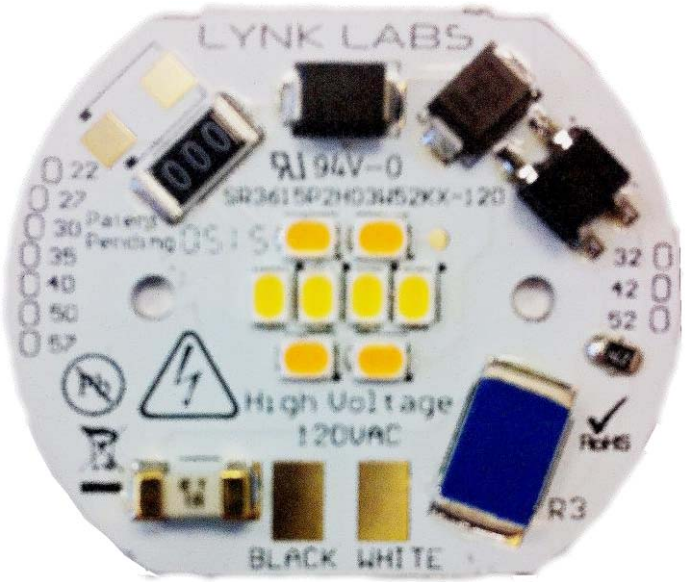
SnapBrite
SR36-15-03W-120
120V DIRECT CONECT - AC LED MODULE

36mm dia. 2.5 Watt 236lm 120V

SINGLE-CCT or WARM ON DIM

STANDARD OR LOW THD DIMABLE MODULE

Technical Data Sheet



RECOGNIZED COMPONENT
Intertek
RoHS 2002/95/EC

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Direct Connect AC LED lighting technology

SnapBrite™ SR36-15-3W-120

Description

SnapBrite high voltage AC LED modules are fast, easy and reliable LED light sources for lighting OEMs in need of LED solutions that offer direct AC line voltage connectivity.

Lynk's patented AC LED technology eliminates the requirement for an expensive, bulky and failure prone AC – DC power supply or driver. Delivering efficiency, reliability and a high power factor, SnapBrite modules can be used by lighting manufacturers in many types of fixture as an effective replacement for energy hungry incandescent or CFL lamps. Additionally, the modules will dim with many popular leading and trailing edge phase cut dimmers.

Unlike other AC LED light sources, these SnapBrite modules offer a very unique but optional Warm-On-Dim feature that can change CCT from cooler to warmer as the dimming level changes. This mimics the way a traditional light bulb or halogen lamp becomes warmer to look at as the light level reduces. WOD is a great feature for hospitality and residential applications.

Lynk Low THD Technology can provide under 20% ATHD and a power factor of better than 0.97 for applications demanding minimal EMC disturbance.

Look for the Lynk Labs name or this private label mark to ensure you are always backed by Lynk Labs high quality AC LED technology, IP, and reliability. Lynk Labs - Your AC LED Experts!

LLI ®

Features

- 120V Direct Connect - No Drivers/PSU's
- Lower Cost - Higher Reliability AC LED Module
- Dimmable
- Warm-On-Dim Option
- Work with most existing AC Dimmers
- High Efficiency
- High Power Factor >0.97
- Low THD <20%
- Significant Energy Savings
- Long Operating Life
- Reliable, Fast & Easy

Applications

- Puck
- Under cabinet
- Cove,
- Indoor/Outdoor General line voltage Illumination
- Ideal for commercial, hospitality and residential

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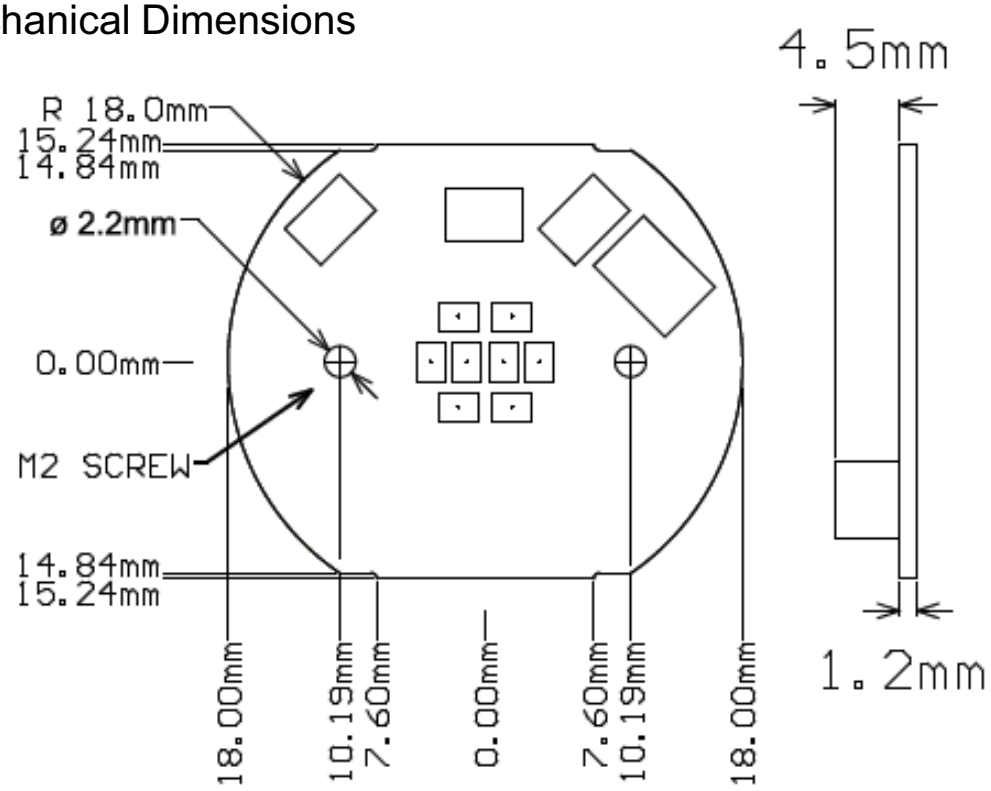
Contents:

