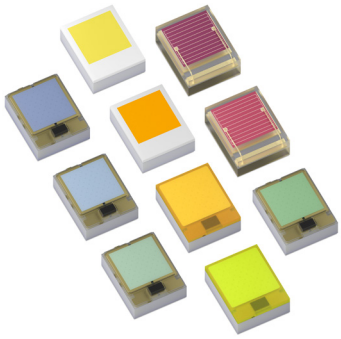
LUMILEDS

ILLUMINATION

LUXEON CZ ES Color Line

Maximum density and minimal area for complex color arrays



The LUXEON CZ ES Color Line has the smallest 2mm^2 die LEDs in the LUXEON family. Measuring only 2.0mm x 1.6mm in size, enables the maximum amount of LEDs to be packed in a small Light-Emitting Surface (LES). The 3-stripe foot print eases the PCB layout while ensuring a minimal LES with unprecedented color mixing potential. The undomed LED allows optics to be placed very close to its emitting surface. This device is optimized for use in architectural & entertainment lighting, and emergency vehicle lighting.

FEATURES AND BENEFITS

- Max drive current - up to 2.5A
- High density placement in arrays
- Lambertian radiation pattern
- Suitable for mixing rod optics
- Excellent Rth with dedicated thermal pad
- Robust Durability with Class 3B ESD protection

PRIMARY APPLICATIONS

- Spotlights
- Wall Wash
- Floodlights
- Landscape Lighting
- More...

DS611 LUXEON CZ ES Color Line Product Datasheet ©2026 Lumileds Holding B.V. All rights reserved.

Table of Contents

General Product Information . . . 2
- Product Test Conditions . . . 2
- Part Number Nomenclature . . . 2
- Lumen Maintenance . . . 2
- Environmental Compliance . . . 2

Performance Characteristics . . . 3
- Product Selection Guide . . . 3
- Optical Characteristics . . . 4
- Electrical and Thermal Characteristics . . . 5

Absolute Maximum Ratings . . . 5

Characteristic Curves . . . 6
- Spectral Power Distribution Characteristics . . . 6
- Light Output Characteristics . . . 8
- Forward Current Characteristics . . . 14
- Radiation Pattern Characteristics . . . 16

Product Bin and Labeling Definitions . . . 19
- Decoding Product Bin Labeling . . . 19
- Luminous Flux Bins . . . 20
- Radiometric Power Bins . . . 21
- Color Bin Definitions . . . 22
- Peak Wavelength Bins . . . 25
- Dominant Wavelength Bins . . . 25
- Forward Voltage Bins . . . 26

Mechanical Dimensions . . . 26

Reflow Soldering Guidelines . . . 28
- JEDEC Moisture Sensitivity . . . 28
- Solder Pad Design . . . 29

Packaging Information . . . 29
- Pocket Tape Dimensions . . . 29
- Reel Dimensions . . . 30

About Lumileds . . . 31

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General Product Information

Product Test Conditions

LUXEON CZ ES Color Line LEDs are tested and binned with a DC drive current of 1000mA at a junction temperature, T_j, of 85°C.

Part Number Nomenclature

Part numbers for LUXEON CZ ES Color Line follow the convention below:

L 1 C V – **A A A** 1 0 0 0 0 0 0 0 0 0

Where:

A A A – designates color (DRD=Deep Red, RED=Red, PCA=PC Amber, MNT=Mint, LME=Lime, GRN=Green, CYN=Cyan, BLU=Blue, RYL=Royal Blue)

Therefore, the following part number is used for a LUXEON CZ ES Red LED:

L 1 C V – **R E D** 1 0 0 0 0 0 0 0 0 0

Part numbers for LUXEON CZ ES White follow the convention below:

L 1 C V – **A A B B** 0 0 0 0 0 0 0 0 0 0

Where:

A A – designates nominal CCT (27=2700K, 30=3000K, 40=4000K, 57=5700K)

B B – designates minimum CRI (70=70CRI, 80=80CRI)

Therefore, the following part number is used for a LUXEON CZ ES White 4000K 80CRI LED:

L 1 C V – **4 0 8 0** 0 0 0 0 0 0 0 0 0 0

Lumen Maintenance

Please contact your local Sales Representative or Lumileds Technical Solutions Manager for more information about the long-term performance of this product.

Environmental Compliance

Lumileds Holding B.V. is committed to providing environmentally friendly products to the solid-state lighting market. LUXEON CZ ES Color Line is compliant to the European Union directives on the restriction of hazardous substances in electronic equipment, namely the RoHS Directive 2011/65/EU and REACH Regulation (EC) 1907/2006. Lumileds Holding B.V. will not intentionally add the following restricted materials to its products: lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE).

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Performance Characteristics

Product Selection Guide

Table 1a. Product performance of LUXEON CZ ES Colors at specified test current 1000mA, T_j=85ºC

COLOR	DOMINANT OR PEAK WAVELENGTH [1] (nm)		LUMINOUS FLUX (lm) OR RADIOMETRIC POWER [2] (mW)		PART NUMBER
	MINIMUM	MAXIMUM	MINIMUM	TYPICAL	
Deep Red	655	675	900	1009	L1CV-DRD1000000000
Red	624	634	93	109	L1CV-RED1000000000
PC Amber	–	–	220	269	L1CV-PCA1000000000
Mint	–	–	383	451	L1CV-MNT1000000000
Lime	–	–	383	466	L1CV-LME1000000000
Green	520	540	300	345	L1CV-GRN1000000000
Cyan	490	510	180	212	L1CV-CYN1000000000
Blue	465	485	90	116	L1CV-BLU1000000000
Royal Blue	440	460	1230	1389	L1CV-RYL1000000000

Notes for Table 1a:
1. Lumileds maintains a tolerance of ±6.5% on luminous flux measurements. PC Amber, Mint and Lime are binned by chromaticity coordinates. Deep Red and Royal Blue are binned by peak wavelength. All other colors are binned by dominant wavelength.
2. Deep Red and Royal Blue are binned by radiometric power. All other colors are binned by luminous flux.

Table 1b. Product performance of LUXEON CZ ES White at 1000mA, T_j=85°C

COLOR	NOMINAL CCT	MINIMUM CRI [1]	LUMINOUS FLUX [1] (lm)		TYPICAL LUMINOUS EFFICACY (lm/W)	PART NUMBER
			MINIMUM	TYPICAL		
White	5700K	70	315	370	125	L1CV-5770000000000
	2700K	80	264	310	105	L1CV-2780000000000
	3000K	80	280	320	108	L1CV-3080000000000
	4000K	80	295	347	118	L1CV-4080000000000
	5700K	80	300	350	119	L1CV-5780000000000

Notes for Table 1b:
1. Lumileds maintains a tolerance of ±2 on CRI and ±6.5% on luminous flux measurements.

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Optical Characteristics

Table 2a. Optical characteristics for LUXEON CZ ES Colors at 1000mA, T_j=85°C

COLOR	PART NUMBER	TYPICAL SPECTRAL HALF-WIDTH [1] (nm)	TYPICAL TEMPERATURE COEFFICIENT OF DOMINANT OR PEAK WAVELENGTH (nm/°C)	TYPICAL TOTAL INCLUDED ANGLE [2]	TYPICAL VIEWING ANGLE [3]
Deep Red	L1CV-DRD1000000000	21	0.16	146	138
Red	L1CV-RED1000000000	18	0.05	145	134
PC Amber	L1CV-PCA1000000000	75	-0.01	137	117
Mint	L1CV-MNT1000000000	114	0.00	139	120
Lime	L1CV-LME1000000000	102	0.01	138	119
Green	L1CV-GRN1000000000	33	0.04	138	121
Cyan	L1CV-CYN1000000000	29	0.02	138	120
Blue	L1CV-BLU1000000000	28	0.03	138	122
Royal Blue	L1CV-RYL1000000000	20	0.04	138	121

Notes for Table 2a:
1. Spectral half-width is the spectral bandwidth at 50% of the peak intensity.
2. Total angle at which 90% of total luminous flux is captured.
3. Viewing angle is the off axis angle from the LED centerline where the luminous intensity is ½ of the peak value.

Table 2b. Optical characteristics for LUXEON CZ ES White at 1000mA, T_j=85°C

COLOR	PART NUMBER	TYPICAL TOTAL INCLUDED ANGLE [1]	TYPICAL VIEWING ANGLE [2]
White	L1CV-xxx0000000000	138	119

Notes for Table 2b:
1. Total angle at which 90% of total luminous flux is captured.
2. Viewing angle is the off axis angle from the LED centerline where the luminous intensity is ½ of the peak value.

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Electrical and Thermal Characteristics

Table 3. Electrical and thermal characteristics for LUXEON CZ ES Color Line at 1000mA, T_j=85°C

COLOR	PART NUMBER	FORWARD VOLTAGE [1] (V_f)			TYPICAL TEMPERATURE COEFFICIENT OF FORWARD VOLTAGE [2] (mV/°C)	TYPICAL THERMAL RESISTANCE—JUNCTION TO SOLDER PAD (°C/W)
		MINIMUM	TYPICAL	MAXIMUM		
Deep Red	L1CV-DRD1000000000	2.00	2.20	2.80	-0.5	1.2
Red	L1CV-RED1000000000	2.00	2.20	2.80	-1.6	1.6
PC Amber	L1CV-PCA1000000000	2.50	2.95	3.30	-1.9	2.6
Mint	L1CV-MNT1000000000	2.50	2.95	3.30	-1.9	2.1
Lime	L1CV-LME1000000000	2.50	2.95	3.30	-1.7	2.2
Green	L1CV-GRN1000000000	2.70	3.20	3.50	-2.6	2.7
Cyan	L1CV-CYN1000000000	2.70	3.37	3.50	-3.1	2.5
Blue	L1CV-BLU1000000000	2.70	3.37	3.50	-3.5	2.3
Royal Blue	L1CV-RYL1000000000	2.50	2.95	3.30	-1.8	1.7
White	L1CV-xxx0000000000	2.50	2.95	3.30	-1.8	2.2

Notes for Table 3:
1. Lumileds maintains a tolerance of ±0.06V on forward voltage measurements.
2. Measured between 25°C and 85°C.

