

## Acriche Series

# Binning and Labeling

Acriche series is designed for AC source operation and high flux output applications.

Acriche is a semi-permanent and environmental Friendly semiconductor lighting that can be used in AC without additional device.

Acriche's thermal management perform exceeds other power LED solutions.

It incorporates state of the art SMD design and Thermal emission material.

Acriche is ideal light sources for general illumination Applications.

This application note provides binning and labeling information of Acriche series.

It includes the Acriche bins for luminous flux, wavelength (or x,y coordinates), correlated color temperature (CCT) for white.



## Acriche

### Features

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

### Applications

- Architectural lighting
- Task lighting
- Decorative / Pathway lighting
- Household appliances

## Full Code of Acriche Series

Full code form : AX<sub>1</sub>X<sub>2</sub>X<sub>3</sub>X<sub>4</sub>X<sub>5</sub> - X<sub>6</sub>X<sub>7</sub> - X<sub>8</sub>X<sub>9</sub>X<sub>10</sub>X<sub>11</sub>X<sub>12</sub>

### 1. Part Number

- A : Acriche
- X<sub>1</sub> : Color
- X<sub>2</sub> : Acriche series number
- X<sub>3</sub> : LENS type
- X<sub>4</sub> : Operating voltage
- X<sub>5</sub> : Type of PCB


### 2. Internal Number


- X<sub>6</sub>
- X<sub>7</sub>


### 3. Code Labeling


- X<sub>8</sub> : Luminous flux (or Radiant flux for royal blue)
- X<sub>9</sub>X<sub>10</sub>X<sub>11</sub> : Dominant wavelength (or x,y coordinates rank code)
- X<sub>12</sub> : Operating voltage in 110V (emitter only)


### 4. Sticker Diagram on Reel & Aluminum Vinyl Bag

PART NO. : AX<sub>1</sub>X<sub>2</sub>X<sub>3</sub>X<sub>4</sub>X<sub>5</sub> - X<sub>6</sub>X<sub>7</sub>  


QUANTITY : ###  


LOT NUMBER : #####  


BIN CODE : X<sub>8</sub>X<sub>9</sub>X<sub>10</sub>X<sub>11</sub>X<sub>12</sub>  




## Part number of Acriche Series

Part Number form : A X<sub>1</sub> X<sub>2</sub> X<sub>3</sub> X<sub>4</sub> X<sub>5</sub>

### 1. Part Number

- A : Acriche
- X<sub>1</sub>: Color
- X<sub>2</sub> : Acriche series number
- X<sub>3</sub> : LENS type
- X<sub>4</sub> : Operating Voltage
- X<sub>5</sub> : Type of PCB

X <sub>1</sub>	Color
W	Pure White
N	Warm White

X <sub>2</sub>	Acriche Series
2	A2
3	A3

X <sub>3</sub>	LENS Type
2	Dome Type

X <sub>4</sub>	Operating Voltage [V]
0	100
1	110
2	220
3	230

X <sub>5</sub>	PCB Type
0	Emitter only
1	A3 PCB type
4	A2 PCB type

## 2. Part Number of A2 products

Part Number	Color	Operating Voltage [V]	Type
AW2200/AN2200	Pure White/Warm white	100V/110V	Emitter
AW2204/AN2204	Pure White/Warm white	100V	PCB
AW2214/AN2214	Pure White/Warm white	110V	PCB

## 3. Part Number of A3 products

Part Number	Color	Operating Voltage [V]	Type
AW3200/AN3200	Pure White/Warm white	100V/110V	Emitter
AW3201/AN3201	Pure White/Warm white	100V	PCB
AW3211/AN3211	Pure White/Warm white	110V	PCB
AW3220/AN3220	Pure White/Warm white	220V/230V	Emitter
AW3221/AN3221	Pure White/Warm white	220V	PCB
AW3231/AN3231	Pure White/Warm white	230V	PCB

## Code Labeling

### 1. Luminous Flux Bins

- Luminous flux bin structure for pure white, warm white

Bin Code		Luminous Flux [lm]
S		54.0 ~ 70.0
T		70.0 ~ 91.0
U		91.0 ~ 118.5
V	V1	118.5 ~ 136.0
	V2	136.0 ~ 154.0
W	W1	154.0 ~ 177.0
	W2	177.0 ~ 200.0
X	X1	200.0 ~ 230.0
	X2	230.0 ~ 260.0
Y		260.0 ~ 340.0
Z		340.0 ~ 440.0

The list explains the photometric luminous flux bins for Acriche series. Acriche series are tested and binned by photometric luminous flux. Not all bins are available in all colors.