3. Mechanical Dimensions



Notes： 1. All dimensions are in millimeters.

2. Tolerance is ±0.05mm unless otherwise noted.

RECOGNIZED COMPONENT Intertek RoHS 2002/95/EC

4. Electrical & Optical Characteristics

ITEM	SYMBOL	CONDITION	UNIT	S THD	L THD	WOD
Drive Voltage	Vf	line voltage	Vrms	120		
Viewing Angle	2θ½		deg	120		
Operating Temperature at test point	T_o (T_c)	If=25 mArms	℃	70		
Typical Operating Power	W_T	If=25 mArms	W	2.5	2.8	2.8
Total Harmonic Distortion	ATHD	Vf=120 Vrms	%	>38%	<20%	<20%
Luminous Flux (3000K CRI 80)	Φ	Vf=120 Vrms	lm	236	214	210
Luminous Efficacy (3000K)	η_v	Vf=120 Vrms	lm/w	94	76	75

*Measurement Uncertainty of the Luminous Flux: ± 10%
*Values given are for specified drive current at 25℃ case temperature

Standard Module Variants aTHD >20%

MODEL NUMBER	CCT	CRI	VAC	POWER	LUMEN	lm/W
SR3615P2H03W27KXS-120	2700K	80	120	2.5	231	92
SR3615P2H03W30KXS-120	3000K	80	120	2.5	236	94
SR3615P2H03W40KXS-120	4000K	80	120	2.5	253	101

Other CCTs & 90 CRI Option may be Available to Special Order

LOW THD Module Variants aTHD <20%

MODEL NUMBER	CCT	CRI	VAC	POWER	LUMEN	lm/W
SR3615P2H03WL27KXS-120	2700K	80	120	2.8	210	75
SR3615P2H03WL30KXS-120	3000K	80	120	2.8	214	76
SR3615P2H03WL40KXS-120	4000K	80	120	2.8	230	82

Other CCTs & 90 CRI Option may be Available to Special Order

Warm on Dim Variants aTHD <20%

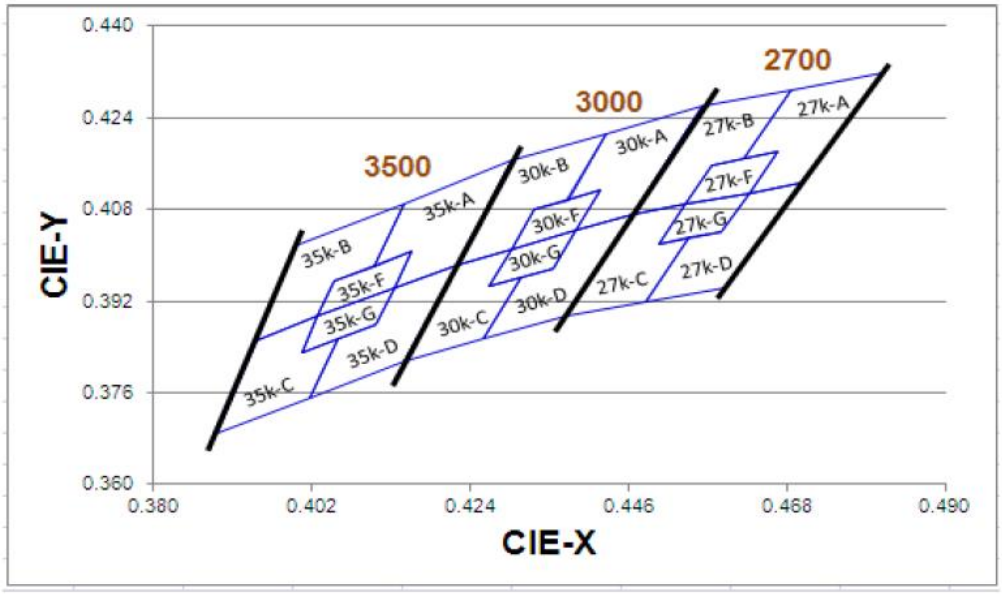
MODEL NUMBER	Min CCT	Max CCT	CRI	VAC	POWER	LUMEN (no dimmer)	lm/W
SR3615P2H03W42WDXS-120	2200K	2700K	80	120	2.8	210	74
SR3615P2H03W52WDXS-120	2200K	3000K	80	120	2.8	216	76