Absolute Maximum Ratings

Table 4. Absolute maximum ratings for LUXEON CZ ES Color Line

PARAMETERS	DEEP RED	RED AND PC AMBER	GREEN AND CYAN	BLUE AND ROYAL BLUE	MINT, LIME AND WHITE
DC Forward Current [1, 2]	1400mA	2500mA	2500mA	2500mA	2500mA
Peak Pulsed Forward Current [1, 3]	1750mA	3000mA	3000mA	3000mA	3000mA
LED Junction Temperature [1] (DC & Pulse)	135°C				
ESD Sensitivity (ANSI/ESDA/JEDEC JS-001-2012)	Class 3B				
LED Storage Temperature	-40°C to 135°C				
Soldering Temperature	JEDEC 020D 260°C				
Allowable Reflow Cycles	3				
Reverse Voltage ($V_{reverse}$)	LUXEON LEDs are not designed to be driven in reverse bias				

Notes for Table 4:
1. Proper current derating must be observed to maintain the junction temperature below the maximum allowable junction temperature.
2. Residual periodic variations due to power conversion from alternating current (AC) to direct current (DC), also called "ripple," are acceptable if the following conditions are met:
   – The frequency of the ripple current is 100Hz or higher
   – The average current for each cycle does not exceed the maximum allowable DC forward current
   – The maximum amplitude of the ripple does not exceed the maximum peak pulsed forward current
3. At 10% duty cycle with pulse width of 10ms.

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Characteristic Curves

Spectral Power Distribution Characteristics

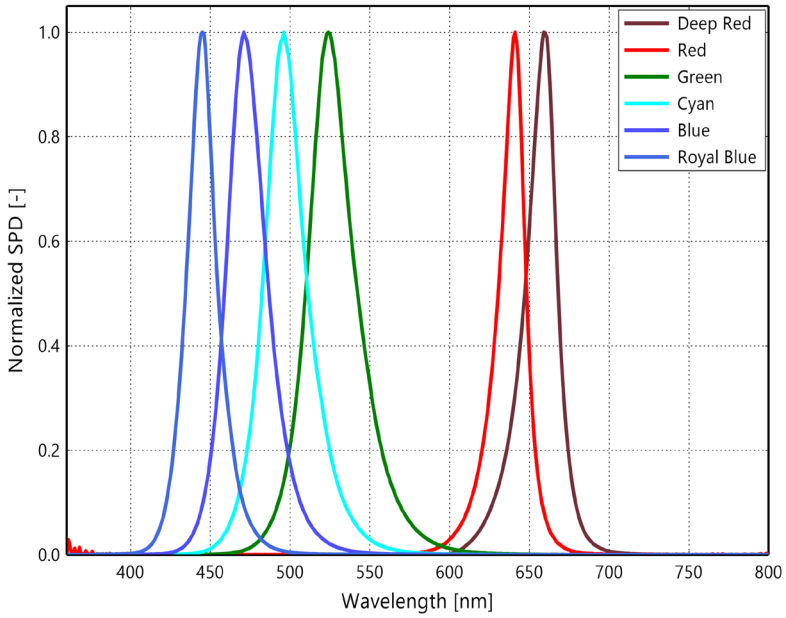


Figure 1a. Typical normalized SPD vs. wavelength for LUXEON CZ ES Direct Colors at 1000mA, T_j=85°C

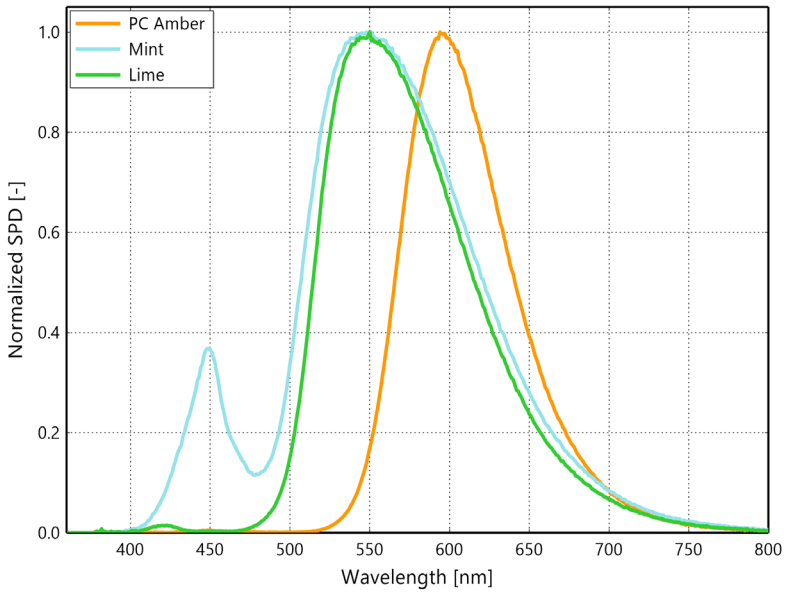


Figure 1b. Typical normalized SPD vs. wavelength for LUXEON CZ ES Phosphor Converted Colors at 1000mA, T_j=85°C

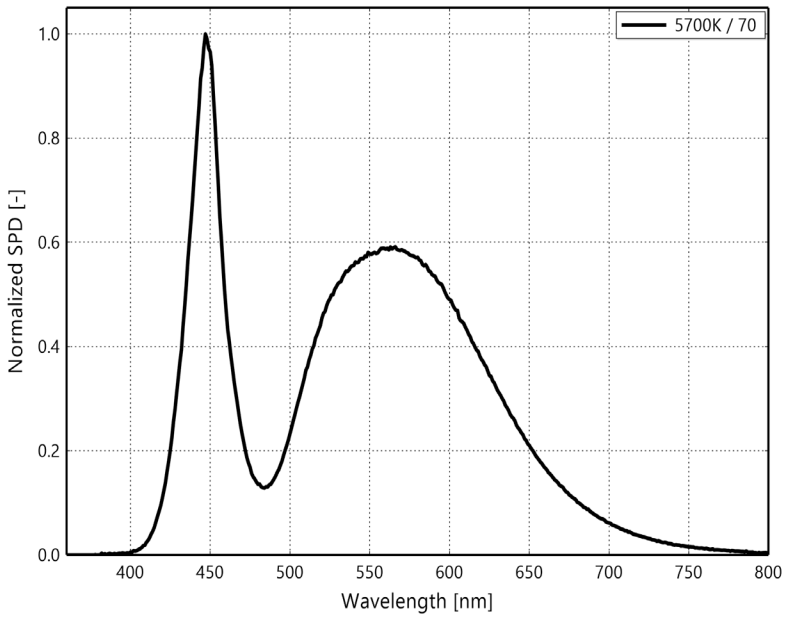


Figure 1c. Typical normalized SPD vs. wavelength for LUXEON CZ ES White 70CRI at 1000mA, T_j=85ºC

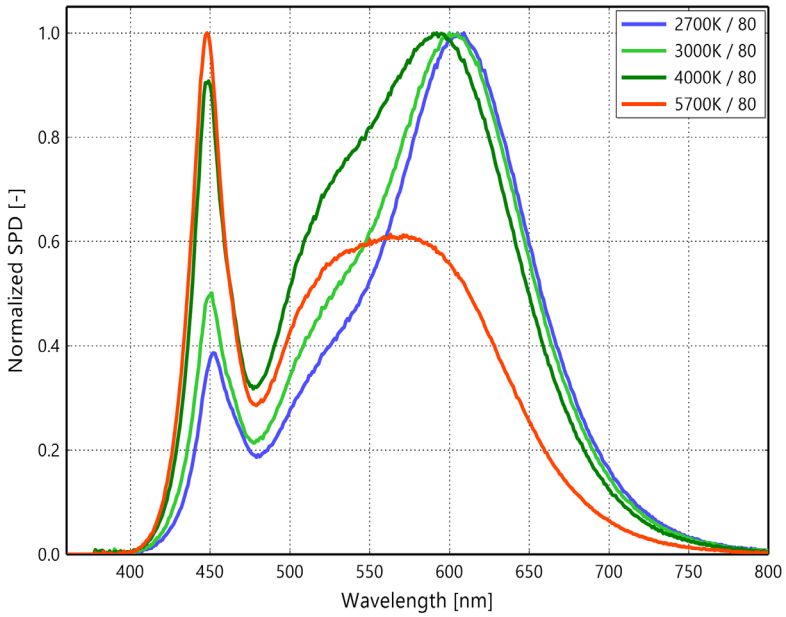


Figure 1d. Typical normalized SPD vs. wavelength for LUXEON CZ ES White 80CRI at 1000mA, T_j=85ºC

Light Output Characteristics

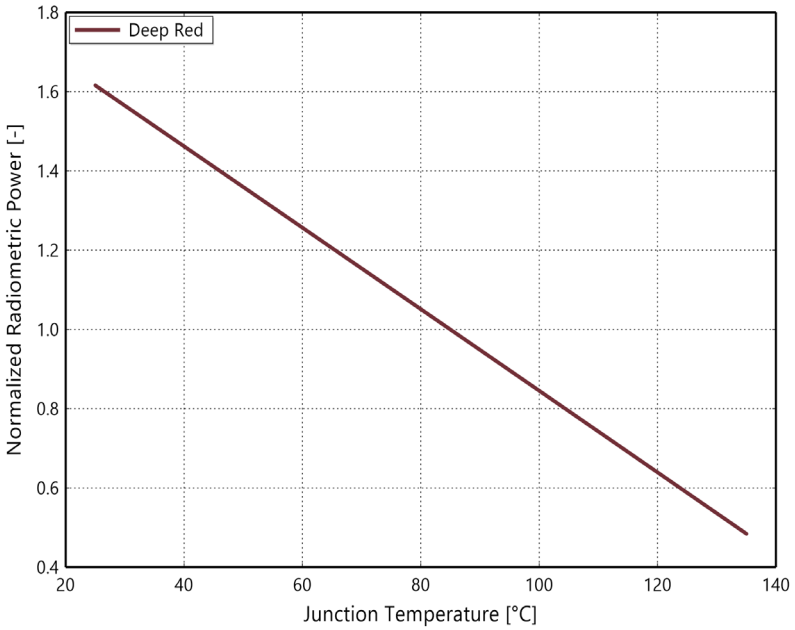


Figure 2a. Typical normalized radiometric power vs. junction temperature for LUXEON CZ ES Deep Red at 1000mA

