

Less electricity · Greener world

Version:06/2013



## LED LESS ELECTRICITY GREENER WORLD

LED Components





## AGS-Electronics offers exceptional quality LEDs

The high-tech plant was found in 2004 and since then has been committed to the research and development of LED packaging, especially white LED packaging technology. Plant consists of over 47,981 square meters of LED encapsulation workshop, hundreds of automated LED production lines. Plant manufactures one of the widest ranges of LEDs including High Power LEDs, COB LEDs, SMD LEDs. Our LED package components comply with the USA Energy Star Test Standard, which provides strong quality assurance for our products.



AGS-Electronics, Ph: +1-505-550-6501 or +1-505-565-5102, Fx: +1-505-814-5778, Em: sales@ags-electronics.com,

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EMC3535

## The 3rd generation Epoxy Molded SMD

Low cost, high reliability EMC model

### Features:

High thermal conductivity, low thermal resistance (Rth-j-s is around 10°C/W). Performance in thermal resistance is better than PPA, 300°C is workable

Compact size with high watts & high luminous efficiency (Max power 1.5W and 120lm/W). High cost-performance ratio than ceramic led; circuit design of low current in series connection is available.

Recommended applications: spot light, led bulb, TV backlight



★ EMC3535

### Parameters:

Model	Color	CCT (K)	IF(mA)	Φv(lm) min	Φv(lm) typ.	VF(V)	Ra≥	2θ[°]
HL-EMC-3535DW-2-S1	White	6000	300	100	115	2.9-3.4	70	120
HL-EMC-3535DW-2-S1	Yellow	2800	300	90	95	2.9-3.4	80	120

### Applications:



Ceramic C3535



Special light source for LED Plant growth  
Full wavelength range, highly reliable ceramic encapsulation technology, particularly recommended for plant growth



★ C3535

### Features:

Ceramic 3535 adopts ceramic substrate and thermoelectrical separation design. Covering various wavelengths, product can realize customized wavelengths and proportioning.

Same series of white light LEDs take the lead in approval of the IES LM-80 testing.

Modular ceramic encapsulation technology with small size and high watts, universal design in 1W and 3W gives us a preferred light source for LED plant growth.

### Parameters:

Product Type	Color	IF(mA)	W	Φe(Mw)	Φv(lm)typ.	VF(V)	Rth(°C/W)	λp(nm)	2θ[°]
HL-C3535F1V1EA-ZW	White	350	1W	240	-	3.2-3.4	5	385-390	130
HL-C3535F2V1EA-ZW	White	350	1W	240	-	3.0-3.4	5	440-445	130
HL-C3535F26B1EA-ZW	Blue	350	1W	490	10	3.0-3.4	5	440-445	130
HL-C3535F4G1EA-ZW	Green	350	1W	255	98	3.0-3.4	5	520-525	130
HL-C3535F1O1EA-ZW	Orange	350	1W	150	52	1.8-2.4	5	605-610	130
HL-C3535F5R1EA-ZW	Red	350	1W	280	17	1.8-2.4	5	660-665	130
HL-C3535F4R1EA-ZW	Red	350	1W	289	15	1.8-2.4	5	640-650	130
HL-C3535F3IR1EA-ZW	Red	350	1W	100	-	1.4-2.2	5	730-740	130
HL-C3535F4Y1EA-ZW	Yellow	350	1W	49	26	1.8-2.4	5	580-590	130

### Applications:



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13.5X13.5X1.5(mm)  
Luminous dimensions (mm)  
Φ 11.2

Applications: Bulb, spot light, down light etc, indoor lighting.

Model	CCT(K)	W	IF(mA)	Φv(lm) typ.	VF(V)	Rth ( °C/W )	Ra≥
LM002							
HL-LM002HW-5B2C12	3000	4.3	120	510	34-40	4.5	80
HL-LM002HW-5B2C12	6000	4.3	120	545	34-40	4.5	80
HL-LM002HW-5B3C8	3000	4.3	180	510	22.5-26	4.5	80
HL-LM002HW-5B3C8	6000	4.3	180	545	22.5-26	4.5	80
HL-LM002HW-7B3C12	3000	6.5	180	700	34-40	3.6	80
HL-LM002HW-7B3C12	6000	6.5	180	750	34-40	3.6	80
HL-LM002HW-7B5C8	3000	7.2	300	700	22.5-26	3.5	80
HL-LM002HW-7B5C8	6000	7.2	300	750	22.5-26	3.5	80
HL-LM002HW-9B4C12	3000	8.6	240	960	34-40	2.9	80
HL-LM002HW-9B4C12	6000	8.6	240	1020	34-40	2.9	80
HL-LM002HW-9B6C8	3000	8.6	360	960	22.5-26	2.9	80
HL-LM002HW-9B6C8	6000	8.6	360	1020	22.5-26	2.9	80



19X19X1.5(mm)  
Luminous dimensions (mm)  
Φ 17

Applications: Bulb, spot light, down light etc, indoor lighting.

