



AB-GES-S04124WxxNN1

Features & Applications

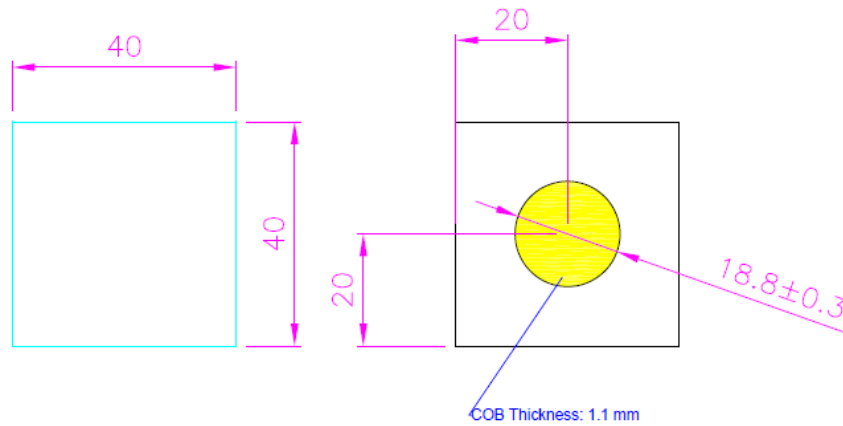
Features:

- 24W 40X40 mm square AC LED light engine
- SimpleDrive® - 120V AC drive technology
- Driver on COB structure
- Ceramic base DCOB
- Long life - No Electrolytic capacitors
- Easily to be integrated
- UL Compliance

Applications:

- Down light (reflector type)
- Down light (lens type)

Outline Dimensions



Units: mm

Notes:

1. No Terminal block
2. No Wire connection
3. Substrate is Ceramic base
4. Thickness of PCB is 1.0mm
5. Tolerance of dimension and thichness is ± 0.15 mm



Characteristics

■ Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
Input Voltage	V _{in}	130	Vac
LED Junction Temperature	T _J	115	°C
Storage Temperature	T _{stg}	-40 ~ 100 °C	°C
Operation Temperature	T _{opr}	-40 ~ 85 °C	°C

- Proper current rating must be observed to maintain junction temperature below maximum at all time. For this product, we suggest to keep the Temperature of TC point under 75°C, and the temperature of Top IC surface under 115°C. After passing the maximum temperature of IC, the rating current will be lower automatically for protecting the whole circuit.

■ Electrical Characteristics, Ta=25°C

Parameter	Symbol	Min.	Max.	Unit
Input Voltage	V _{in}	110	130	Vac
Input Frequency	Freq.	50/60		Hz
Power Factor	PF	0.9	0.95	-
Surge Protection*	Voltage		0.5	kV
Dielectrics strength	Voltage		1.5	kV

* This surge protection is without the protection device circuit.