Other CCTs & 90 CRI Option may be Available to Special Order

5. Absolute Maximum Ratings (@ Ta=25°C)

ITEM	SYMBOL	ABSOLUTE MAXIMUM RATING	UNIT
Power Dissipation	Pd	3.5	W
A.C. Current	If	30	mArms
AC Voltage	Vf	130	V
Operatiing Temperature at Tc	Tc	-25 ~ +85	℃
Storage Temperature	Ts	-40 ~ +100	℃
Soldering Temperature(Hand)	Tsld	370	℃

6. CIE Chromaticity Coordinates



CCT	Bin Code	CIE x	CIE y	Bin Code	CIE x	CIE y
2700K	27K-A	0.4813	0.4319	27K-D	0.4700	0.4126
		0.4687	0.4289		0.4627	0.4109
		0.4621	0.4169		0.4588	0.4041
		0.4667	0.4180		0.4544	0.4030
		0.4627	0.4109		0.4483	0.3919
		0.4700	0.4126		0.4593	0.3944
	Reference Range:2580K~2700K					
	27K-B	0.4687	0.4289	27K-C	0.4465	0.4071
		0.4562	0.4260		0.4373	0.3893
		0.4465	0.4071		0.4483	0.3919
		0.4539	0.4088		0.4544	0.4030
		0.4576	0.4158		0.4502	0.4020
		0.4621	0.4169		0.4539	0.4088
	Reference Range:2700K~2870K					
	27K-F	0.4667	0.4180	27K-G	0.4627	0.4109
		0.4576	0.4158		0.4539	0.4088
		0.4539	0.4088		0.4502	0.4020
		0.4627	0.4109		0.4588	0.4041
	Reference Range: 2665K~2770K					

CCT	Bin Code	CIE x	CIE y	Bin Code	CIE x	CIE y
3000K	30K-A	0.4562	0.4260	30K-D	0.4465	0.4071
		0.4430	0.4212		0.4388	0.4043
		0.4375	0.4096		0.4355	0.3977
		0.4422	0.4113		0.4311	0.3962
		0.4388	0.4043		0.4259	0.3853
		0.4465	0.4071		0.4373	0.3893
	Reference Range:2870K~3000K					
	30K-B	0.4430	0.4212	30K-C	0.4221	0.3984
		0.4299	0.4165		0.4147	0.3814
		0.4221	0.3984		0.4259	0.3853
		0.4297	0.4011		0.4311	0.3962
		0.4328	0.4079		0.4267	0.3946
		0.4375	0.4096		0.4297	0.4011
	Reference Range:3000K~3220K					
	30K-F	0.4422	0.4113	30K-G	0.4388	0.4043
		0.4328	0.4079		0.4297	0.4011
		0.4297	0.4011		0.4267	0.3946
		0.4388	0.4043		0.4355	0.3977
	Reference Range:2960K~3080K					

CCT	Bin Code	CIE x	CIE y	Bin Code	CIE x	CIE y
3500K	35K-A	0.4299	0.4165	35K-D	0.4221	0.3984
		0.4148	0.4090		0.4134	0.3943
		0.4106	0.3981		0.4108	0.3878
		0.4159	0.4007		0.4057	0.3853
		0.4134	0.3943		0.4018	0.3752
		0.4221	0.3984		0.4147	0.3814
	Reference Range: 3220K~3500K					
	35K-B	0.4148	0.4090	35K-C	0.3943	0.3853
		0.3996	0.4015		0.3889	0.3690
		0.3943	0.3853		0.4018	0.3752
		0.4029	0.3893		0.4057	0.3853
		0.4051	0.3954		0.4006	0.3829
		0.4106	0.3981		0.4029	0.3893
	Reference Range: 3500K~3710K					
	35K-F	0.4159	0.4007	35K-G	0.4134	0.3943
		0.4051	0.3954		0.4029	0.3893
		0.4029	0.3893		0.4006	0.3829
		0.4134	0.3943		0.4108	0.3878
	Reference Range:3360K~3550K					

