

Binning and Labeling

AX42XX

Description

The Acriche series of devices are designed for ease of implementation and readily connect to AC sources emitting very high flux while avoiding power losses associated with AC to regulated DC conversion.



Acriche is a long-lasting, environmentally friendly semiconductor light source that can be attached either directly to AC voltages, or as with the A4, to a simple diode bridge (see "Basic Connection" in this document).

Acriche's thermal management exceeds other power LED solutions incorporating state-of-the-art SMD technology, thermal path design, and materials.

Whether designing a spot light or tiled array the Acriche A4 is an ideal light source for general purpose illumination applications.

This application note provides binning and labeling information of A4 series. It includes the A4 bins for luminous flux, color coordinates and correlated color temperature for white.

Features

- Connect directly in AC power
- Power Saving
- Long Life Time
- Simple BOM
- Miniaturization
- Low thermal resistance
- SMT solderability
- Lead Free product
- RoHS compliant

Applications

- Architectural lighting
- Residential lighting
- Task lighting
- Decorative / Pathway lighting

Contents





- 1. Part number**
- 2. Code labeling**
- 3. Order code**


Part number

1. Part Number form : A X₁ X₂ X₃ X₄ X₅ - X₆X₇ - X₈X₉X₁₀X₁₁

X₁	Color	N	Warm white
X₂	Acriche series	4	A4 series
X₃	Lens type	2	Dome type
X₄	Voltage	0	100V,RMS (PCB)
		1	110V,RMS (PCB)
		2	220V,RMS (PCB)
		3	230V,RMS (PCB)
		4	50,55V,RMS (Emitter)
X₅	PCB type	0	Emitter
		1	4W Compact
		2	4W Square
		3	4W Line
		4	8W Bulb
X₆	-	-	Internal code
X₇	-	-	Internal code
X₈	Brightness bin	-	-
X₉	Color bin	-	-
X₁₀	Color bin	-	-
X₁₁	VF bin	-	-