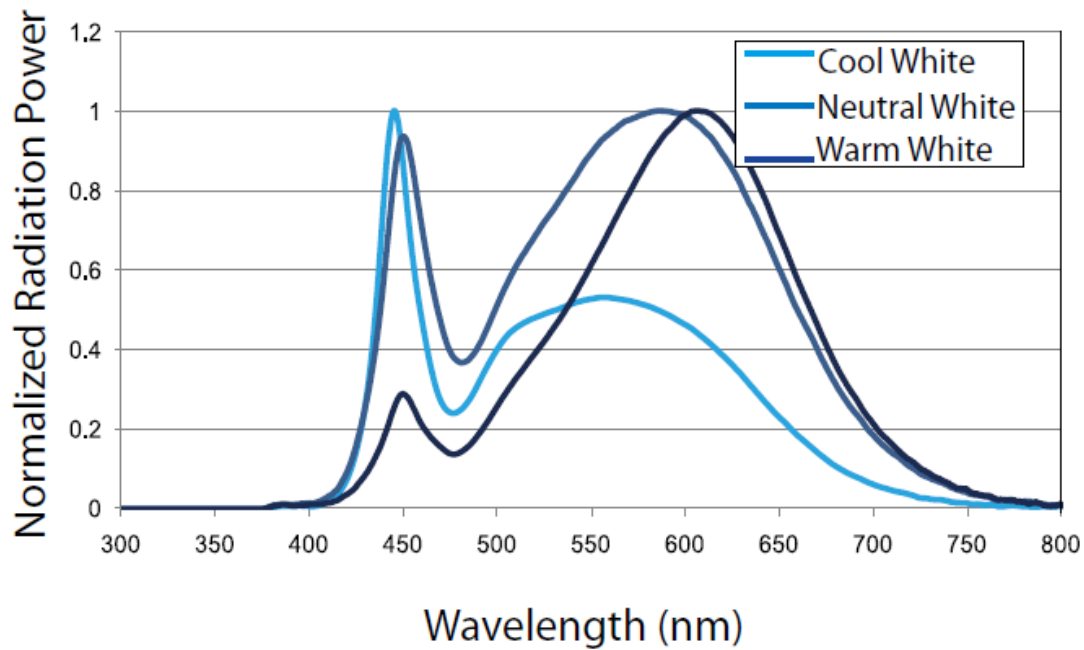
■ Optical Characteristics (V_{in}=120V), Ta=25°C

Model name	AC Power			Color Temp	Luminous Flux(lm)		CRI
	Min	Typ.	Max	(K)	Min	Typ	
AB-GES-S04124W30NN1	20.8	24.0	27.0	3000	1920	2100	>80
AB-GES-S04124W40NN1	20.8	24.0	27.0	4000	1920	2100	>80
AB-GES-S04124W50NN1	20.8	24.0	27.0	5000	1920	2100	>80

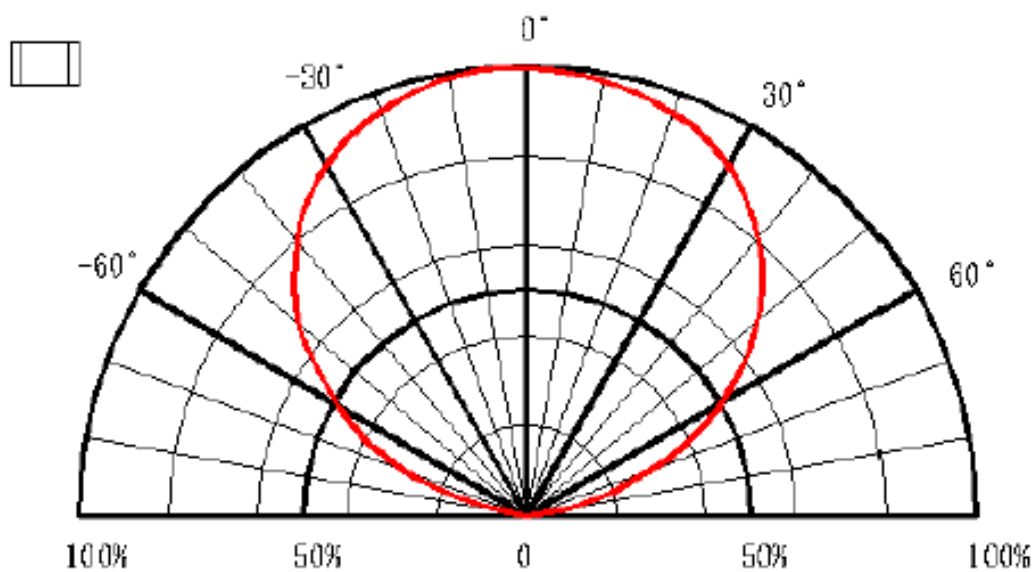
- Correlated color Temperature is derived from the CIE 1931Chromaticity diagram.
- The luminous flux tolerance is ± 10%.
- This CRI value tolerance is ± 2.
- Calibration accuracy of CIE_x and CIE_y : ±0.007 ;
- Calibration error CCT 3000K ±175K ; 4000K ±300K ; 6500K ±400K