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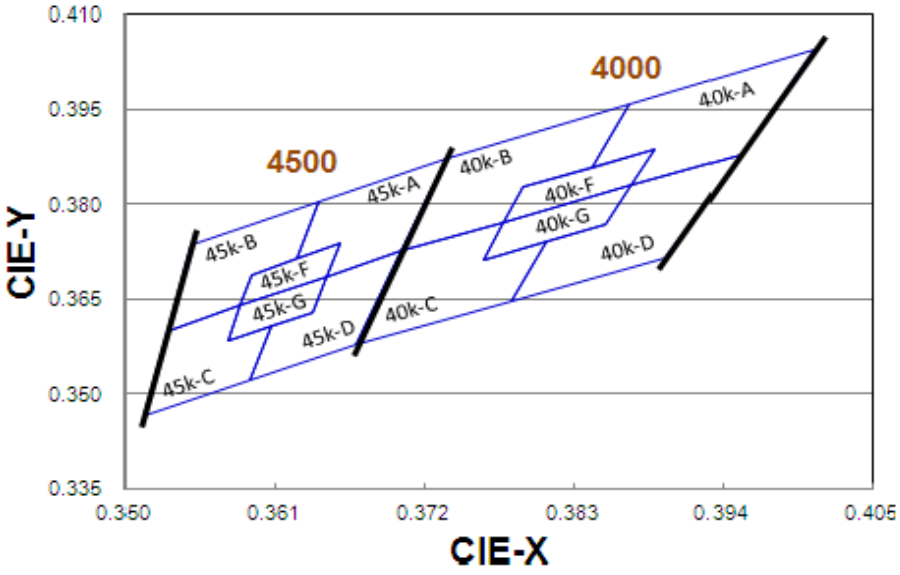
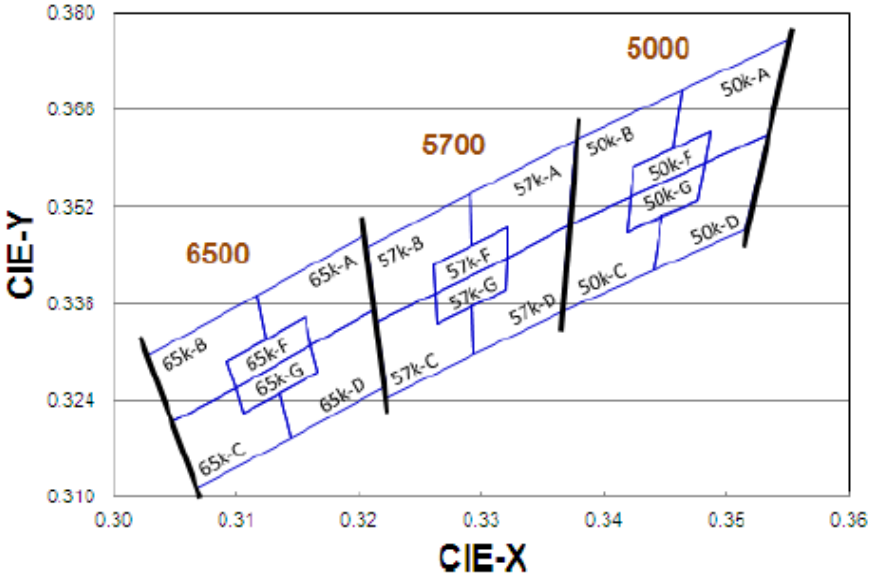


CCT	Bin Code	CIE x	CIE y	Bin Code	CIE x	CIE y
4000K	40K-A	0.4006	0.4044	40K-D	0.3952	0.3880
		0.3871	0.3959		0.3873	0.3831
		0.3843	0.3858		0.3854	0.3768
		0.3890	0.3887		0.3810	0.3741
		0.3873	0.3831		0.3784	0.3647
		0.3952	0.3880		0.3898	0.3716
	Reference Range:3700K~3970K					
	40K-B	0.3871	0.3959	40K-C	0.3703	0.3726
		0.3736	0.3874		0.3670	0.3578
		0.3703	0.3726		0.3784	0.3647
		0.3779	0.3773		0.3810	0.3741
		0.3793	0.3828		0.3764	0.3713
		0.3843	0.3858		0.3779	0.3773
	Reference Range:3970K~4270K					
	40K-F	0.3890	0.3887	40K-G	0.3873	0.3831
		0.3793	0.3828		0.3779	0.3773
		0.3779	0.3773		0.3764	0.3713
		0.3873	0.3831		0.3854	0.3768
	Reference Range:3870K~4080K					

CCT	Bin Code	CIE x	CIE y	Bin Code	CIE x	CIE y
4500K	45K-A	0.3736	0.3874	45K-D	0.3703	0.3726
		0.3642	0.3805		0.3648	0.3686
		0.3626	0.3714		0.3637	0.3630
		0.3658	0.3738		0.3607	0.3608
		0.3648	0.3686		0.3591	0.3522
		0.3703	0.3726		0.3670	0.3578
	Reference Range: 4260K~4500K					
	45K-B	0.3642	0.3805	45K-C	0.3530	0.3601
		0.3548	0.3736		0.3512	0.3465
		0.3530	0.3601		0.3591	0.3522
		0.3584	0.3640		0.3607	0.3608
		0.3592	0.3689		0.3575	0.3585
		0.3626	0.3714		0.3584	0.3640
	Reference Range: 4500K~4745K					
	45K-F	0.3658	0.3738	45K-G	0.3648	0.3686
		0.3592	0.3689		0.3584	0.3640
		0.3584	0.3640		0.3575	0.3585
		0.3648	0.3686		0.3637	0.3630
	Reference Range:4400K~4580K					



CCT	Bin Code	CIE x	CIE y	Bin Code	CIE x	CIE y
5000K	50K-A	0.3551	0.3760	50K-D	0.3533	0.3624
		0.3464	0.3688		0.3482	0.3583
		0.3456	0.3604		0.3477	0.3530
		0.3487	0.3629		0.3448	0.3507
		0.3482	0.3583		0.3441	0.3428
		0.3533	0.3624		0.3515	0.3487
	Reference Range:4745K~5000K					
	50K-B	0.3464	0.3688	50K-C	0.3371	0.3493
		0.3376	0.3616		0.3366	0.3369
		0.3371	0.3493		0.3441	0.3428
		0.3422	0.3533		0.3448	0.3507
		0.3425	0.3579		0.3418	0.3483
		0.3456	0.3604		0.3422	0.3533
	Reference Range:5000K~5310K					
	50K-F	0.3487	0.3629	50K-G	0.3482	0.3583
		0.3425	0.3579		0.3422	0.3533
		0.3422	0.3533		0.3418	0.3483
		0.3482	0.3583		0.3477	0.3530
	Reference Range:4910K~5120K					