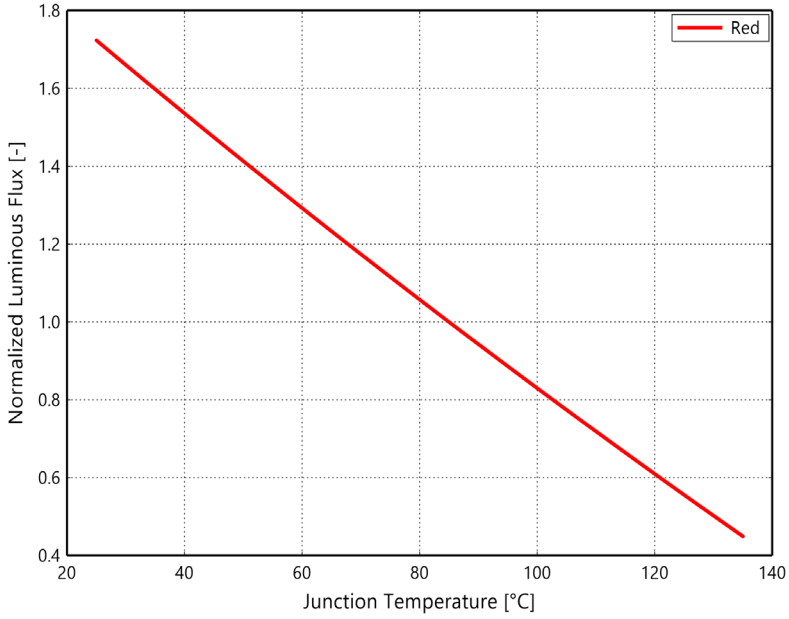


Figure 2b. Typical normalized luminous flux vs. junction temperature for LUXEON CZ ES Red at 1000mA

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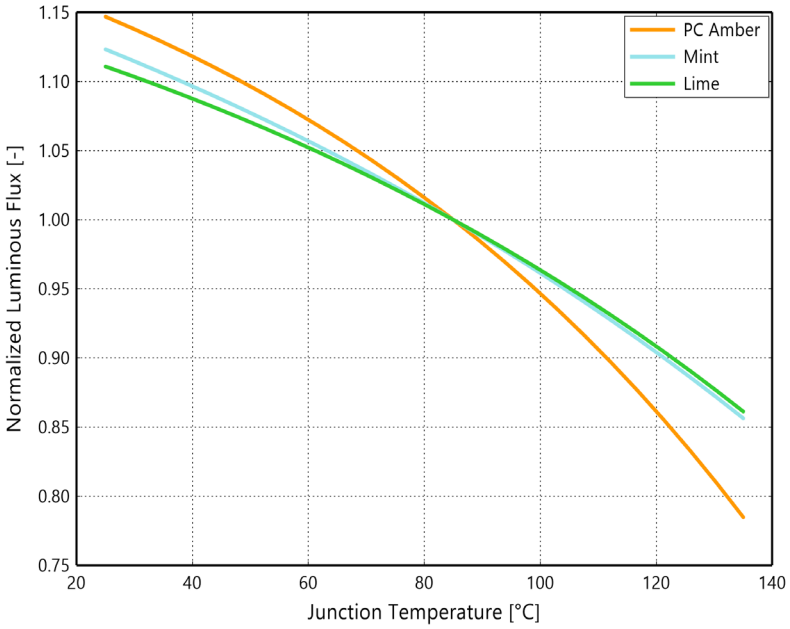


Figure 2c. Typical normalized luminous flux vs. junction temperature for LUXEON CZ ES PC Amber, Mint and Lime at 1000mA

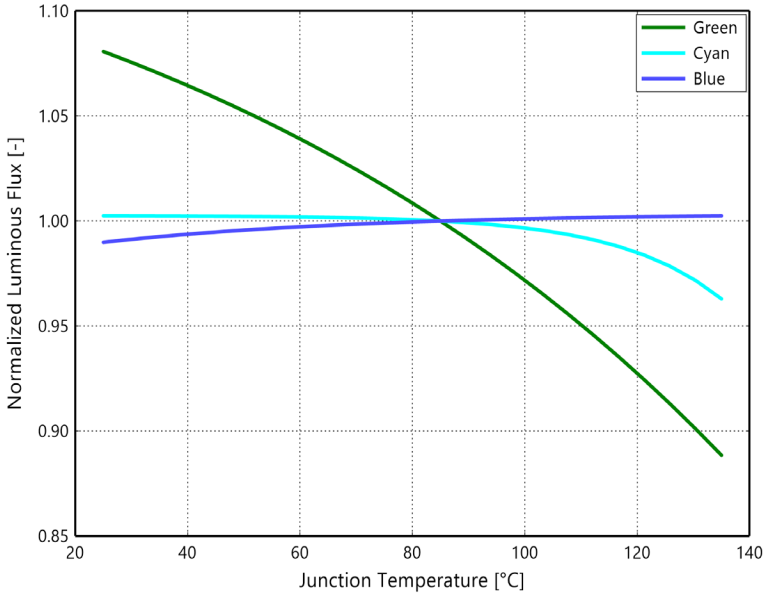


Figure 2d. Typical normalized luminous flux vs. junction temperature for LUXEON CZ ES Green, Cyan and Blue at 1000mA

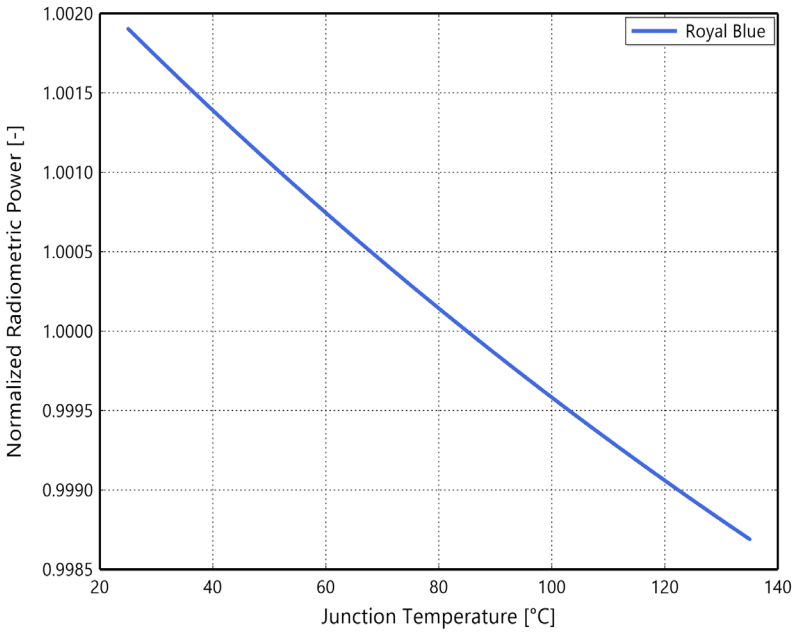


Figure 2e. Typical normalized radiometric power vs. junction temperature for LUXEON CZ ES Royal Blue at 1000mA

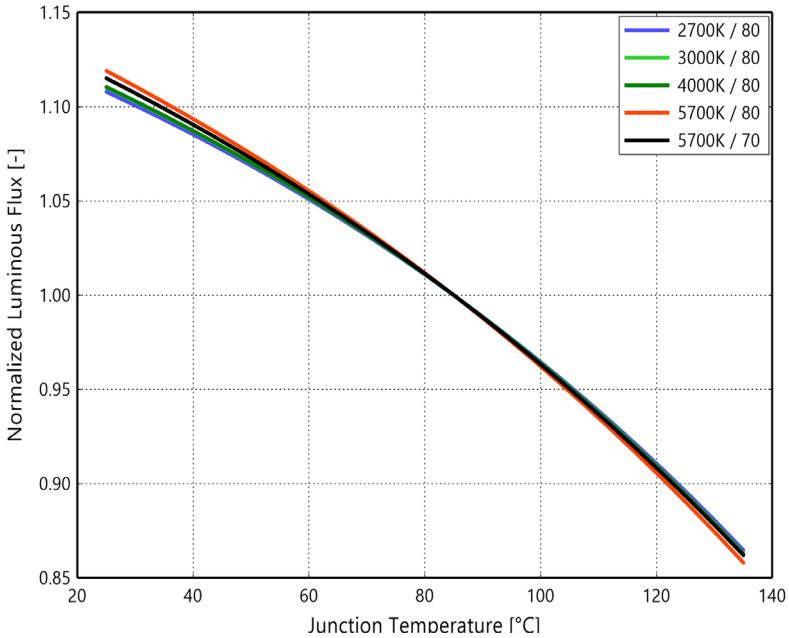


Figure 2f. Typical normalized luminous flux vs. junction temperature for LUXEON CZ ES White at 1000mA

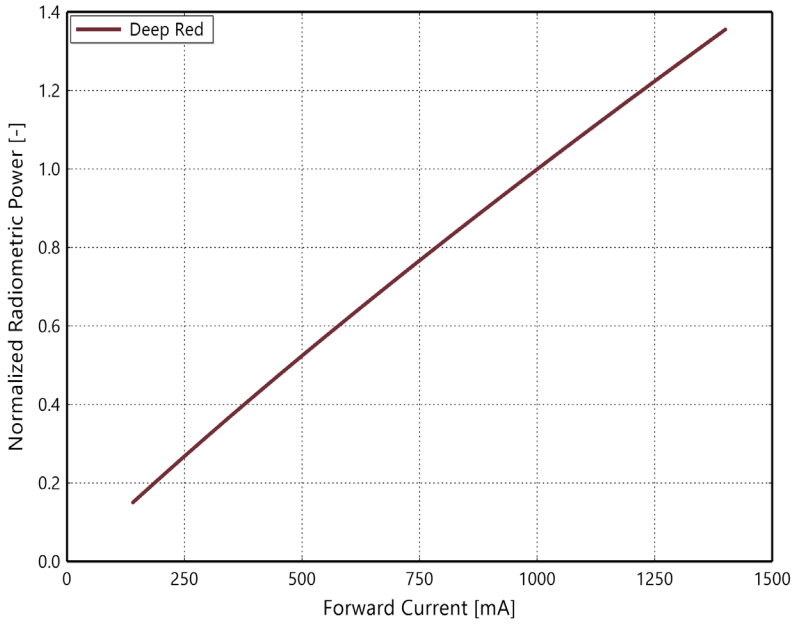


Figure 3a. Typical normalized radiometric power vs. forward current for LUXEON CZ ES Deep Red at T_j=85°C