Tolerance :  $\pm 10\%$  of Luminous flux value

## 2. Pure White CIE

Pure white product tested and binned by x,y coordinates and CCT

- Pure white bin structure

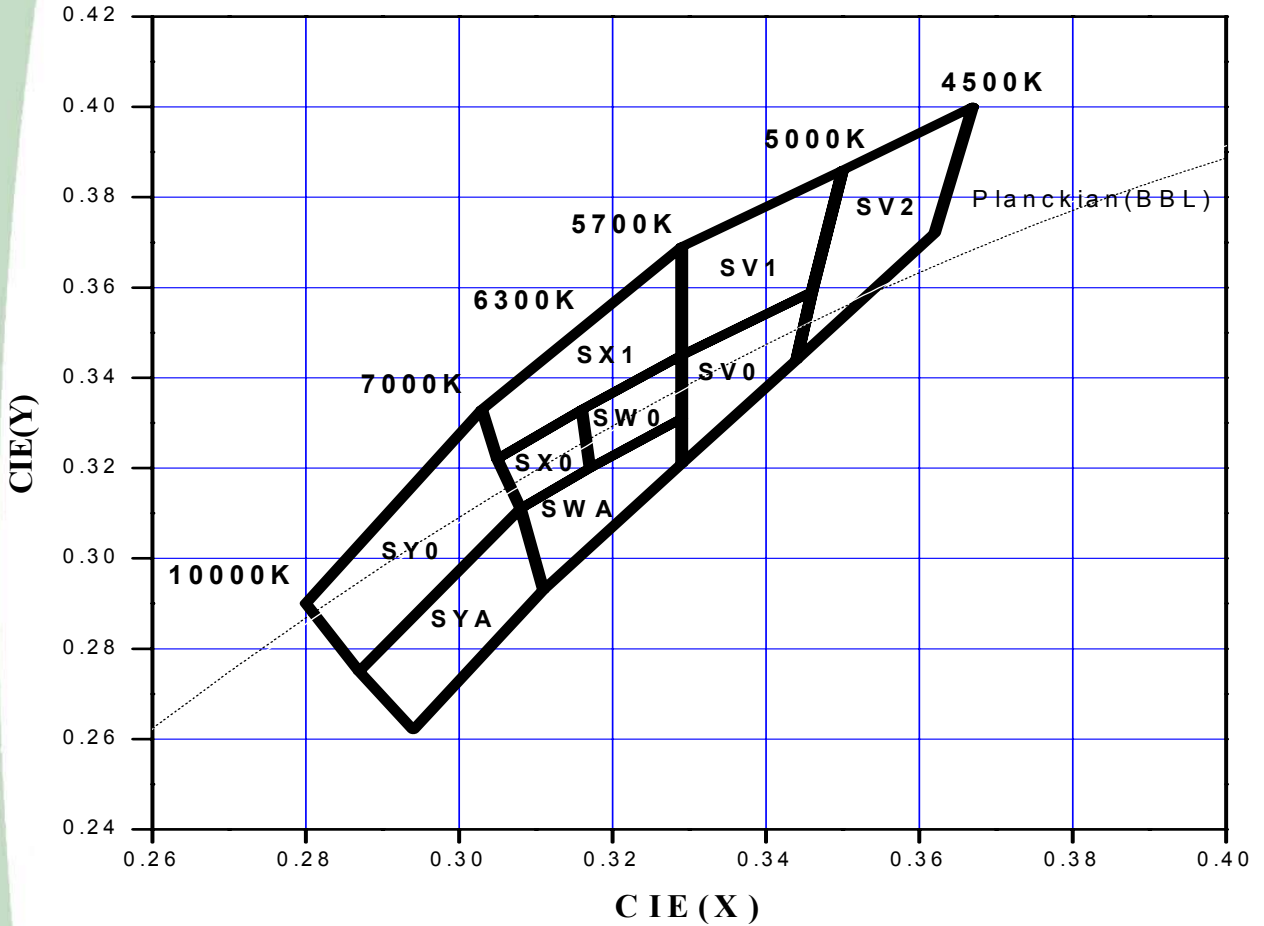
Bin	CHR_X	CHR_Y	CCT(K)	Bin	CHR_X	CHR_Y	CCT(K)
SX0	0.316	0.333	6700	SYA	0.308	0.311	8000
	0.305	0.322			0.287	0.275	
	0.308	0.311			0.294	0.262	
	0.317	0.320			0.311	0.293	
SW0	0.329	0.345	6050	SV0	0.346	0.359	5350
	0.316	0.333			0.329	0.345	
	0.317	0.320			0.329	0.321	
	0.329	0.331			0.344	0.344	
SX1	0.329	0.369	6300	SV1	0.350	0.386	5350
	0.303	0.333			0.329	0.369	
	0.305	0.322			0.329	0.345	
	0.316	0.333			0.346	0.359	
	0.329	0.345			-	-	
SWA	0.329	0.331	6300	SV2	0.367	0.400	4800
	0.317	0.320			0.350	0.386	
	0.308	0.311			0.346	0.359	
	0.311	0.293			0.344	0.344	
	0.329	0.321			0.362	0.372	
SY0	0.303	0.333	8000				
	0.280	0.290					
	0.287	0.275					
	0.308	0.311					
	0.305	0.322					