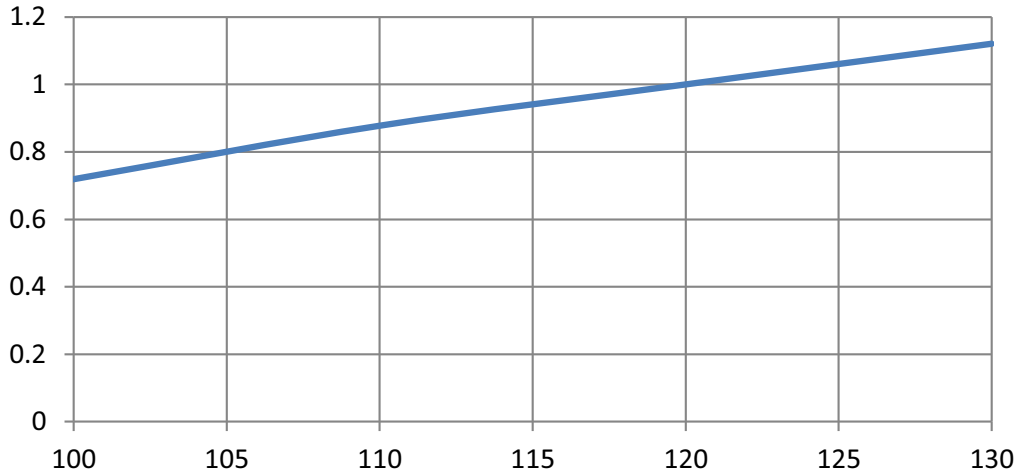
CCT	Bin Code	CIE x	CIE y	Bin Code	CIE x	CIE y
5700K	57K-A	0.3376	0.3616	57K-D	0.3371	0.3493
		0.3292	0.3539		0.3321	0.3447
		0.3292	0.3464		0.3320	0.3401
		0.3321	0.3490		0.3293	0.3377
		0.3321	0.3447		0.3294	0.3306
		0.3371	0.3493		0.3366	0.3369
	Reference Range:5310K~5700K					
	57K-B	0.3292	0.3539	57K-C	0.3215	0.3353
		0.3207	0.3462		0.3222	0.3243
		0.3215	0.3353		0.3294	0.3306
		0.3262	0.3395		0.3293	0.3377
		0.3261	0.3436		0.3263	0.335
		0.3292	0.3464		0.3262	0.3395
	Reference Range:5700K~6020K					
	57K-F	0.3321	0.3490	57K-G	0.3321	0.3447
		0.3261	0.3436		0.3262	0.3395
		0.3262	0.3395		0.3263	0.3350
		0.3321	0.3447		0.3320	0.3401
	Reference Range:5520K~5780K					

CCT	Bin Code	CIE x	CIE y	Bin Code	CIE x	CIE y
6500K	65K-A	0.3205	0.3481	65K-D	0.3213	0.3371
		0.3117	0.3393		0.3161	0.3320
		0.3125	0.3328		0.3166	0.3281
		0.3157	0.3360		0.3136	0.3251
		0.3161	0.3320		0.3145	0.3187
		0.3213	0.3371		0.3221	0.3261
	Reference Range:6020K~6500K					
	65K-B	0.3117	0.3393	65K-C	0.3048	0.3209
		0.3028	0.3304		0.3068	0.3113
		0.3048	0.3209		0.3145	0.3187
		0.3100	0.3259		0.3136	0.3251
		0.3093	0.3297		0.3106	0.3222
		0.3125	0.3328		0.31	0.3259
	Reference Range:6500K~7050K					
	65K-F	0.3157	0.3360	65K-G	0.3161	0.3320
		0.3093	0.3297		0.3100	0.3259
		0.3100	0.3259		0.3106	0.3222
		0.3161	0.3320		0.3166	0.3281
	Reference Range:6300K~6690K					

Note:
1. The value is based on driving current by 30mA.
2. Tolerance of Chromaticity Coordinates: ±0.01.