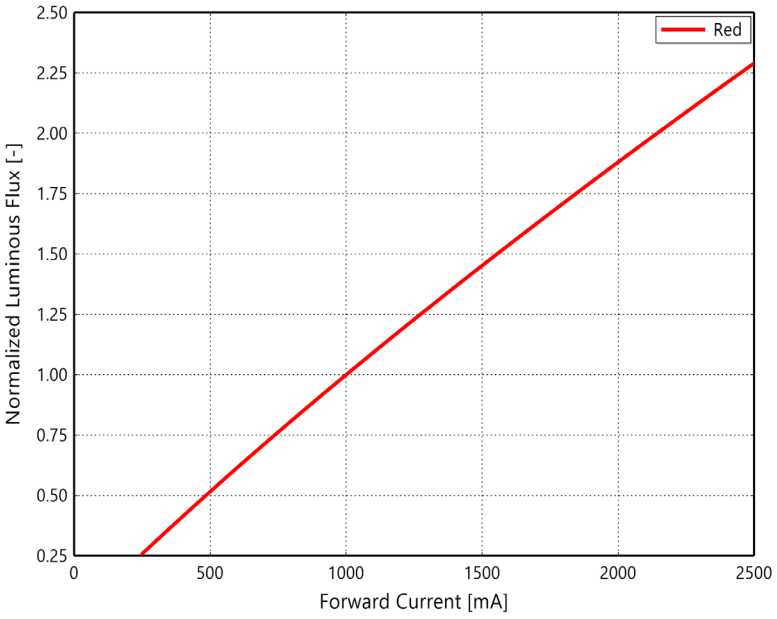


Figure 3b. Typical normalized luminous flux vs. forward current for LUXEON CZ ES Red at T_j=85°C

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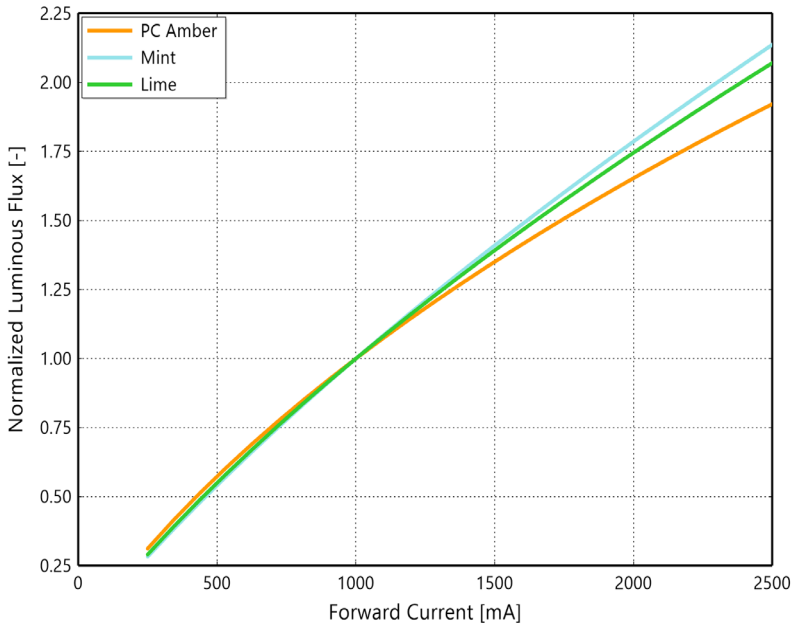


Figure 3c. Typical normalized luminous flux vs. forward current for LUXEON CZ ES PC Amber, Mint and Lime at T_j=85ºC

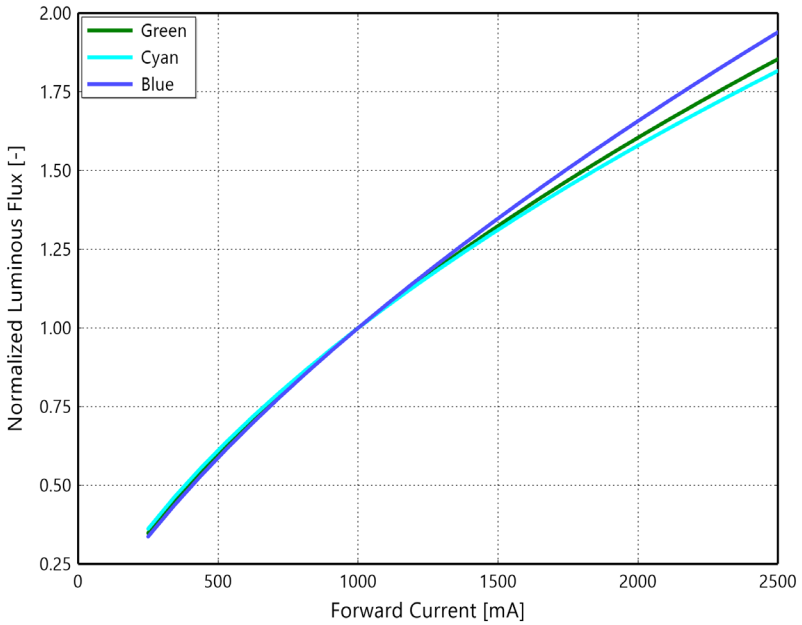


Figure 3d. Typical normalized luminous flux vs. forward current for LUXEON CZ ES Green, Cyan and Blue at T_j=85ºC

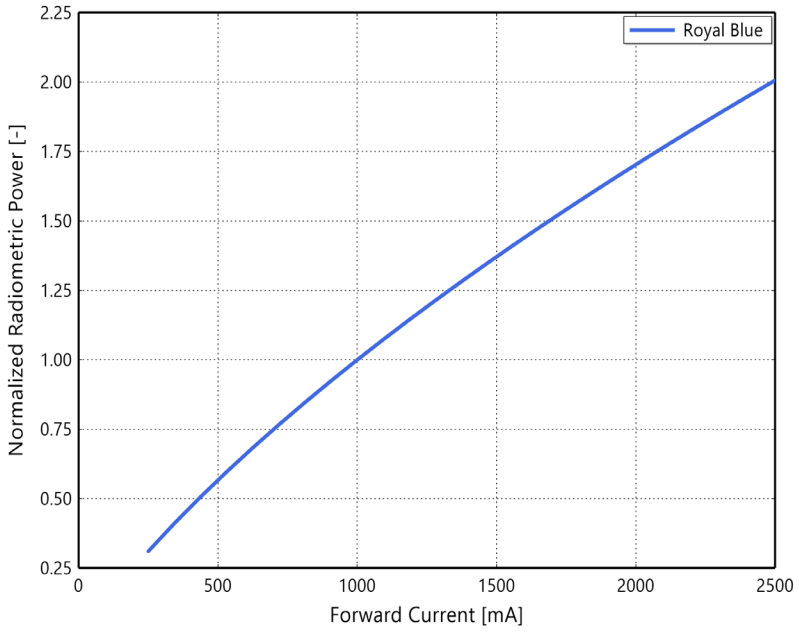


Figure 3e. Typical normalized radiometric power vs. forward current for LUXEON CZ ES Royal Blue at T_j=85ºC

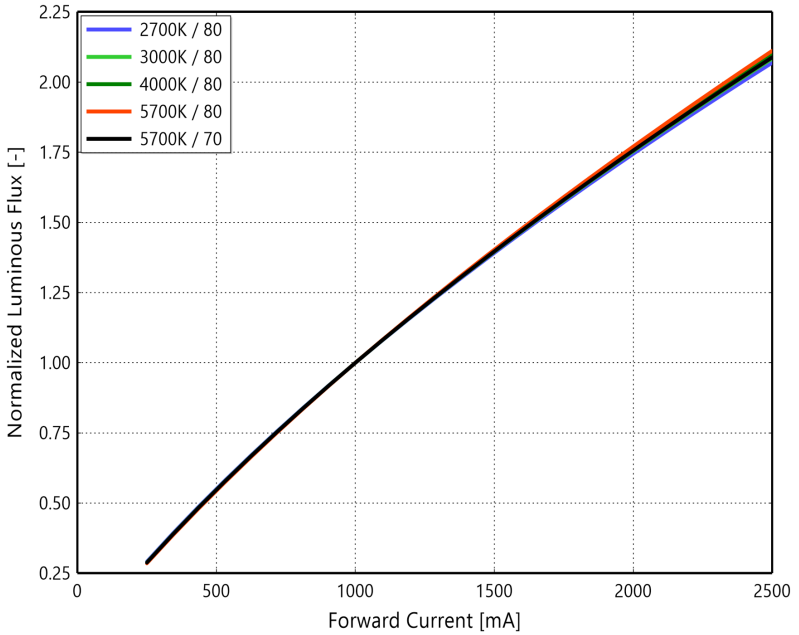


Figure 3f. Typical normalized luminous flux vs. forward current for LUXEON CZ ES White at T_j=85°C

Forward Current Characteristics

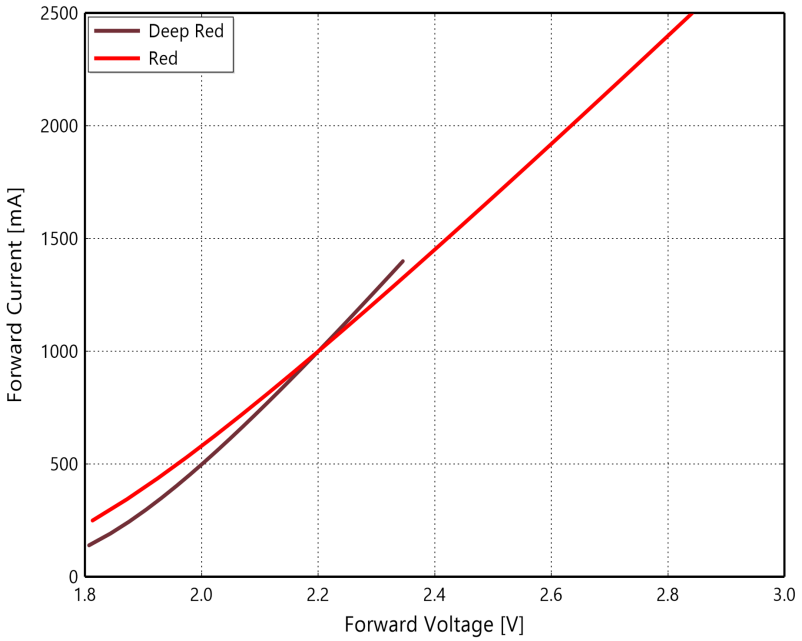


Figure 4a. Typical forward current vs. forward voltage for LUXEON CZ ES Deep Red and Red at T_j=85ºC