Tolerance

Color coordinate :  $\pm 0.005$

CCT :  $\pm 5\%$  of value

- Pure white binning structure graphical representation



### 3. Warm White CIE

Warm white product tested and binned by x,y coordinates and CCT

- Warm white bin structure

Bin	CHR_X	CHR_Y	CCT(K)	Bin	CHR_X	CHR_Y	CCT(K)
SL1	0.435	0.429	3375	SJ1	0.466	0.440	2950
	0.417	0.420			0.450	0.436	
	0.411	0.405			0.441	0.419	
	0.427	0.413			0.457	0.423	
SL0	0.427	0.413	3375	SJ0	0.457	0.423	2950
	0.411	0.405			0.441	0.419	
	0.405	0.390			0.433	0.403	
	0.420	0.398			0.449	0.408	
SLA	0.420	0.398	3375	SJA	0.449	0.408	2950
	0.405	0.390			0.433	0.403	
	0.399	0.375			0.426	0.388	
	0.412	0.381			0.440	0.392	
SLB	0.412	0.381	3375	SJB	0.440	0.392	2950
	0.399	0.375			0.426	0.388	
	0.395	0.365			0.42	0.375	
	0.407	0.37			0.432	0.378	
SK1	0.450	0.436	3150	SH1	0.482	0.444	2750
	0.435	0.429			0.466	0.440	
	0.427	0.413			0.457	0.423	
	0.441	0.419			0.472	0.426	
SK0	0.441	0.419	3150	SH0	0.472	0.426	2750
	0.427	0.413			0.457	0.423	
	0.420	0.398			0.449	0.408	
	0.433	0.403			0.464	0.412	
SKA	0.433	0.403	3150	SHA	0.464	0.412	2750
	0.420	0.398			0.449	0.408	
	0.412	0.381			0.440	0.392	
	0.426	0.388			0.454	0.395	
SKB	0.426	0.388	3150	SHB	0.454	0.395	2750
	0.412	0.381			0.440	0.392	
	0.407	0.370			0.432	0.378	
	0.420	0.375			0.446	0.381	