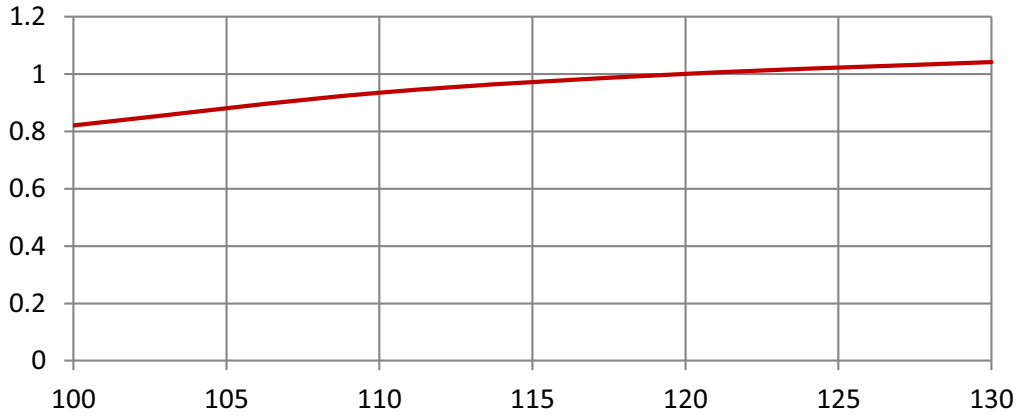
7. Typical Electrical & Optical Characteristic Curves