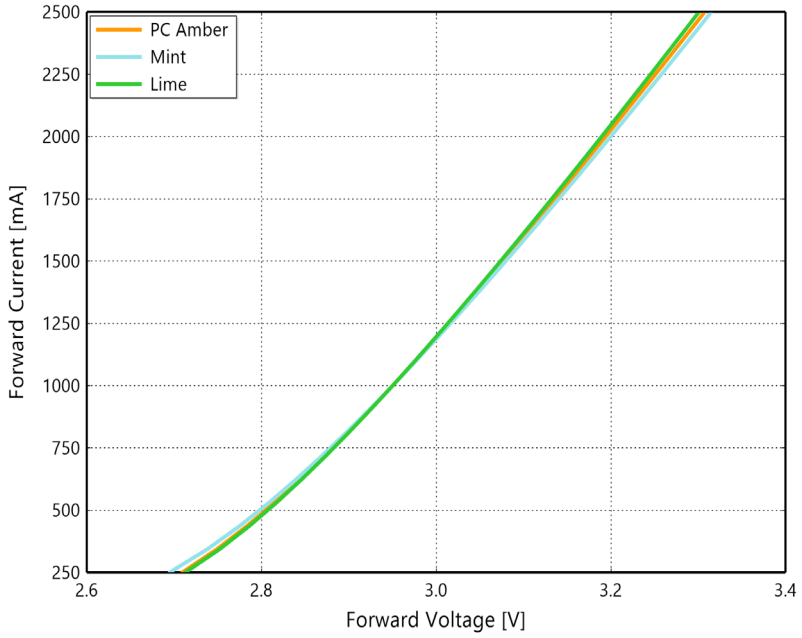


Figure 4b. Typical forward current vs. forward voltage for LUXEON CZ ES PC Amber, Mint and Lime at T_j=85ºC

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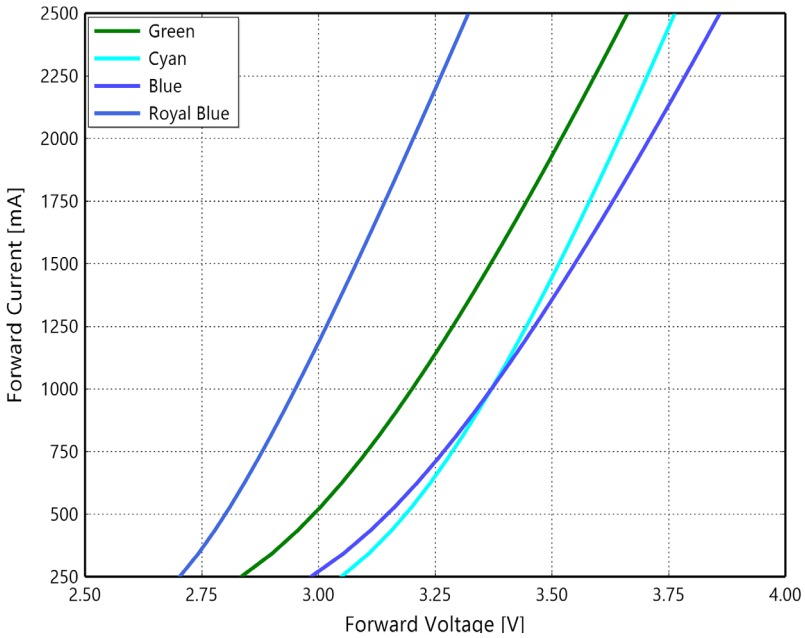


Figure 4c. Typical forward current vs. forward voltage for LUXEON CZ ES Green, Cyan, Blue and Royal Blue at T_j=85ºC

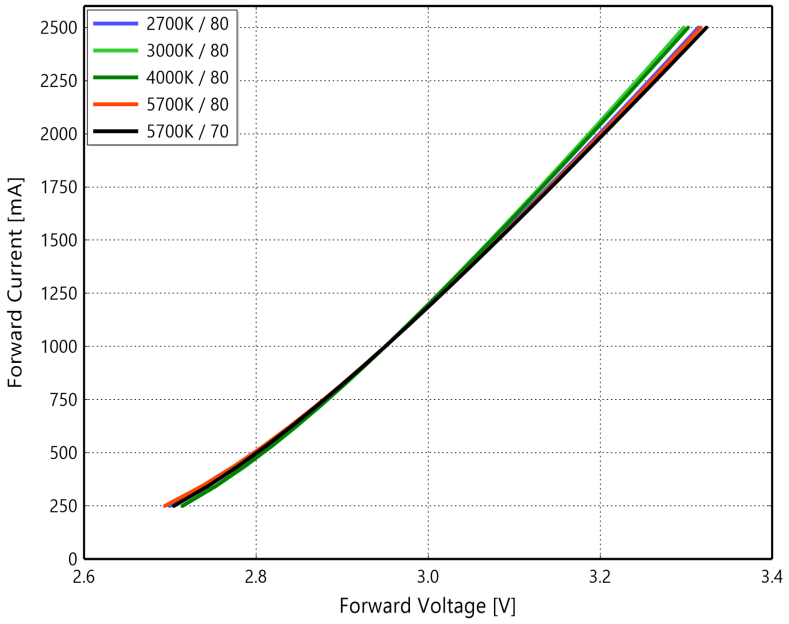


Figure 4d. Typical forward current vs. forward voltage for LUXEON CZ ES White at T_j=85ºC

Radiation Pattern Characteristics

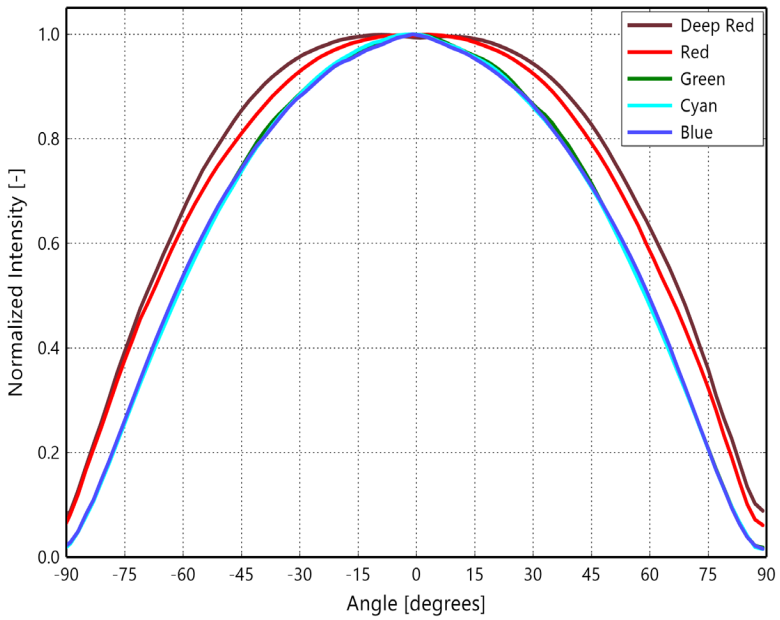


Figure 5a. Typical radiation pattern for LUXEON CZ ES Deep Red, Red, Green, Cyan and Blue at 1000mA, T_j=85°C

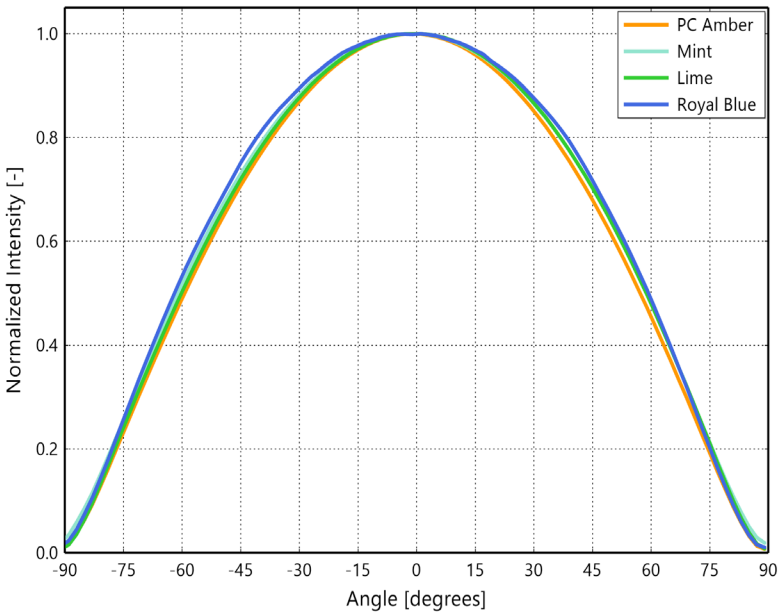


Figure 5b. Typical radiation pattern for LUXEON CZ ES PC Amber, Mint, Lime and Royal Blue at 1000mA, T_j=85°C

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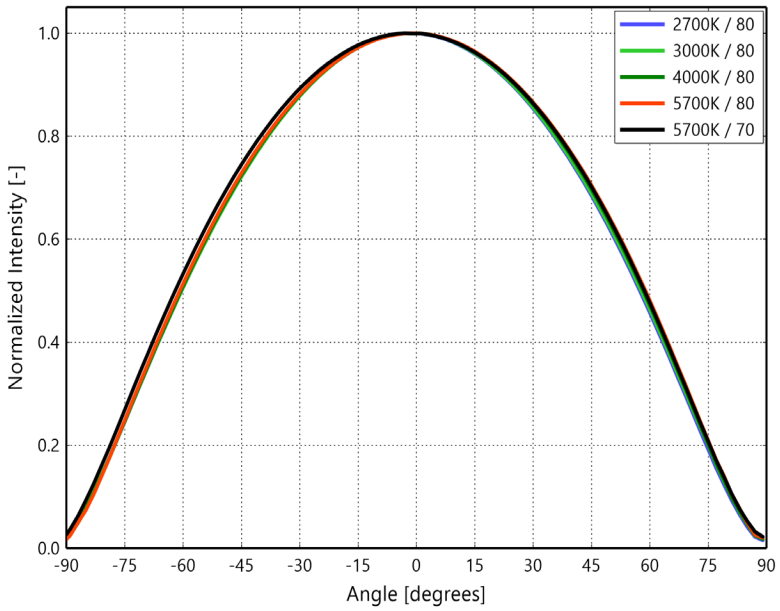


Figure 5c. Typical radiation pattern for LUXEON CZ ES White at 1000mA, T_j=85°C

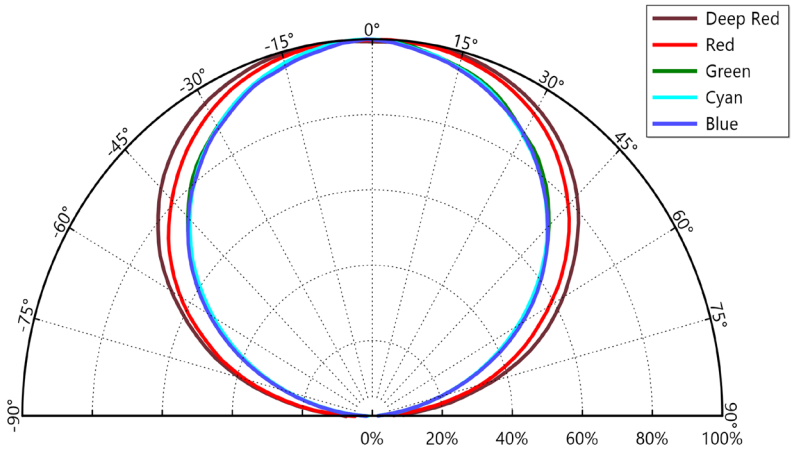


Figure 6a. Typical polar radiation pattern for LUXEON CZ ES Deep Red, Red, Green, Cyan and Blue at 1000mA, T_j=85°C