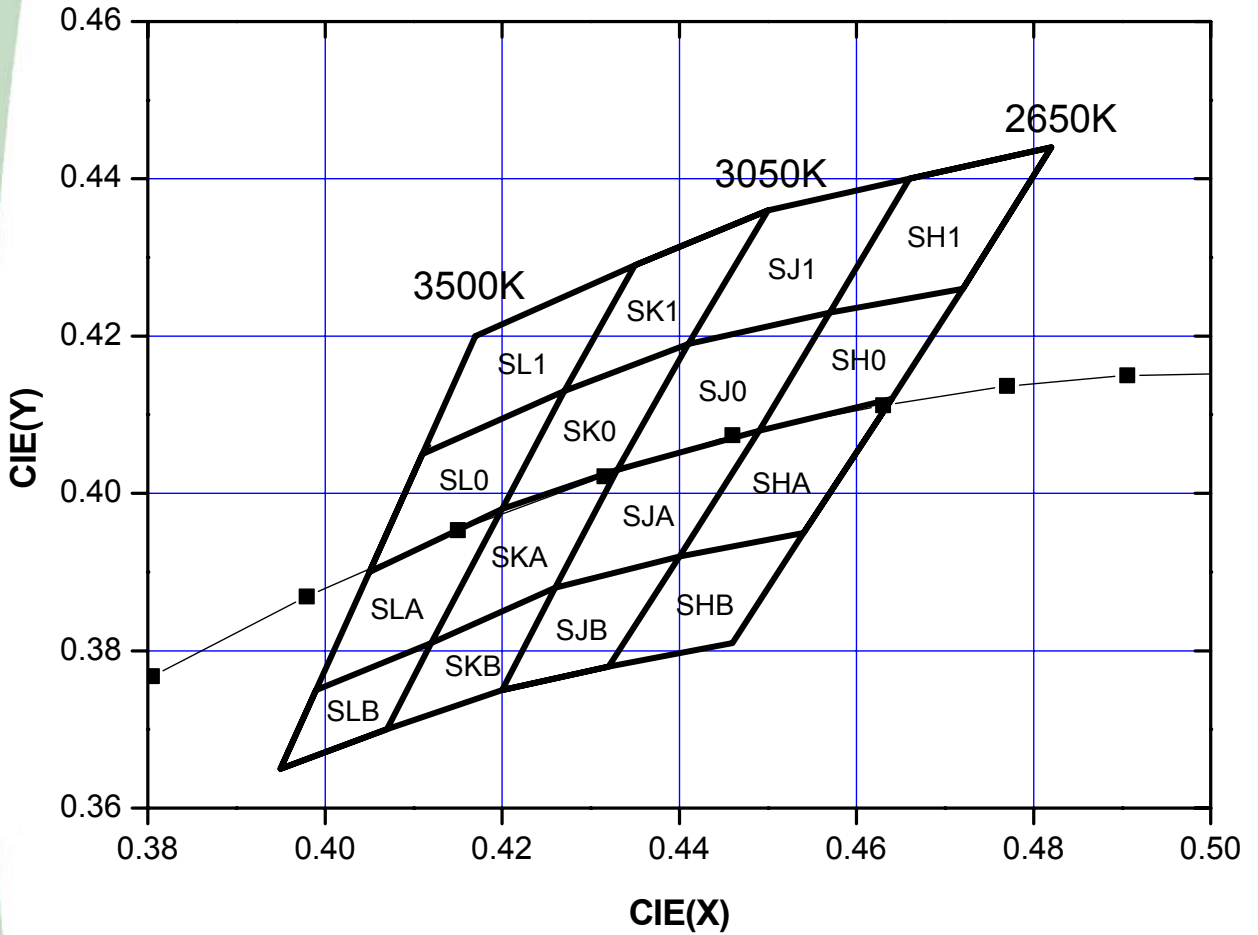
Tolerance

Color coordinate :  $\pm 0.005$

CCT :  $\pm 5\%$  of value



- Warm white binning structure graphical representation



**4. RMS Voltage Bins (emitter)**

- AX2200 (operating in 110V)

Bin Code	Voltage [V,RMS]
A	90.0~92.0
B	92.0~94.0
C	94.0~96.0
D	96.0 ~98.0

- AX3200 (operating in 110V)

Bin Code	Voltage [V,RMS]
A	90.0~92.0
B	92.0~94.0
C	94.0~96.0
D	96.0 ~98.0

- AX3220 (operating in 220V)