■ **Relative Spectrum of Emission (Ta=25°C)**

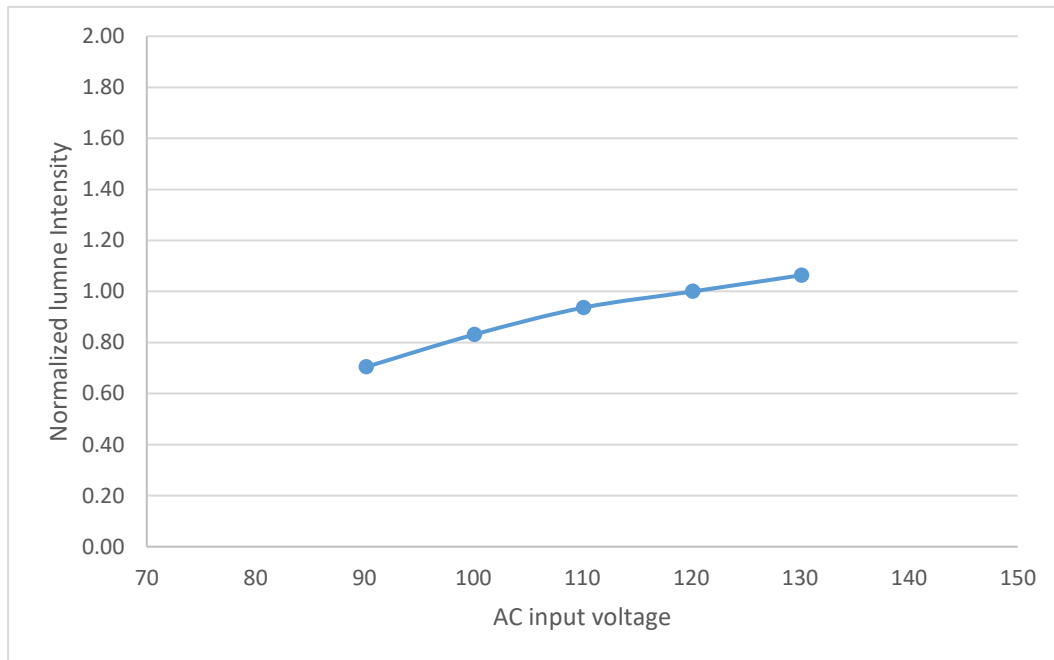


■ **Radiation Pattern**

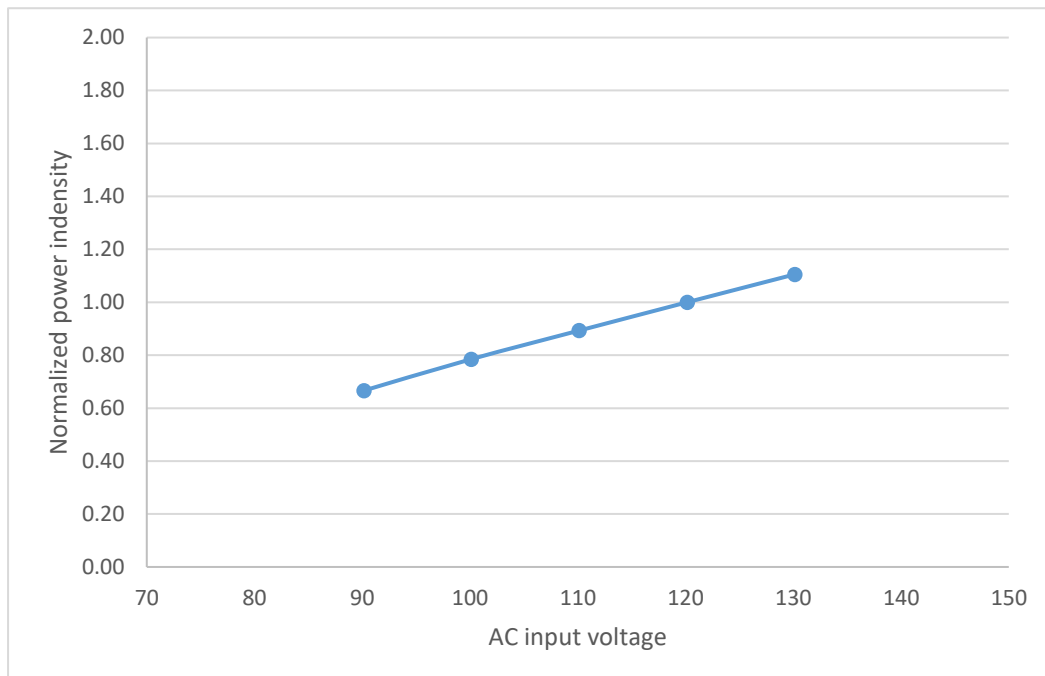




■ **Relative luminous vs. Input voltage (Ta=25°C)**

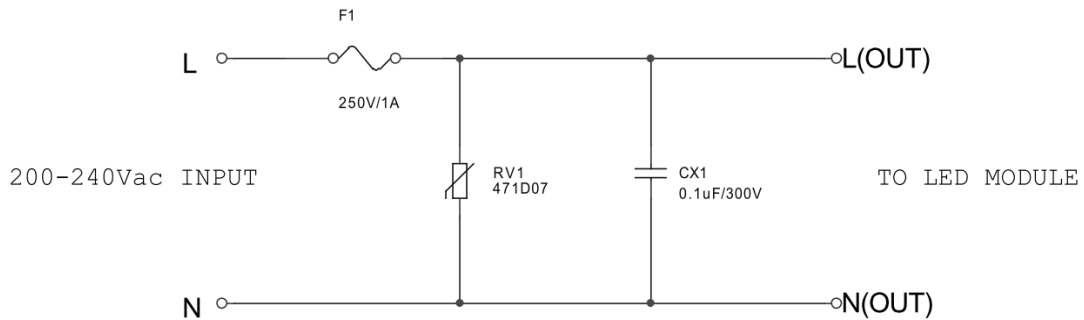


■ **Relative power distribution vs. Input voltage (Ta=25°C)**



Extra Protection Circuit

If there's the extra demand on the surge protection, we may suggest to add one extra circuit to connect to this module. The Surge protection rank can be increase to 1kV.



Based on the testing standard of IEC 60598 and IEC 61547, the module is less than 25W, so the criteria is 0.5kV.

Table 10 – Surges – Test levels at input a.c. power ports

Characteristics	Test levels		
	Device		
	Self-ballasted lamps and semi-luminaires	Luminaires and independent auxiliaries	
		Input power	
		≤25 W	>25 W
Wave-shape data	1,2/50 μs	1,2/50 μs	1,2/50 μs
Test levels			
line to line	±0,5 kV	±0,5 kV	±1,0 kV
line to ground	±1,0 kV	±1,0 kV	±2,0 kV
NOTE In addition to the specified test level, all lower test levels as detailed in IEC 61000-4-5 should also be satisfied.			