2. Sticker Diagram on Reel & Aluminum Vinyl Bag

PART NO. : A X₁ X₂ X₃ X₄ X₅ - X₆ X₇

 QUANTITY : ###

 LOT NUMBER : #####

 BIN CODE : X₈ X₉ X₁₀ X₁₁




Code labeling

1. Luminous Flux Bins

· **Example**

BIN CODE : **R**F1C

└───┬───> Luminous Flux bin

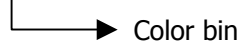
1-1 Bin structure for emitter

Bin code	Luminous Flux [lm]
R	41.5 ~ 54.0
S	54.0 ~ 70.0

2. Color Bins

• **Example**

BIN CODE : RF1C

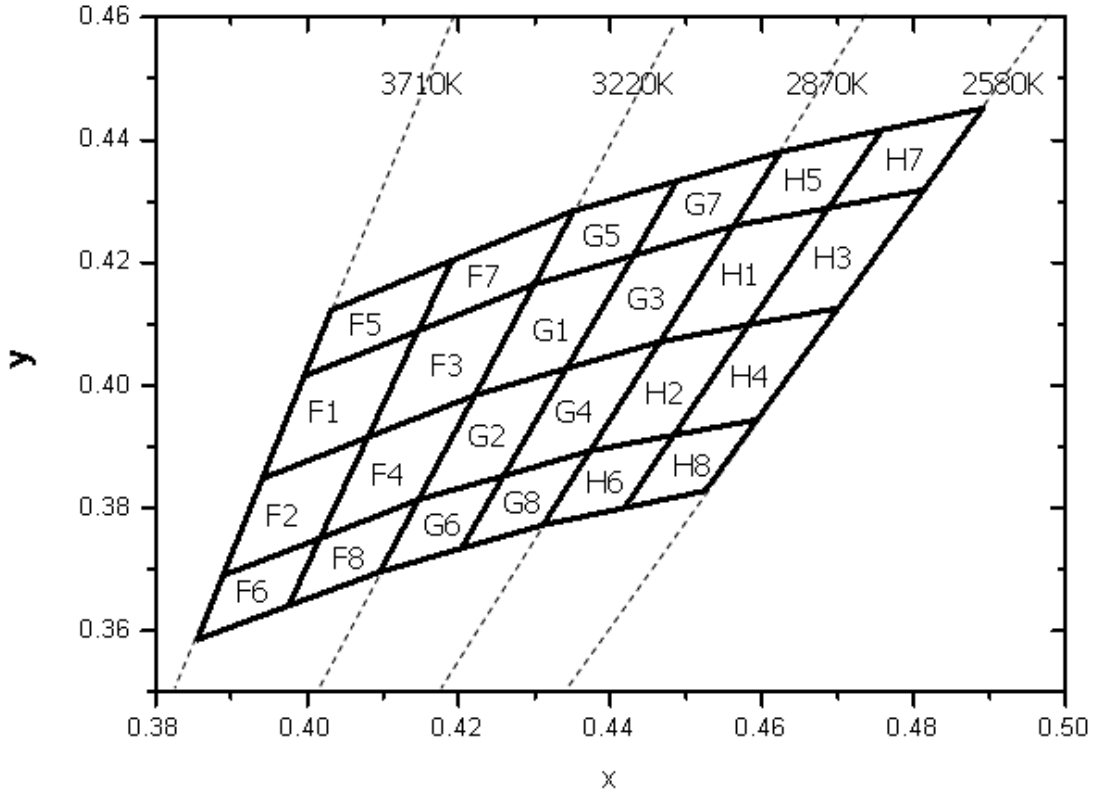


2-1 Bin structure for warm white

Bin	x	y	CCT(K)	Bin	x	y	CCT(K)
F1	0.3996	0.4015	3500	F5	0.4032	0.4123	3500
	0.3941	0.3848			0.3996	0.4015	
	0.408	0.3916			0.4146	0.4089	
	0.4146	0.4089			0.41915	0.4204	
F2	0.3941	0.3848	3500	F6	0.3889	0.369	3500
	0.3889	0.369			0.3855	0.3586	
	0.4017	0.3751			0.39755	0.3641	
	0.408	0.3916			0.4017	0.3751	
F3	0.4146	0.4089	3200	F7	0.41915	0.4204	3200
	0.408	0.3916			0.4146	0.4089	
	0.4221	0.3984			0.4299	0.4165	
	0.4299	0.4165			0.4351	0.4285	
F4	0.408	0.3916	3200	F8	0.4017	0.3751	3200
	0.4017	0.3751			0.39755	0.3641	
	0.4147	0.3814			0.4096	0.3696	
	0.4221	0.3984			0.4147	0.3814	
G1	0.4299	0.4165	3000	G5	0.4351	0.4285	3000
	0.4221	0.3984			0.4299	0.4165	
	0.4342	0.4028			0.443	0.4212	
	0.443	0.4212			0.44875	0.4333	
G2	0.4221	0.3984	3000	G6	0.4147	0.3814	3000
	0.4147	0.3814			0.4096	0.3696	
	0.4259	0.3853			0.42035	0.37345	
	0.4342	0.4028			0.4259	0.3853	

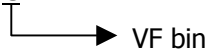
Bin	x	y	CCT(K)	Bin	x	y	CCT(K)
G3	0.443	0.4212	2900	G7	0.44875	0.4333	2900
	0.4342	0.4028			0.443	0.4212	
	0.4465	0.4071			0.4562	0.426	
	0.4562	0.426			0.4624	0.4381	
G4	0.4342	0.4028	2900	G8	0.4259	0.3853	2900
	0.4259	0.3853			0.42035	0.37345	
	0.4373	0.3893			0.4311	0.3773	
	0.4465	0.4071			0.4373	0.3893	
H1	0.4562	0.426	2700	H5	0.4624	0.4381	2700
	0.4465	0.4071			0.4562	0.426	
	0.4582	0.4099			0.4687	0.4289	
	0.4687	0.4289			0.47575	0.44165	
H2	0.4465	0.4071	2700	H6	0.4373	0.3893	2700
	0.4373	0.3893			0.4311	0.3773	
	0.4483	0.3919			0.4418	0.38005	
	0.4582	0.4099			0.4483	0.3919	
H3	0.4687	0.4289	2600	H7	0.47575	0.44165	2600
	0.4582	0.4099			0.4687	0.4289	
	0.47	0.4126			0.4813	0.4319	
	0.4813	0.4319			0.4891	0.4452	
H4	0.4582	0.4099	2600	H8	0.4483	0.3919	2600
	0.4483	0.3919			0.4418	0.38005	
	0.4593	0.3944			0.4525	0.3828	
	0.47	0.4126			0.4593	0.3944	