Bin Code	Voltage [V,RMS]
A	180.0~185.0
B	185.0~190.0
C	190.0~195.0
D	195.0 ~200.0

Tolerance : ±0.5V

## A2 Order Code (2W)

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

- Example: AW2214 – 1A
  - AW2214 : Part Number
  - 1A : Order code

### 1. Pure White (1A,1B,1C)

Standard Order Codes for Pure white				
Order Code	LF	CC	V <sub>F</sub>	Bin Codes
Part No. – 1A	T	SWA	A B C D	TSWAA~TSWAD
		SW0		TSW0A~TSW0D
		SX0		TSX0A~TSX0D
		SX1		TSX1A~TSW1D
	U	SWA		USWAA~USWAD
		SW0		USW0A~USW0D
		SX0		USX0A~USX0D
		SX1		USX1A~USW1D
Part No. – 1B	T	SYA	A B C D	TSYAA~TSYAD
		SY0		TSY0A~TSY0D
	U	SYA		USYAA~USYAD
		SY0		USY0A~USY0D
Part No. – 1C	T	SV0	A B C D	TSV0A~TSV0D
		SV1		TSV1A~TSV1D
		SV2		TSV2A~TSV2D
	U	SV0		USV0A~USV0D
		SV1		USV1A~USV1D
		SV2		USV2A~USV2D

**2. Warm White (1A,1B,1C)**

Standard Order Codes for Warm white				
Order Code	LF	CC	V <sub>F</sub>	Bin Codes
Part No. - 1A	S	SL0	A B C D	SSL0A~SSL0D
		SLA		SSLAA~DSLAD
		SKA		SSKAA~DSKAD
		SK0		SSK0A~SSK0D
	T	SL0		TSL0A~TSL0D
		SLA		TSLAA~TSLAD
		SKA		TSKAA~TSKAD
		SK0		TSK0A~TSK0D
Part No. - 1B	S	SK0	A B C D	SSK0A~SSK0D
		SKA		SSKAA~SSKAD
		SJA		SSJAA~SSJAD
		SJ0		SSJ0A~SSJ0D
	T	SK0		TSK0A~TSK0D
		SKA		TSKAA~TSKAD
		SJA		TSJAA~TSJAD
		SJ0		TSJ0A~TSJ0D
Part No. - 1C	S	SJ0	A B C D	SSJ0A~SSJ0D
		SJA		SSJAA~SSJAD
		SHA		SSHAA~SSHAD
		SH0		SSH0A~SSH0D
	T	SJ0		TSJ0A~TSJ0D
		SJA		TSJAA~TSJAD
		SHA		TSHAA~TSHAD
		SH0		TSH0A~TSH0D

**2. Warm White (1D,1E,1F)**

Standard Order Codes for Warm white				
Order Code	LF	CC	V <sub>F</sub>	Bin Codes
Part No. – 1D	S	SL1	A B C D	SSL1A~SSL1D
		SL0		SSL0A~SSL0D
		SK0		SSK0A~SSK0D
		SK1		SSK1A~SSK1D
	T	SL1		TSL1A~TSL1D
		SL0		TSL0A~TSL0D
		SK0		TSK0A~TSK0D
		SK1		TSK1A~TSK1D
Part No. – 1E	S	SJ1	A B C D	SSJ1A~SSJ1D
		SJ0		SSJ0A~SSJ0D
		SH0		SSH0A~SSH0D
		SH1		SSH1A~SSH1D
	T	SJ1		TSJ1A~TSJ1D
		SJ0		TSJ0A~TSJ0D
		SH0		TSH0A~TSH0D
		SH1		TSH1A~TSH1D
Part No. – 1F	S	SLA	A B C D	SSLAA~SSLAD
		SLB		SSLBA~SSLBD
		SKB		SSKBA~SSKBD
		SKA		SSKAA~SSKAD
	T	SLA		TSLAA~TSLAD
		SLB		TSLBA~TSLBD
		SKB		TSKBA~TSKBD
		SKA		TSKAA~TSKAD