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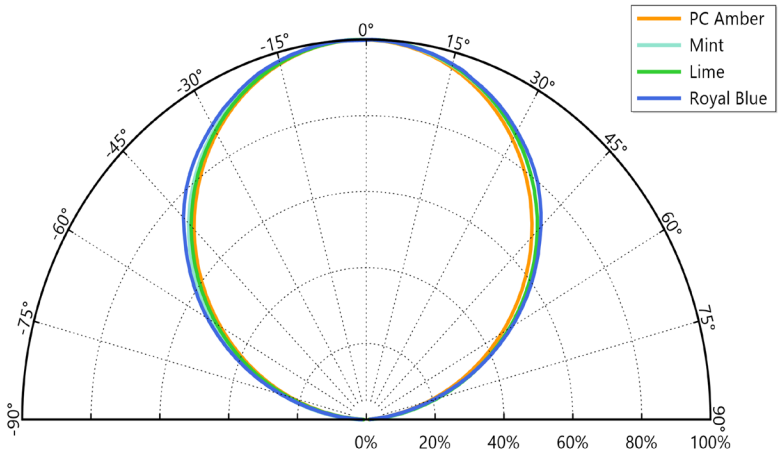


Figure 6b. Typical polar radiation pattern for LUXEON CZ ES PC Amber, Mint, Lime and Royal Blue at 1000mA, T_j=85ºC

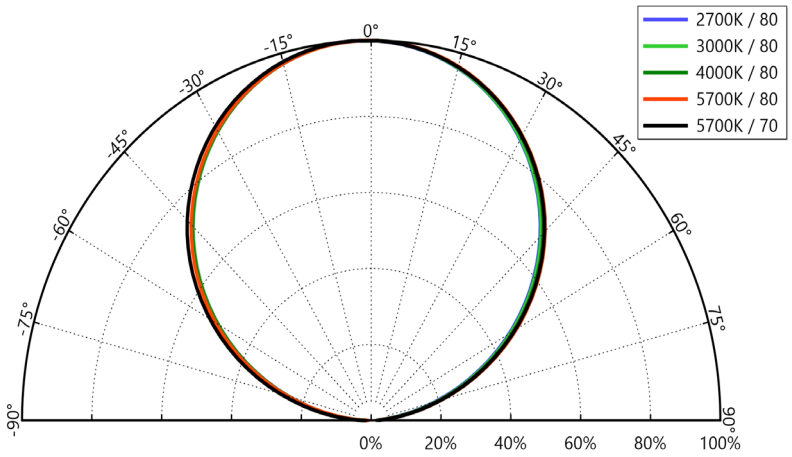


Figure 6c. Typical polar radiation pattern for LUXEON CZ ES White at 1000mA, T_j=85ºC

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Product Bin and Labeling Definitions

Decoding Product Bin Labeling

In the manufacturing of semiconductor products, there are variations in performance around the average values given in the technical datasheet. For this reason, Lumileds bins LED components for luminous flux, radiometric power, color point, peak wavelength, dominant wavelength and forward voltage.

LUXEON CZ ES Color Line LEDs are labeled using a 4-digit alphanumeric CAT code following the format below:

A B C D

Where:

- **A** – designates luminous flux bin or radiometric power bin (luminous flux bin example: A=90 to 95 lm, B= 95 to 100 lm; radiometric power bin example: Deep Red C=1040 to 1100mW, Royal Blue G=1320 to 1390mW)
- **B C** – designates color bin, peak wavelength bin or dominant wavelength bin (peak wavelength bin example: Deep Red 10=655 to 665nm; dominant wavelength bin example: Red 40=624 to 634nm)
- **D** – designates forward voltage bin (example: A=1.80 to 2.00V, B=2.00 to 2.20V)

Therefore, a LUXEON CZ ES Red LED with a lumen range of 110 to 115 lm, a dominant wavelength of 624 to 634nm and a forward voltage range of 2.20 to 2.40V has the following CAT code:

E 4 0 C

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Luminous Flux Bins

Table 5 lists the standard photometric luminous flux bins for LUXEON CZ ES Color Line emitters. Although several bins are outlined, product availability in a particular bin varies by production run and by product performance. Not all bins are available in all CCTs.

Table 5. Luminous flux bin definitions for LUXEON CZ ES Color Line

BIN	LUMINOUS FLUX[1] (lm)	
	MINIMUM	MAXIMUM
A	90	95
B	95	100
C	100	105
D	105	110
E	110	115
F	115	120
G	120	130
H	130	140
J	140	150
K	150	160
L	160	180
M	180	200
N	200	220
P	220	240
Q	240	260
R	260	280
S	280	300
T	300	320
U	320	350
V	350	380
W	380	410
X	410	440
Y	440	480
Z	480	520
1	520	560
2	560	600

Notes for Table 5:
1. Lumileds maintains a tolerance of ±6.5% on luminous flux measurements.

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Radiometric Power Bins

Table 6. Radiometric power bin definitions for LUXEON CZ ES Deep Red and Royal Blue

COLOR	BIN	RADIOMETRIC POWER [1] (mW)	
		MINIMUM	MAXIMUM
Deep Red	A	900	970
	B	970	1040
	C	1040	1110
	D	1110	1180
Royal Blue	F	1230	1310
	G	1310	1390
	H	1390	1460
	J	1460	1530
	K	1530	1600
	L	1600	1670

Notes for Table 6:
1. Lumileds maintains a tolerance of ±6.5% on radiometric power measurements.

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Color Bin Definitions

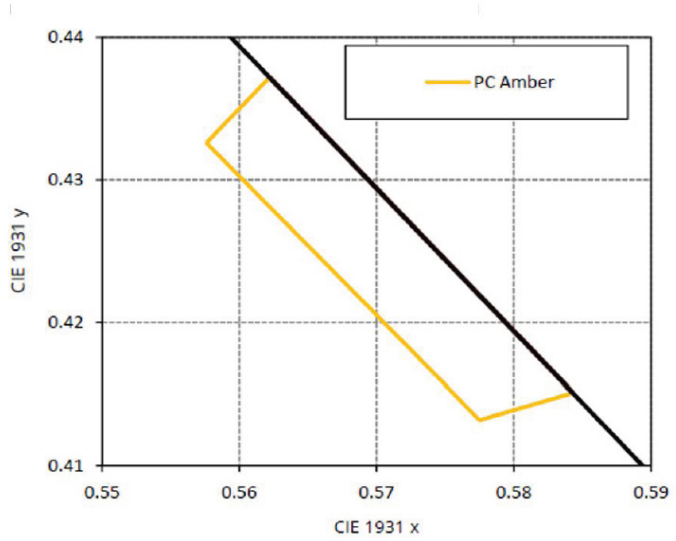


Figure 7. Color bin structure for LUXEON CZ ES PC Amber for Table 7

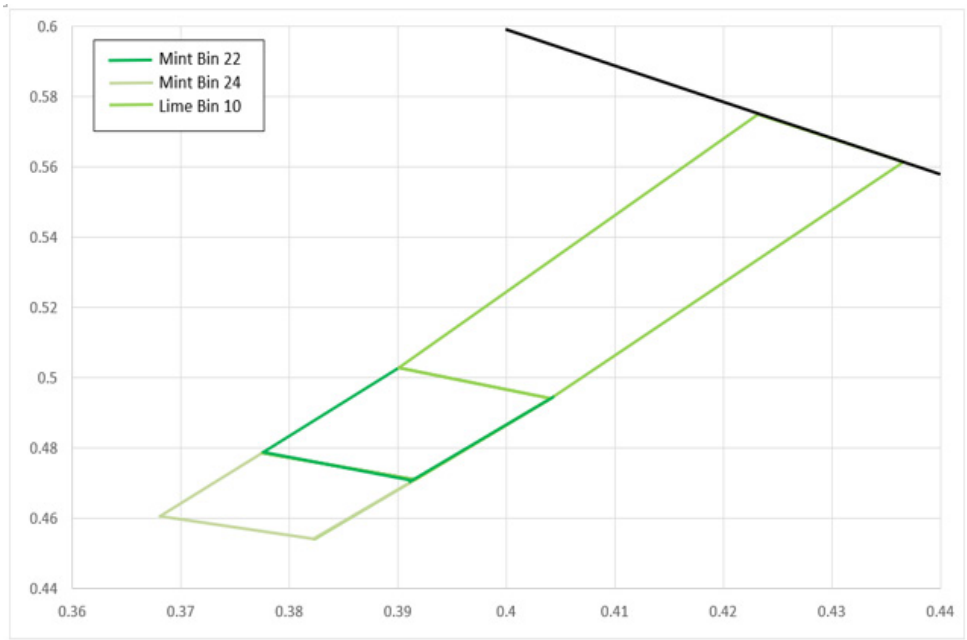


Figure 8. Color bin structure for LUXEON CZ ES Mint and Lime for Table 7

Table 7. Color bin definitions for LUXEON CZ ES PC Amber, Mint and Lime

COLOR	PART NUMBER	BIN	x	y
PC Amber	L1CV-PCA1000000000	20	0.5622	0.4372
			0.5576	0.4326
			0.5775	0.4132
			0.5843	0.4151
Mint	L1CV-MNT1000000000	22	0.4041	0.4941
			0.3901	0.5030
			0.3775	0.4787
			0.3916	0.4711
		24	0.3916	0.4711
			0.3775	0.4787
			0.3681	0.4606
			0.3823	0.4540
Lime	L1CV-LME1000000000	10	0.3901	0.5030
			0.4232	0.5749
			0.4366	0.5616
			0.4041	0.4941

Notes for Table 7:
1. Lumileds maintains a tolerance of ±0.005 on x and y color coordinates measurements.

