for T_J inside the package, as the thermal management design process, specifically from solder point (T_{SP}) to ambient (T_a), remains identical to any other LED component. For more information on thermal management of Cree XLamp LEDs, please refer to the Thermal Management application note. For CXA soldering recommendations and more information on thermal interface materials (TIM) and connection methods, please refer to the Cree XLamp CX Family LEDs soldering and handling document. The CX Family LED Design Guide provides basic information on the requirements to use Cree XLamp CXA LEDs successfully in luminaire designs.

To keep the CXA2520 LED at or below the maximum rated Tc, the case to ambient temperature thermal resistance (R_c-a) must be at or below the maximum R_c-a value shown on the following graph, depending on the operating environment. The y-axis in the graph is a base 10 logarithmic scale.

As the figure at right shows, the R_c-a value is the sum of the thermal resistance of the TIM (R_tim) plus the thermal resistance of the heat sink (R_hs).

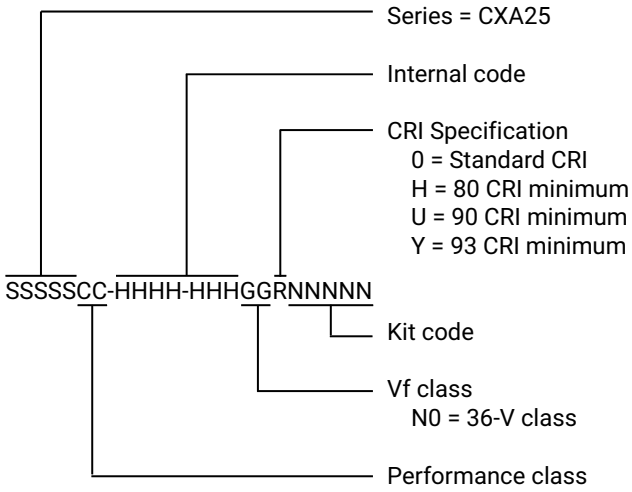




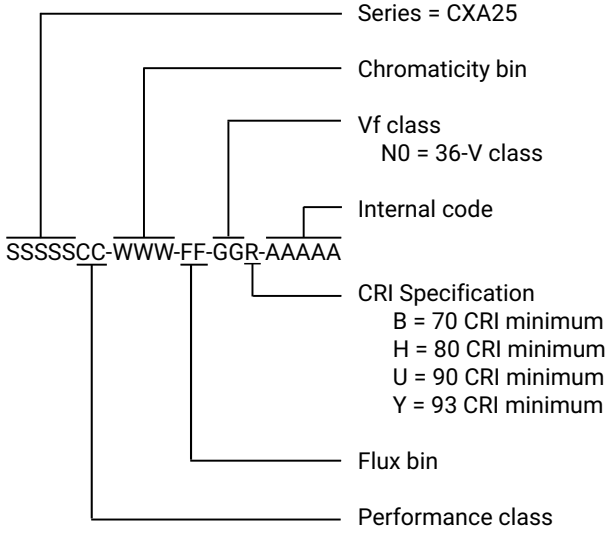
BIN AND ORDER CODE FORMATS

Bin codes and order codes are configured as follows:

Order Code



Bin Code



MECHANICAL DIMENSIONS

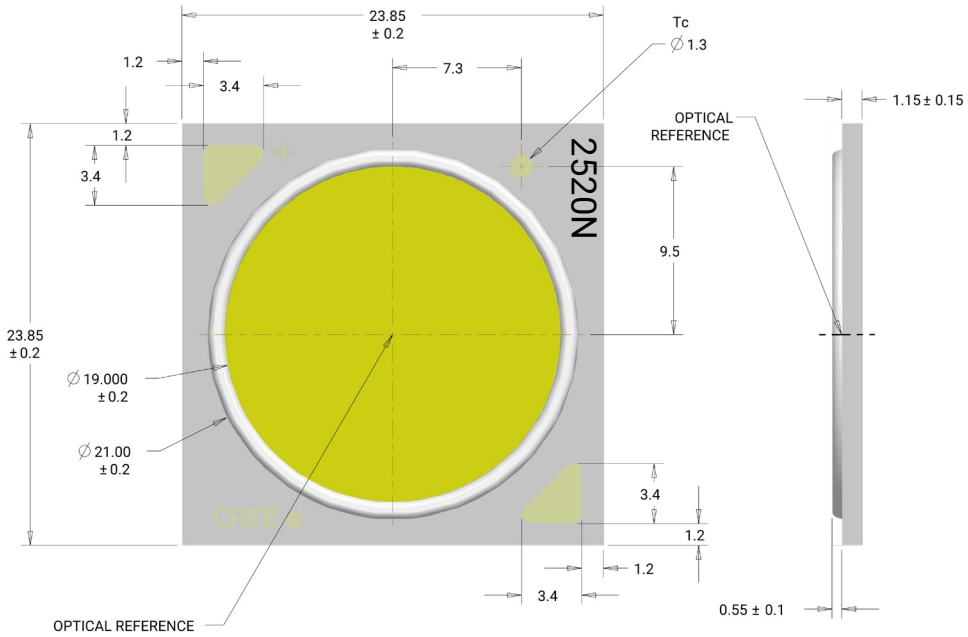
Dimensions are in mm.

Tolerances unless otherwise specified: ±.13

x° ± 1°

Meaning of 2520N

2520N = 36-V CXA2520



NOTES

Measurements

The luminous flux, radiant power, chromaticity, forward voltage and CRI measurements in this document are binning specifications only and solely represent product measurements as of the date of shipment. These measurements will change over time based on a number of factors that are not within Cree's control and are not intended or provided as operational specifications for the products. Calculated values are provided for informational purposes only and are not intended as specifications.

Pre-Release Qualification Testing

Please read the LED Reliability Overview for details of the qualification process Cree applies to ensure long-term reliability for XLamp LEDs and details of Cree's pre-release qualification testing for XLamp LEDs.

Lumen Maintenance

Cree now uses standardized IES LM-80-08 and TM-21-11 methods for collecting long-term data and extrapolating LED lumen maintenance. For information on the specific LM-80 data sets available for this LED, refer to the public LM-80 results document.

Please read the Long-Term Lumen Maintenance application note for more details on Cree's lumen maintenance testing and forecasting. Please read the Thermal Management application note for details on how thermal design, ambient temperature, and drive current affect the LED junction temperature.

RoHS Compliance

The levels of RoHS restricted materials in this product are below the maximum concentration values (also referred to as the threshold limits) permitted for such substances, or are used in an exempted application, in accordance with EU Directive 2011/65/EC (RoHS2), as implemented January 2, 2013. RoHS Declarations for this product can be obtained from your Cree representative or from the Product Documentation sections of www.cree.com.

REACh Compliance

REACh substances of very high concern (SVHCs) information is available for this product. Since the European Chemical Agency (ECHA) has published notice of their intent to frequently revise the SVHC listing for the foreseeable future, please contact a Cree representative to insure you get the most up-to-date REACh SVHC Declaration. REACh banned substance information (REACh Article 67) is also available upon request.

UL® Recognized Component

Level 4 enclosure consideration. The LED package or a portion thereof has been investigated as a fire and electrical enclosure per ANSI/UL 8750.

Vision Advisory

WARNING: Do not look at an exposed lamp in operation. Eye injury can result. For more information about LEDs and eye safety, please refer to the LED Eye Safety application note.

PACKAGING

Cree CXA2520 LEDs are packaged in trays of 20. Five trays are sealed in an anti-static bag and placed inside a carton, for a total of 100 LEDs per carton. Each carton contains 100 LEDs from the same performance bin.

Dimensions are in inches.
Tolerances: ±.13
x° ±1°