2-2 Warm white binning structure graphical representation



3. VF Bins

• **Example**

BIN CODE : RF1**C**


3-1 External resistor table

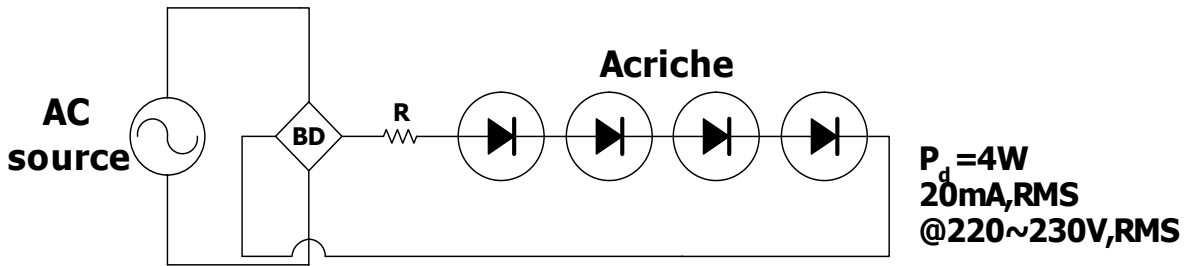
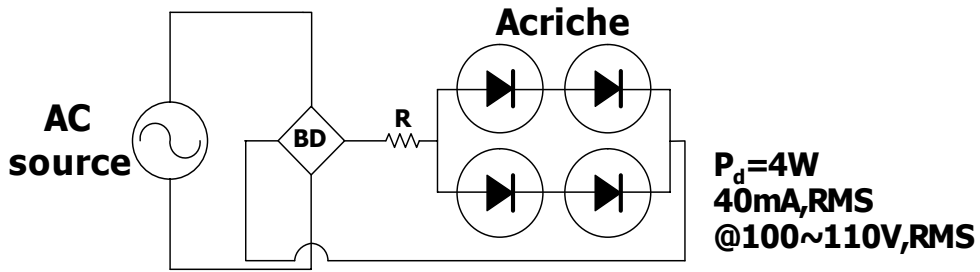
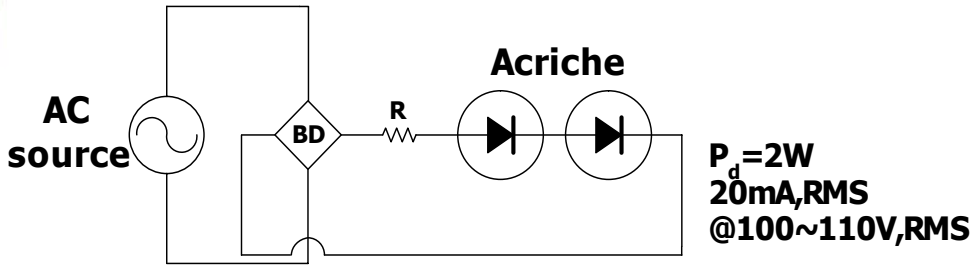
Operating voltage [V,RMS]	Power dissipation [W]	VF bins			
		A	B	C	D
100	2	800	770	740	700
	4	410	390	370	350
110	2	1270	1230	1180	1140
	4	640	610	590	570
220	4	2550	2460	2360	2270
230	4	3000	2920	2850	2770

Unit [ohm]

* Notes :

- [1] A4 series need bridge diode and external resistor.
- [2] The tolerance of current is $\pm 5\%$ on each resistance rank.

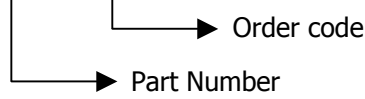
3-2 Basic connections of AX42X0 for AC source



Oder code

A4 series has an order code, use it as follows to purchase.

· **Example : AN4240 - 1A**



1. Emitter type

Standard Order Codes for warm white				
Order code	L/F bin	CC bin	VF bin	Bin codes
Part Number - 1A	R	F1	A	RF1A ~ RF1D
		F2	B	RF2A ~ RF2D
		F3	C	RF3A ~ RF3D
		F4	D	RF4A ~ RF4D
	S	F1	A	SF1A ~ SF1D
		F2	B	SF2A ~ SF2D
		F3	C	SF3A ~ SF3D
		F4	D	SF4A ~ SF4D
Part Number - 1B	R	F3	A	RF3A ~ RF3D
		F4	B	RF4A ~ RF4D
		G1	C	RG1A ~ RG1D
		G2	D	RG2A ~ RG2D
	S	F3	A	SF3A ~ SF3D
		F4	B	SF4A ~ SF4D
		G1	C	SG1A ~ SG1D
		G2	D	SG2A ~ SG2D
Part Number - 1C	R	G1	A	RG1A ~ RG1D
		G2	B	RG2A ~ RG2D
		G3	C	RG3A ~ RG3D
		G4	D	RG4A ~ RG4D
	S	G1	A	SG1A ~ SG1D
		G2	B	SG2A ~ SG2D
		G3	C	SG3A ~ SG3D
		G4	D	SG4A ~ SG4D