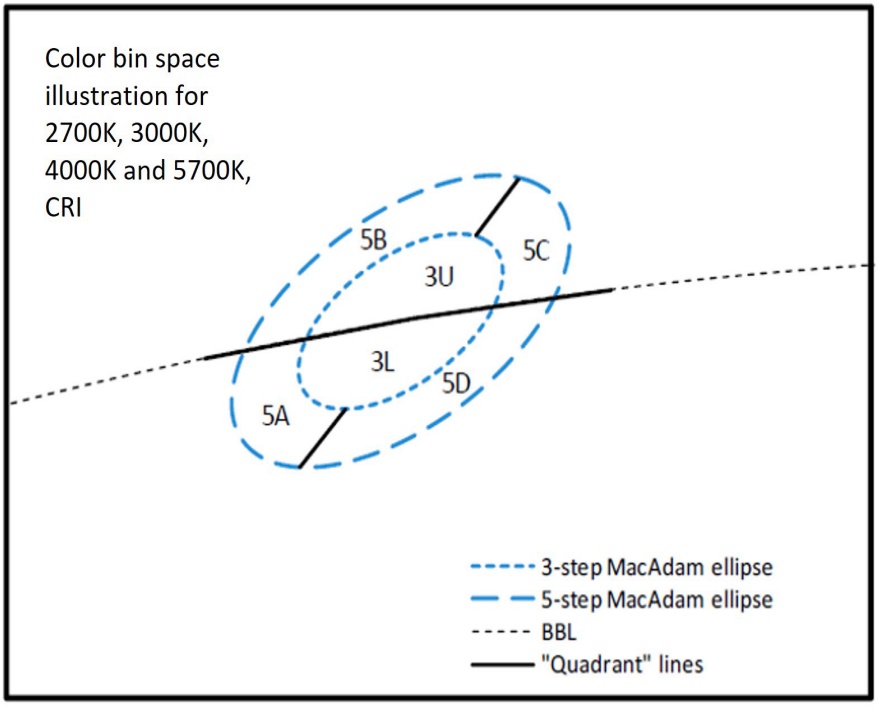


Figure 9. Color bin structure for LUXEON CZ ES Color Line

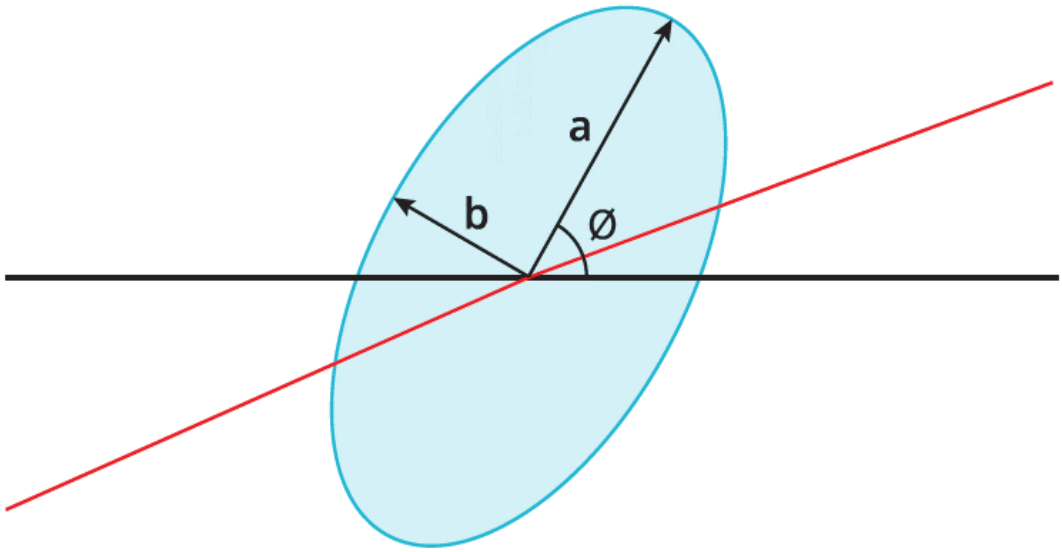


Figure 10. 3- and 5-step MacAdam ellipse illustration for Tables 8a and 8b

Table 8a. 3- and 5-step MacAdam ellipse color bin definitions for LUXEON CZ ES White at 1000mA, T_j = 85°C

NOMINAL CCT	COLOR SPACE	CENTER POINT (cx, cy)	MAJOR AXIS, a	MINOR AXIS, b	ELLIPSE ROTATION ANGLE, Θ
2700K	Single 3-step MacAdam ellipse	(0.4578, 0.4101)	0.00810	0.00420	53.7°
3000K	Single 3-step MacAdam ellipse	(0.4338, 0.4030)	0.00834	0.00408	53.2°
4000K	Single 3-step MacAdam ellipse	(0.3818, 0.3797)	0.00939	0.00402	53.7°
5700K	Single 3-step MacAdam ellipse	(0.3287, 0.3417)	0.00746	0.00320	59.1°
2700K	Single 5-step MacAdam ellipse	(0.4578, 0.4101)	0.01350	0.00700	53.7°
3000K	Single 5-step MacAdam ellipse	(0.4338, 0.4030)	0.01390	0.00680	53.2°
4000K	Single 5-step MacAdam ellipse	(0.3818, 0.3797)	0.01565	0.00670	53.7°
5700K	Single 5-step MacAdam ellipse	(0.3287, 0.3417)	0.01243	0.00533	59.1°

Notes for Table 8a:
1. Lumileds maintains a tolerance of ±0.005 on x and y coordinates in the CIE 1931 color space.

Table 8b. MacAdam ellipse color bin definitions for LUXEON CZ ES Color Line

NOMINAL CCT	SDCM
30	Single 3-step MacAdam ellipse (CCTs 5000K and above)
3U	Single 3-step MacAdam ellipse (80 CRI and CCTs 4000K and below)
3L	Single 3-step MacAdam ellipse (80 CRI and CCTs 4000K and below)
50	Single 5-step MacAdam ellipse (70CRI)
5A	Single 5-step MacAdam ellipse (80CRI)
5B	Single 5-step MacAdam ellipse (80CRI)
5C	Single 5-step MacAdam ellipse (80CRI)
5D	Single 5-step MacAdam ellipse (80CRI)

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Peak Wavelength Bins

Table 9. Peak wavelength bin definitions for LUXEON CZ ES Deep Red and Royal Blue

COLOR	PART NUMBER	BIN	PEAK WAVELENGTH [1] (nm)	
			MINIMUM	MAXIMUM
Deep Red	L1CV-DRD1000000000	10	655	665
		20	665	675
Royal Blue	L1CV-RYL1000000000	30	440	445
		40	445	450
		50	450	455
		60	455	460

Notes for Table 9:
1. Lumileds maintains a tolerance of ±2.0nm on peak wavelength measurements.

Dominant Wavelength Bins

Table 10. Dominant wavelength bin definitions for LUXEON CZ ES Red, Green, Cyan and Blue at 1000mA, T_j=85°C

COLOR	PART NUMBER	BIN	DOMINANT WAVELENGTH [1] (nm)	
			MINIMUM	MAXIMUM
Red	L1CV-RED1000000000	40	624.0	634.0
Green	L1CV-GRN1000000000	10	520.0	525.0
		20	525.0	530.0
		30	530.0	535.0
		40	535.0	540.0
Cyan	L1CV-CYN1000000000	10	490.0	496.0
		20	496.0	500.0
		30	500.0	505.0
		40	505.0	510.0
Blue	L1CV-BLU1000000000	10	460.0	465.0
		20	465.0	470.0
		30	470.0	475.0
		40	475.0	480.0
		50	480.0	485.0

Notes for Table 10:
1. Lumileds maintains a tolerance of ±0.5nm on dominant wavelength measurements.

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Forward Voltage Bins

Table 11. Forward voltage bin definitions for LUXEON CZ ES Color Line

BIN	FORWARD VOLTAGE [1] (V_f)	
	MINIMUM	MAXIMUM
A	1.80	2.00
B	2.00	2.20
C	2.20	2.40
D	2.40	2.60
E	2.60	2.80
F	2.80	3.00
G	3.00	3.20
H	3.20	3.40
J	3.40	3.60

Notes for Table 11:
1. Lumileds maintains a tolerance of ±0.06V on forward voltage measurements.

Mechanical Dimensions

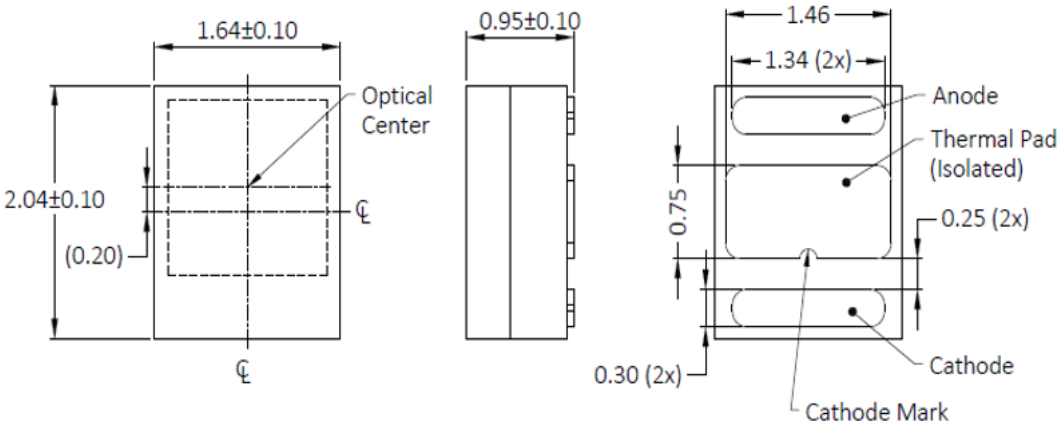


Figure 11. Mechanical dimensions for LUXEON CZ ES Red and Deep Red

Notes for Figure 11:
1. Drawings are not to scale.
2. All dimensions are in millimeters.

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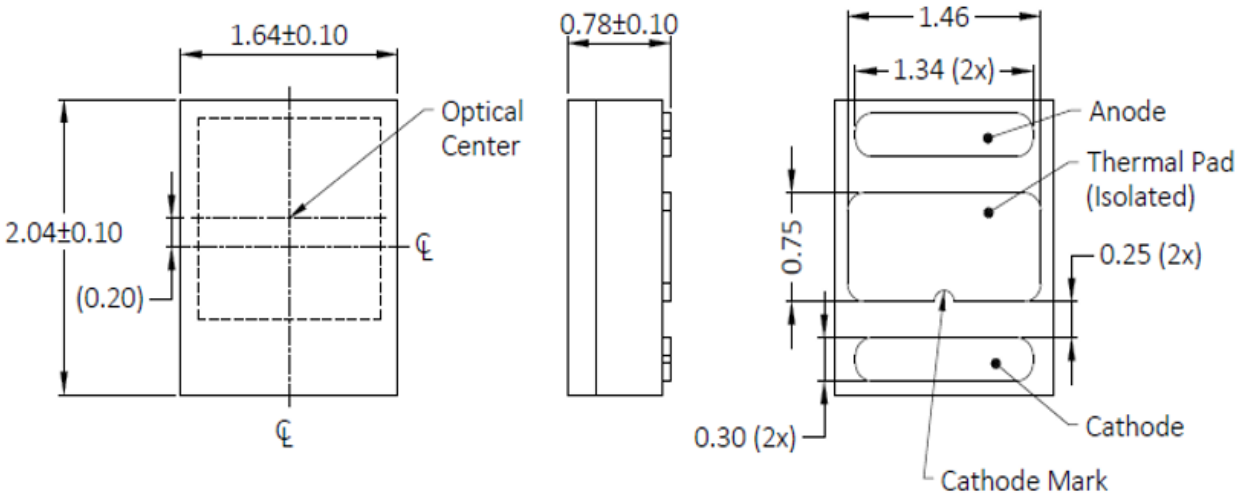


Figure 12. Mechanical dimensions for LUXEON CZ ES all other colors

Notes for Figure 12:
1. Drawings are not to scale.
2. All dimensions are in millimeters.