Relative Power vs Voltage

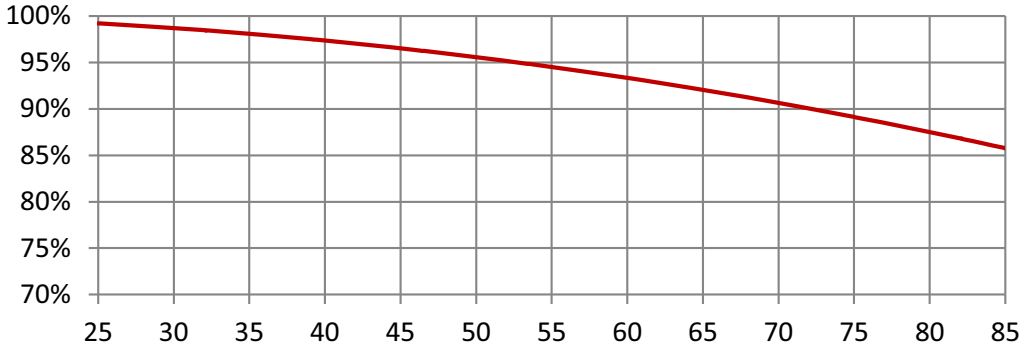


Ta=25˚C

Relative Luminous Flux vs. Voltage



Lumen Thermal de-rating curve



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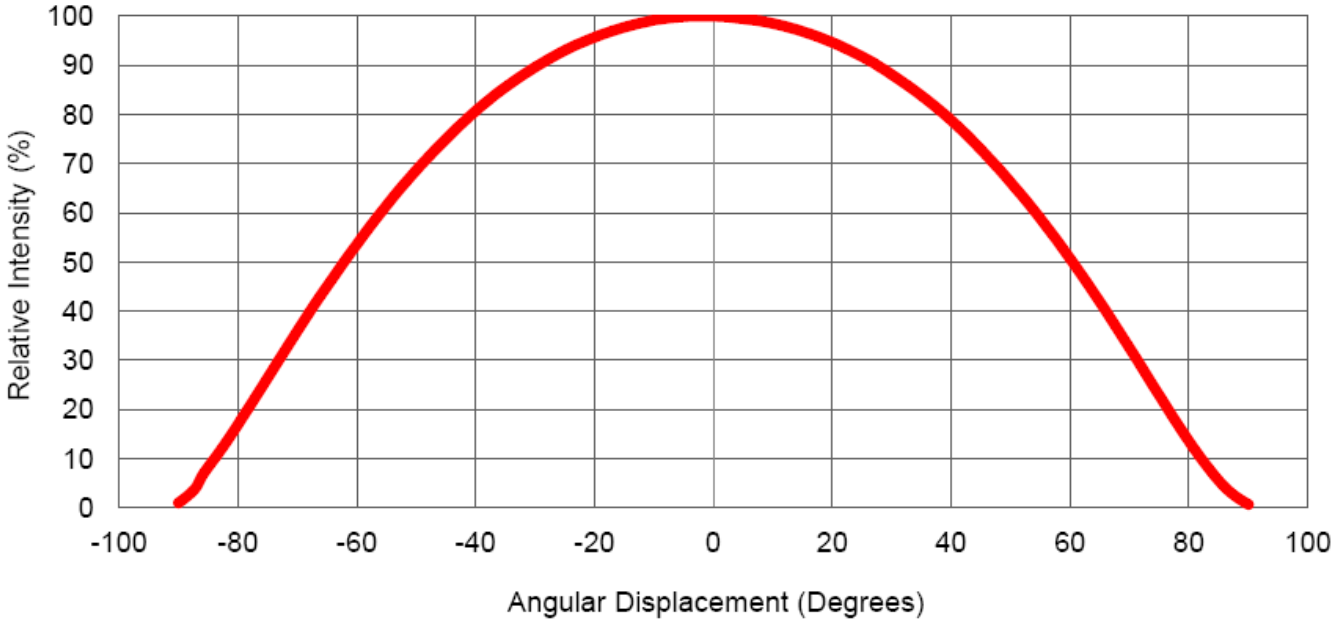
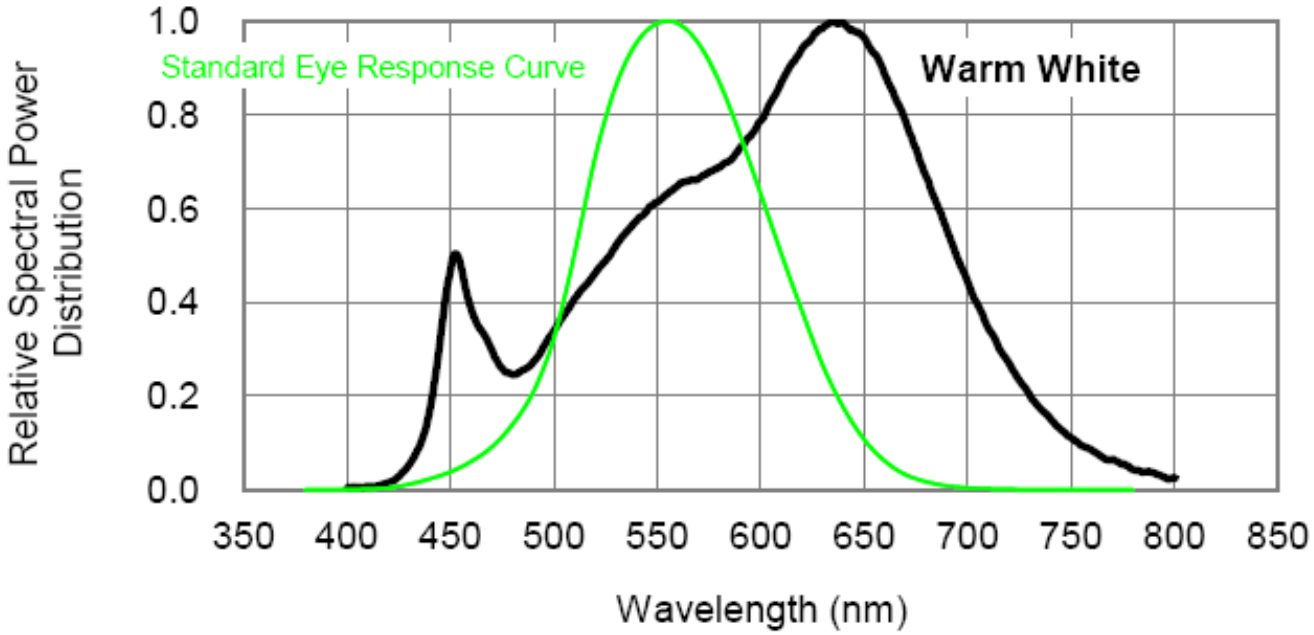
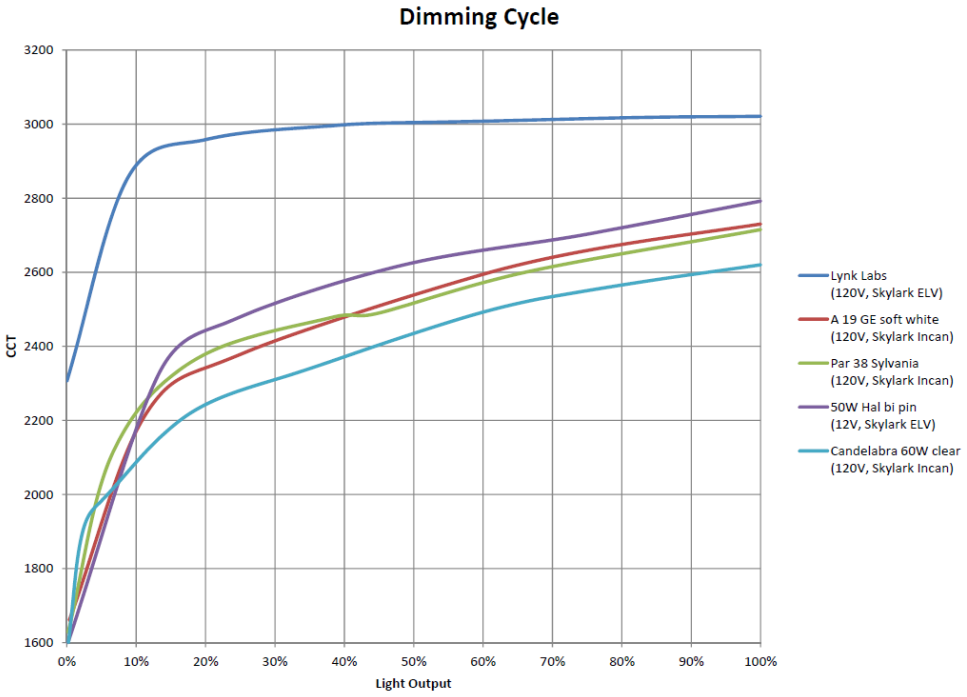
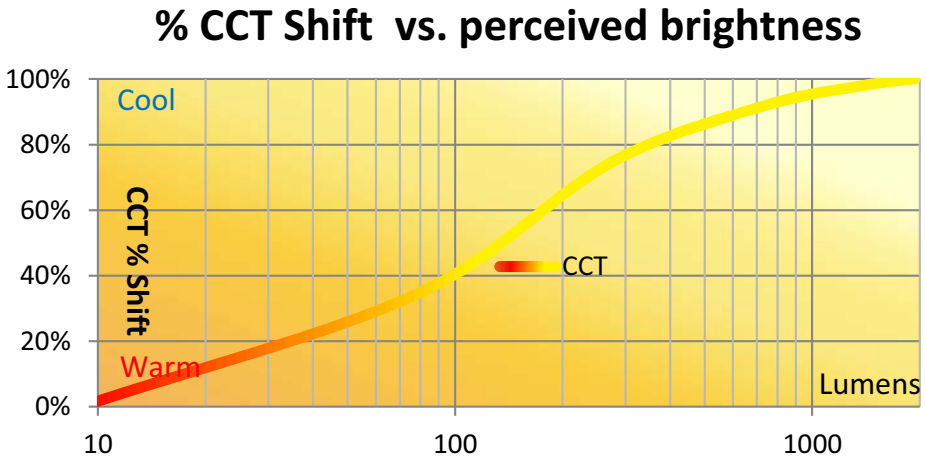
Lambertian Radiation Pattern