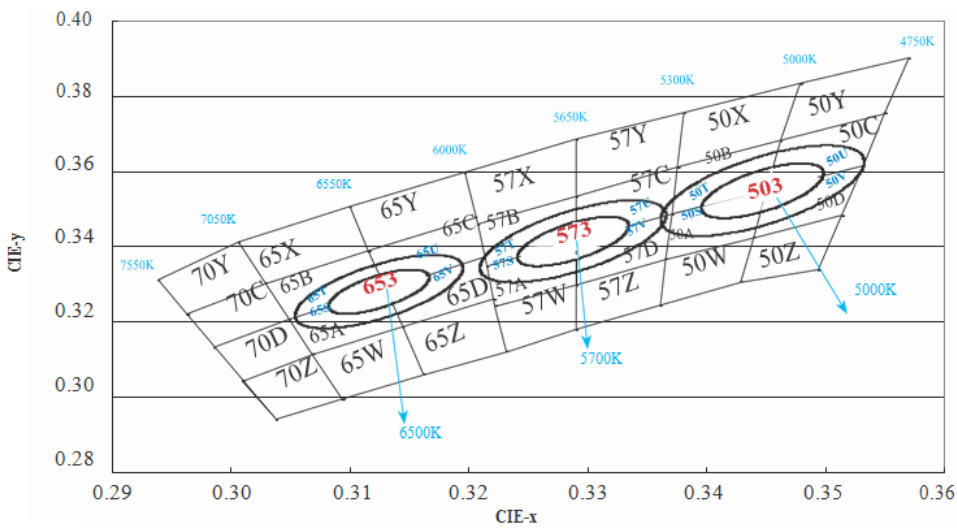
Color Bin Code

Color region stays within Macadam "3-Step" ellipse from the chromaticity center. The chromaticity center refers to ANSI C78.377:2008.

Please refer to ANSI C78.377 for the chromaticity center.

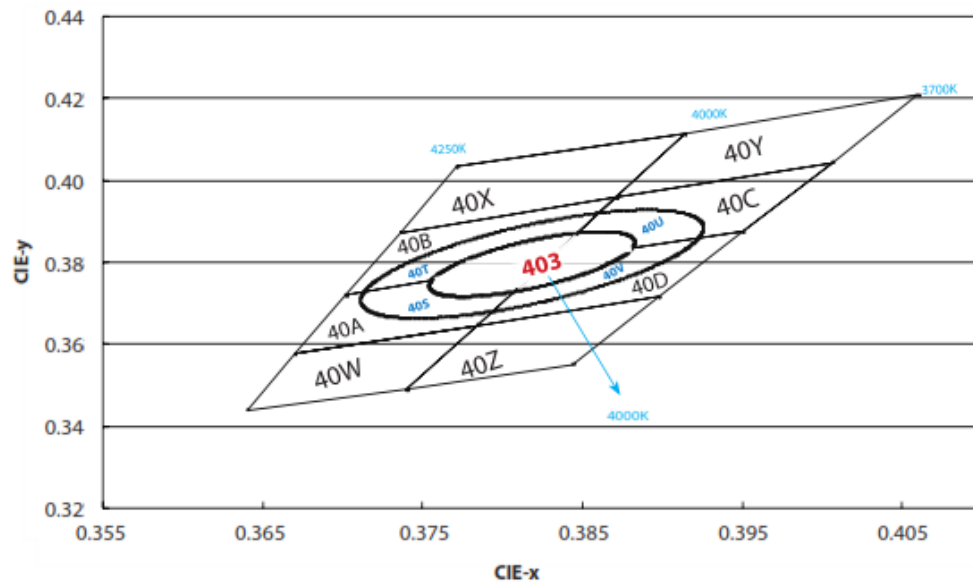
CCT	Steps	Cx	Cy	a	b	theta
2700K	3	0.4578	0.4101	0.00810	0.00420	53.70
3000K	3	0.4338	0.4030	0.00834	0.00408	53.22
3500K	3	0.4073	0.3917	0.00927	0.00414	54.00
4000K	3	0.3818	0.3797	0.00939	0.00402	53.72
5000K	3	0.3447	0.3553	0.00822	0.00354	59.62
5700K	3	0.3287	0.3417	0.00746	0.00320	59.09
6500K	3	0.3123	0.3282	0.00669	0.00285	58.57

Cool White





Neutral White



Warm White