Reflow Soldering Guidelines

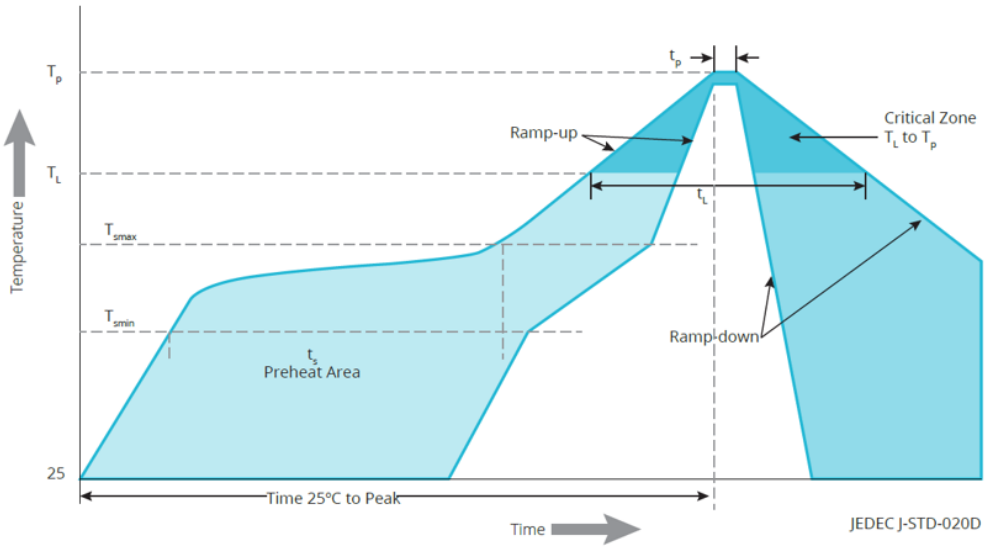


Figure 13. Visualization of the acceptable reflow temperature profile as specified in Table 12

Table 12. Reflow profile characteristics for LUXEON CZ ES Color Line

PROFILE FEATURE	LEAD-FREE ASSEMBLY
Preheat Minimum Temperature (T_{smin})	150°C
Preheat Maximum Temperature (T_{smax})	200°C
Preheat Time (t_{smin} to t_{smax})	60 to 120 seconds
Ramp-Up Rate (T_L to T_p)	3°C / second maximum
Liquidus Temperature (T_L)	217°C
Time Maintained Above Temperature T_L (t_L)	60 to 150 seconds
Peak / Classification Temperature (T_p)	260°C
Time Within 5°C of Actual Temperature (t_p)	20 to 40 seconds
Ramp-Down Rate (T_p to T_L)	6°C / second maximum
Time 25°C to Peak Temperature	8 minutes maximum

JEDEC Moisture Sensitivity

Table 13. Moisture sensitivity levels for LUXEON CZ ES Color Line

LEVEL	FLOOR LIFE		SOAK REQUIREMENTS STANDARD	
	TIME	CONDITIONS	TIME	CONDITIONS
1	Unlimited	≤30°C / 85% RH	168 Hours +5 / -0	85°C / 85% RH

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Solder Pad Design

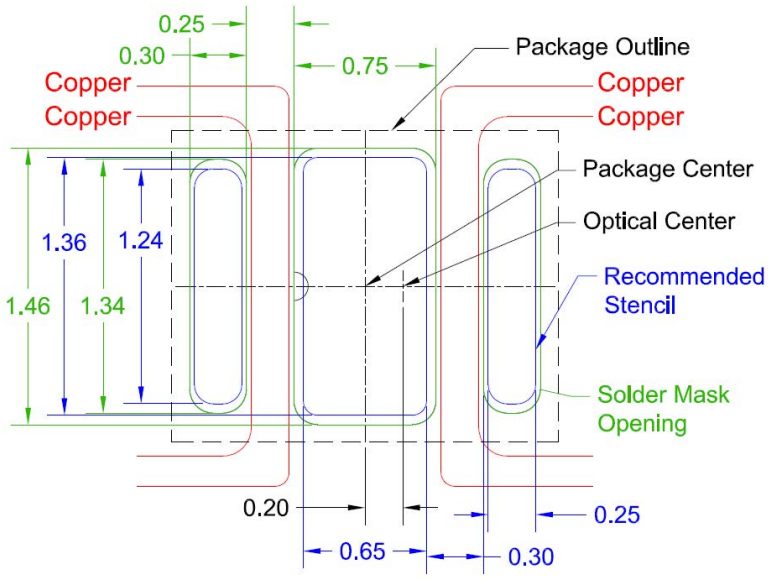


Figure 14. Recommended PCB solder pad layout for LUXEON CZ ES Color Line

Notes for Figure 14:
1. Drawings are not to scale.
2. All dimensions are in millimeters.
3. The drawing above shows the recommended solder pad layout on Printed Circuit Board (PCB).

Packaging Information

Pocket Tape Dimensions

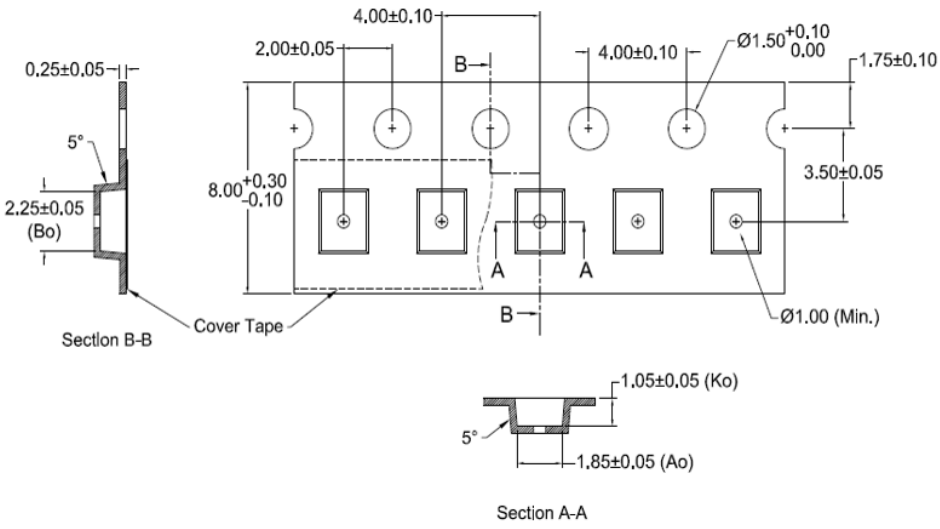


Figure 15. Pocket Tape dimensions for LUXEON CZ ES Color Line

Notes for Figure 15:
1. Drawings are not to scale.
2. All dimensions are in millimeters.

Reel Dimensions

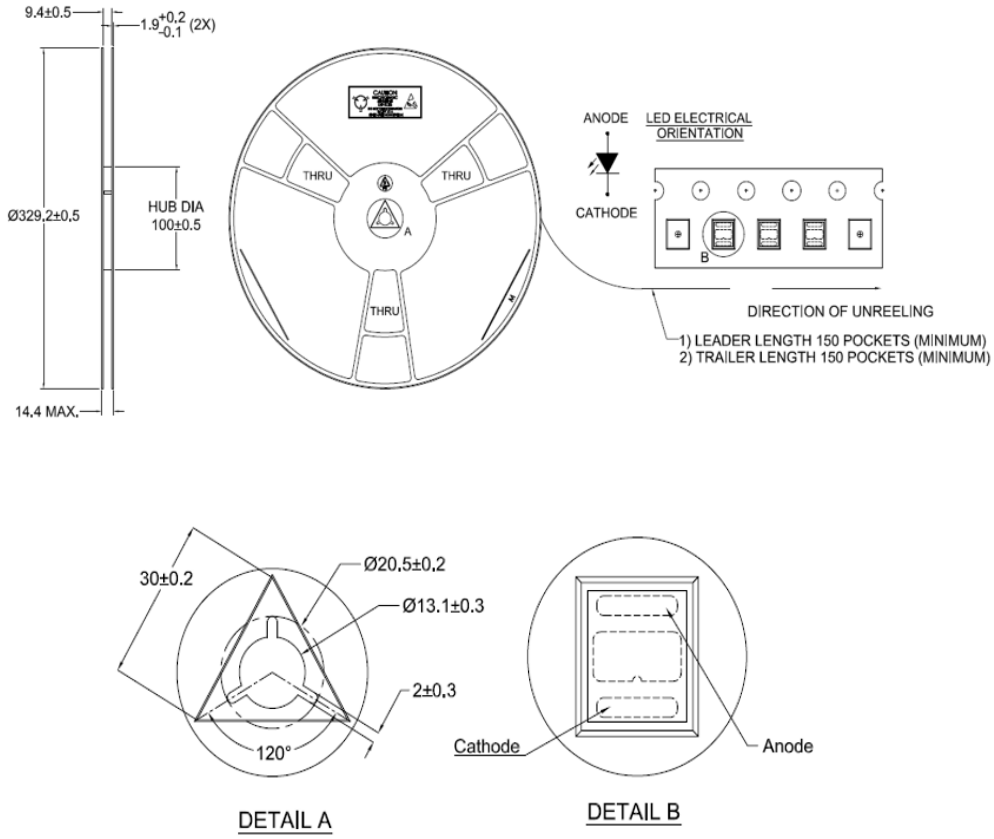


Figure 16. Reel dimensions for LUXEON CZ ES Color Line

Notes for Figure 16:
1. Drawings are not to scale.
2. All dimensions are in millimeters.
3. Maximum 1,000 pieces per reel.

About Lumileds

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To learn more about our lighting solutions, visit lumileds.com.

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