Standard Order Codes for warm white				
Order code	L/F bin	CC bin	VF bin	Bin codes
Part Number – 1D	R	G3	A	RG3A ~ RG3D
		G4	B	RG4A ~ RG4D
		H1	C	RH1A ~ RH1D
		H2	D	RH2A ~ RH2D
	S	G3	A	SG3A ~ SG3D
		G4	B	SG4A ~ SG4D
		H1	C	SH1A ~ SH1D
		H2	D	SH2A ~ SH2D
Part Number – 1E	R	H1	A	RH1A ~ RH1D
		H2	B	RH2A ~ RH2D
		H3	C	RH3A ~ RH3D
		H4	D	RH4A ~ RH4D
	S	H1	A	SH1A ~ SH1D
		H2	B	SH2A ~ SH2D
		H3	C	SH3A ~ SH3D
		H4	D	SH4A ~ SH4D
Part Number – 2A	R	F1	A	RF1A ~ RF1D
		F3	B	RF3A ~ RF3D
		F5	C	RF5A ~ RF5D
		F7	D	RF7A ~ RF7D
	S	F1	A	SF1A ~ SF1D
		F3	B	SF3A ~ SF3D
		F5	C	SF5A ~ SF5D
		F7	D	SF7A ~ SF7D
Part Number – 2B	R	F3	A	RF3A ~ RF3D
		F7	B	RF7A ~ RF7D
		G1	C	RG1A ~ RG1D
		G5	D	RG5A ~ RG5D
	S	F3	A	SF3A ~ SF3D
		F7	B	SF7A ~ SF7D
		G1	C	SG1A ~ SG1D
		G5	D	SG5A ~ SG5D

Standard Order Codes for warm white				
Order code	L/F bin	CC bin	VF bin	Bin codes
Part Number – 2C	R	G1	A	RG1A ~ RG1D
		G3	B	RG3A ~ RG3D
		G5	C	RG5A ~ RG5D
		G7	D	RG7A ~ RG7D
	S	G1	A	SG1A ~ SG1D
		G3	B	SG3A ~ SG3D
		G5	C	SG5A ~ SG5D
		G7	D	SG7A ~ SG7D
Part Number – 2D	R	G3	A	RG3A ~ RG3D
		G7	B	RG7A ~ RG7D
		H1	C	RH1A ~ RH1D
		H5	D	RH5A ~ RH5D
	S	G3	A	SG3A ~ SG3D
		G7	B	SG7A ~ SG7D
		H1	C	SH1A ~ SH1D
		H5	D	SH5A ~ SH5D
Part Number – 2E	R	H1	A	RH1A ~ RH1D
		H3	B	RH3A ~ RH3D
		H5	C	RH5A ~ RH5D
		H7	D	RH7A ~ RH7D
	S	H1	A	SH1A ~ SH1D
		H3	B	SH3A ~ SH3D
		H5	C	SH5A ~ SH5D
		H7	D	SH7A ~ SH7D
Part Number – 3A	R	F2	A	RF2A ~ RF2D
		F4	B	RF4A ~ RF4D
		F6	C	RF6A ~ RF6D
		F8	D	RF8A ~ RF8D
	S	F2	A	SF2A ~ SF2D
		F4	B	SF4A ~ SF4D
		F6	C	SF6A ~ SF6D
		F8	D	SF8A ~ SF8D

Standard Order Codes for warm white				
Order code	L/F bin	CC bin	VF bin	Bin codes
Part Number – 3B	R	F4	A	RF4A ~ RF4D
		F8	B	RF8A ~ RF8D
		G2	C	RG2A ~ RG2D
		G6	D	RG6A ~ RG6D
	S	F4	A	SF4A ~ SF4D
		F8	B	SF8A ~ SF8D
		G2	C	SG2A ~ SG2D
		G6	D	SG6A ~ SG6D
Part Number – 3C	R	G2	A	RG2A ~ RG2D
		G4	B	RG4A ~ RG4D
		G6	C	RG6A ~ RG6D
		G8	D	RG8A ~ RG8D
	S	G2	A	SG2A ~ SG2D
		G4	B	SG4A ~ SG4D
		G6	C	SG6A ~ SG6D
		G8	D	SG8A ~ SG8D
Part Number – 3D	R	G4	A	RG4A ~ RG4D
		G8	B	RG8A ~ RG8D
		H2	C	RH2A ~ RH2D
		H6	D	RH6A ~ RH6D
	S	G4	A	SG4A ~ SG4D
		G8	B	SG8A ~ SG8D
		H2	C	SH2A ~ SH2D
		H6	D	SH6A ~ SH6D
Part Number – 3E	R	H2	A	RH2A ~ RH2D
		H4	B	RH4A ~ RH4D
		H6	C	RH6A ~ RH6D
		H8	D	RH8A ~ RH8D
	S	H2	A	SH2A ~ SH2D
		H4	B	SH4A ~ SH4D
		H6	C	SH6A ~ SH6D
		H8	D	SH8A ~ SH8D