Warm on Dim


Dimming Cycle
CCT
3200
3000
2800
2600
2400
2200
2000
1800
1600
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Light Output
Lynk Labs (120V, Skylark ELV)
A 19 GE soft white (120V, Skylark Incan)
Par 38 Sylvania (120V, Skylark Incan)
50W Hal bi pin (12V, Skylark ELV)
Candelabra 60W clear (120V, Skylark Incan)


% CCT Shift vs. perceived brightness
100%
80%
60%
40%
20%
0%
Cool
CCT % Shift
Warm
CCT
Lumens
10
100
1000

8.Part Number Identification

04/08/2014

Part Number												
Product Code	Shape	Dimension/Diameter (mm)	Internal Codes	Module Power	aTHD	CCT (XXK) Warm on Dim (XYWD)	Connection Type	CRI		Input Voltage	Miscellaneous	Revision Level
S	R	3 6	1 5	P 2 H	0	3 W L	3 0 K	X	S	1 2 0 V	,	R1

Model Number												
Product Code	Shape	Dimension/Diameter	LED Indicator		Module Power	aTHD		CCT (XXK) Warm on Dim (XYWD)	Connection Type	CRI		Input Voltage	Miscellaneous
S	R	3 6	15		0 3 W	L		3 0 K	X	S		1 2 0 V	

Product Code		
S	=	SnapBrite™
T	=	Tesla™
G	=	GeoLite™
B	=	BriteDriver®

Shape		
R	=	Round
S	=	Square
T	=	Star
L	=	Linear

Dimension/Diameter				
L	=	X	X	X
W	=	Y	Y	Y
D	=	Z	Z	Z

Module Power		
Q	=	0.25W
H	=	0.5W
T	=	0.75W
R	=	Decimal Point

aTHD		
L	=	< 20%
S	=	≥ 20%

Miscellaneous
Customer Code
Special Design
Special Silk Scn
TBA

CCT/WOD					
2	2	K		=	2200K
2	7	K		=	2700K
3	0	K		=	3000K
3	5	K		=	3500K
4	0	K		=	4000K
5	0	K		=	5000K
5	7	K		=	5700K
3	2	W	D	=	~ 2700K To 2200K Warm on Dim
4	2	W	D	=	~ 3000K To 2200K Warm on Dim
5	2	W	D	=	~ 3500K To 2200K Warm on Dim

Connection Type		
C	=	Poke-In Connector
I	=	Insullation Displacement Connector
O	=	Connector + Solder Pads
W	=	Wire "Pigtail"
X	=	Solder Pads

CRI		
L	=	< 80 CRI
S	=	≥ 80 CRI
H	=	≥ 90 CRI

Revision Level
P1 to 9, Prelim
R1 to ∞, Rls
TBA

LED Indicator	
P	Prolite
E	EverLite
D	Interlight
C	Citizen
S	SemiLeds
N	Nichia
...	TBA

Input Voltage		
12V	=	12 VAC, Magnetic or Electronic Transformer Sourse
12E	=	12 VAC, Electronic Transformer Sourse Only
120V	=	120 VAC
120R	=	Rectified 120 VAC
230V	=	230 VAC

9.Packaging

LED Modules will be packaged in trays for primary protection.

According to the total delivery amount, cardboard boxes will be used to protect the Trays of LED Modules from mechanical shocks during transportation.

The boxes are not water resistant and therefore must be kept away from water and moisture.

10. Reliability and Average Lumen Maintenance

Before releasing new products the manufacturer puts a representative product sample set through an entire suite of qualification tests, including the most stressful test for high power LEDs, the Wet High-Temperature Operating Life (WHTOL) test at 85°C/85%RH for 1000 hours at the specified operating current.

LED lifetime has been extrapolated based on the accumulated operating and accelerated aging data. Based on this data, the manufacturer projects that the LED products will deliver, on average, 70% lumen maintenance at 50,000 hours of operation at the specified operating current, provided that the case temperature is maintained at or below 80°C.

11. Moisture Sensitivity

The module can operate for up to 1000hrs at 85 ˚C and 65% Relative Humidity.
It is not designed for operation in wet conditions without an additional conformal coating which must be approved and supplied by the manufacturer during the module build process or warrantee will be voided