**2. Warm White (1G)**

Standard Order Codes for Warm white				
Order Code	LF	CC	V <sub>F</sub>	Bin Codes
Part No. – 1G	S	SJA	A B C D	SSJAA~SSJAD
		SJB		SSJBA~SSJBD
		SHB		SSHBA~SSHBD
		SHA		SSHAA~SSHAD
	T	SJA		TSJAA~TSJAD
		SJB		TSJBA~TSJBD
		SHB		TSHBA~TSHBD
		SHA		TSHAA~TSHAD

## A3 Order Code (4W)

### 1. Pure White (1A,1B,1C)

Standard Order Codes for Pure white				
Order Code	LF	CC	VF	Bin Codes
Part No. - 1A	W2	SWA	A B C D	W2SWAA~ W2SWAD
		SW0		W2SW0A~W2SW0D
		SX0		W2SX0A~W2SX0D
		SX1		W2SX1A~ W2SX1D
	X1	SWA		X1SWAA~ X1SWAD
		SW0		X1SW0A~X1SW0D
		SX0		X1SX0A~X1SX0D
		SX1		X1SX1A~ X1SX1D
	X2	SWA		X2SWAA~ X2SWAD
		SW0		X2SW0A~X2SW0D
		SX0		X2SX0A~X2SX0D
		SX1		X2SX1A~ X2SX1D
	Y*	SWA		YSWAA~ YSWAD
		SW0		YSW0A~YSW0D
		SX0		YSX0A~YSX0D
		SX1		YSX1A~ YSX1D

\* : Not yet available

## A3 Order Code (4W)

### 1. Pure White (1A,1B,1C)

Standard Order Codes for Pure white						
Order Code	LF	CC	VF	Bin Codes		
Part No. – 1B	W2	SYA	A B C D	W2SYAA~ W2SYAD		
		SY0		W2SY0A~W2SY0D		
	X1	SYA		X1SYAA~ X1SYAD		
		SY0		X1SY0A~X1SY0D		
	X2	SYA		X2SYAA~ X2SYAD		
		SY0		X2SY0A~X2SY0D		
	Y*	SYA		YSYAA~ YSYAD		
		SY0		YSY0A~YSY0D		
	Part No. – 1C	W2		SV0	A B C D	W2SV0A~W2SV0D
				SV1		W2SV1A~W2SV1D
				SV2		W2SV2A~W2SV2D
		X1		SV0		X1SV0A~X1SV0D
SV1			X1SV1A~X1SV1D			
SV2			X1SV2A~X1SV2D			
X2		SV0	X2SV0A~X2SV0D			
		SV1	X2SV1A~X2SV1D			
		SV2	X2SV2A~X2SV2D			
Y*		SV0	YSV0A~YSV0D			
		SV1	YSV1A~YSV1D			
		SV2	YSV2A~YSV2D			

\* : Not yet available



**2. Warm White (1A,1B,1C)**

Standard Order Codes for Warm white						
Order Code	LF	CC	V <sub>F</sub>	Bin Codes		
Part No. - 1A	V1	SL0	A B C D	V1SL0A~V1SL0D		
		SLA		V1SLAA~V1SLAD		
		SKA		V1SKAA~V1SKAD		
		SK0		V1SK0A~V1SK0D		
	V2	SL0		V2SL0A~V2SL0D		
		SLA		V2SLAA~V2SLAD		
		SKA		V2SKAA~V2SKAD		
		SK0		V2SK0A~V2SK0D		
	W1	SL0		W1SL0A~W1SL0D		
		SLA		W1SLAA~W1SLAD		
		SKA		W1SKAA~W1SKAD		
		SK0		W1SK0A~W1SK0D		
	Part No. - 1B	V1		SK0	A B C D	V1SK0A~V1SK0D
				SKA		V1SKAA~V1SKAD
				SJA		V1SJAA~V1SJAD
				SJ0		V1SJ0A~V1SJ0D
V2		SK0	V2SK0A~V2SK0D			
		SKA	V2SKAA~V2SKAD			
		SJA	V2SJAA~V2SJAD			
		SJ0	V2SJ0A~V2SJ0D			
W1		SK0	W1SK0A~W1SK0D			
		SKA	W1SKAA~W1SKAD			
		SJA	W1SJAA~W1SJAD			
		SJ0	W1SJ0A~W1SJ0D			

\* : Not yet available

## 2. Warm White (1C,1D)

Standard Order Codes for Warm white						
Order Code	LF	CC	V <sub>F</sub>	Bin Codes		
Part No. – 1C	V1	SJ0	A B C D	V1SJ0A~V1SJ0D		
		SJA		V1SJAA~V1SJAD		
		SHA		V1SHAA~V1SHAD		
		SH0		V1SH0A~V1SH0D		
	V2	SJ0		V2SJ0A~V2SJ0D		
		SJA		V2SJAA~V2SJAD		
		SHA		V2SHAA~V2SHAD		
		SH0		V2SH0A~V2SH0D		
	W1	SJ0		W1SJ0A~W1SJ0D		
		SJA		W1SJAA~W1SJAD		
		SHA		W1SHAA~W1SHAD		
		SH0		W1SH0A~W1SH0D		
	Part No. – 1D	V1		SL1	A B C D	V1SL1A~V1SL1D
				SL0		V1SL0A~V1SL0D
				SK0		V1SK0A~V1SK0D
				SK1		V1SK1A~V1SK1D
V2		SL1	V2SL1A~V2SL1D			
		SL0	V2SL0A~V2SL0D			
		SK0	V2SK0A~V2SK0D			
		SK1	V2SK1A~V2SK1D			
W1		SL1	W1SL1A~W1SL1D			
		SL0	W1SL0A~W1SL0D			
		SK0	W1SK0A~W1SK0D			
		SK1	W1SK1A~W1SK1D			

\* : Not yet available

**2. Warm White (1E,1F)**

Standard Order Codes for Warm white						
Order Code	LF	CC	V <sub>F</sub>	Bin Codes		
Part No. – 1E	V1	SJ1	A B C D	V1SJ1A~V1SJ1D		
		SJ0		V1SJ0A~V1SJ0D		
		SH0		V1SH0A~V1SH0D		
		SH1		V1SH1A~V1SH1D		
	v2	SJ1		V2SJ1A~V2SJ1D		
		SJ0		V2SJ0A~V2SJ0D		
		SH0		V2SH0A~V2SH0D		
		SH1		V2SH1A~V2SH1D		
	W1	SJ1		W1SJ1A~W1SJ1D		
		SJ0		W1SJ0A~W1SJ0D		
		SH0		W1SH0A~W1SH0D		
		SH1		W1SH1A~W1SH1D		
	Part No. – 1F	V1		SLA	A B C D	V1SLAA~V1SLAD
				SLB		V1SLBA~V1SLBD
				SKB		V1SKBA~V1SKBD
				SKA		V1SKAA~V1SKAD
v2		SLA	V2SLAA~V2SLAD			
		SLB	V2SLBA~V2SLBD			
		SKB	V2SKBA~V2SKBD			
		SKA	V2SKAA~V2SKAD			
W1		SLA	W1SLAA~W1SLAD			
		SLB	W1SLBA~W1SLBD			
		SKB	W1SKBA~W1SKBD			
		SKA	W1SKAA~W1SKAD			

\* : Not yet available

**2. Warm White (1G)**

Standard Order Codes for Warm white				
Order Code	LF	CC	V <sub>F</sub>	Bin Codes
Part No. – 1G	V1	SJA	A B C D	V1SJAA~V1SJAD
		SJB		V1SJBA~V1SJBD
		SHB		V1SHBA~V1SHBD
		SHA		V1SHAA~V1SHAD
	V2	SJA		V2SJAA~V2SJAD
		SJB		V2SJBA~V2SJBD
		SHB		V2SHBA~V2SHBD
		SHA		V2SHAA~V2SHAD
	W1	SJA		W1SJAA~W1SJAD
		SJB		W1SJBA~W1SJBD
		SHB		W1SHBA~W1SHBD
		SHA		W1SHAA~W1SHAD