Model	CCT(K)	W	IF(mA)	Φv(lm) typ.	VF(V)	Rth ( °C/W )	Ra≥
LM003							
HL-LM003HW-9B4C12	3000	8.6	240	1040	34-40	2.8	80
HL-LM003HW-9B4C12	6000	8.6	240	1100	34-40	2.8	80
HL-LM003HW-11B5C12	3000	10.8	300	1270	34-40	2.2	80
HL-LM003HW-11B5C12	6000	10.8	300	1350	34-40	2.2	80
HL-LM003HW-13B6C12	3000	13	360	1480	34-40	1.7	80
HL-LM003HW-13B6C12	6000	13	360	1600	34-40	1.7	80
HL-LM003HW-15B7C12	3000	15.1	420	1780	34-40	1.5	80
HL-LM003HW-15B7C12	6000	15.1	420	1880	34-40	1.5	80
HL-LM003HW-17B8C12	3000	17.2	480	1950	34-40	1.3	80
HL-LM003HW-17B8C12	6000	17.2	480	2080	34-40	1.3	80



12X15X1.5(mm)  
Luminous dimensions (mm)  
Φ 6.7

Applications: Down light, candle lamp etc, indoor lighting.

Model	CCT(K)	W	IF(mA)	Φv(lm) typ.	VF(V)	Rth ( °C/W )	Ra≥
LM009							
HL-LM009HW-3B6C3	3000	3.2	180	330	8.5-11.5	5.5	80
HL-LM009HW-3B6C3	6000	3.2	180	370	8.5-11.5	5.5	80



20X20X2.5(mm)  
Luminous dimensions (mm)  
11.9X13.5

Applications: Flood light

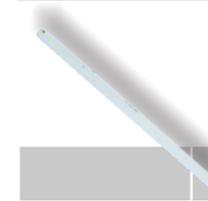
Model	CCT(K)	W	IF(mA)	Φv(lm) typ.	VF(V)	Rth ( °C/W )	Ra≥
LT003							
HL-LT003FW-10B3C3	6000	9.5	1050	879	9	2.5	70
HL-LT003FW-10B1C9	6000	9.6	350	895	27.5	2.5	70



40X46X2.5(mm)  
Luminous dimensions (mm)  
25.9X25.9

Applications: Flood light, tunnel light, high bay etc.

Model	CCT(K)	W	IF(mA)	Φv(lm) typ.	VF(V)	Rth ( °C/W )	Ra≥
LT005							
HL-LT005FW-50B5C10	6000	53.4	1750	5071	30.5	0.6	70
HL-LT005FW-70B7C10	6000	74.7	2450	7099	30.5	0.45	70
HL-LT005FW-100B10C10	6000	106.8	3500	10141	30.5	0.3	70



274.25X14X1.0 mm  
287.5X13.5X1.2 mm

Applications: Tube light

Model	CCT(K)	IF(mA)	Φv(lm) typ.	VF(V)	Ra≥	2 θ 1/2[°]
LB021						
HL-LB021HW-4B9C3	6000	450	540	9	70	160



22X18x1.8(mm)

Applications: down light, bulb

Model	CCT(K)	IF(mA)	Φv(lm) typ.	VF(V)	Luminous dimensions (mm)	Ra≥
LC002						
HL-LC002H384W-12B10C8	2700	500	1120	22.5-26	15.4	80
HL-LC002H384W-12B10C8	3000	500	1200	22.5-26	15.4	80
HL-LC002H384W-12B10C8	6000	500	1320	22.5-26	15.4	80



3.0X1.4X0.8(mm)

Applications: Tube light, panel light, bulb

Model	CCT (K)	IF(mA)	Φv(lm) min	Φv(lm) typ.	VF(V)	Ra≥	2 θ 1/2[°]
3014-08							
HL-A-3014HW-S1-08	6000	30	10	12	2.8-3.6	80	120
LM-80							
HL-A-3014HW-S1-08	4000	30	9	11.3	2.8-3.6	80	120
HL-A-3014HW-S1-08	3000	30	8	10	2.8-3.6	80	120



3.5X2.8X1.0(mm)

Applications: General lighting (tube light, bulb, down light, panel light etc.)

Model	CCT (K)	IF(mA)	Φv(lm) min	Φv(lm) typ.	VF(V)	Ra≥	2 θ 1/2[°]
3528-10							
HL-A-3528HW-S1-10	6000	20	7.5	8.5	2.8-3.4	80	120
HL-A-3528HW-S1-10	4000	20	7	8	2.8-3.4	80	120
HL-A-3528HW-S1-10	3000	20	6.5	7.5	2.8-3.4	80	120



3.5X2.8X1.3(mm)

Applications: Tube light, panel light, led strip, rope light, decorative lighting, indicator light

Model	CCT (K)	IF(mA)	Φv(lm) min	Φv(lm) typ.	VF(V)	Ra≥	2 θ 1/2[°]
3528-13							
HL-A-3528HW-S1-13	6000	20	7.5	8	2.8-3.4	80	120
LM-80							
HL-A-3528HW-S1-13	4000	20	7	7.5	2.8-3.4	80	120
HL-A-3528HW-S1-13	3000	20	6.5	7	2.8-3.4	80	120



3.5X2.8X0.8(mm)

Applications: Tube light, down light, bulb

Model	CCT (K)	IF(mA)	Φv(lm) min	Φv(lm) typ.	VF(V)	Ra≥	2θ 1/2[°]	
<b>2835</b> LM-80	HL-A-2835DW-S1-08	6000	150	55	60	3.0-3.6	80	120
	HL-A-2835DW-S1-08	4000	150	50	55	3.0-3.6	80	120
	HL-A-2835DW-S1-08	3000	150	45	52	3.0-3.6	80	120
HL-A-2835HW-S1-08	6000	60	20	22	2.8-3.4	80	120	
	4000	60	19	21	2.8-3.4	80	120	
	3000	60	18	20	2.8-3.4	80	120	
HL-A-2835DW-2C-S1-08	6000	30	20	22	5.8-6.5	80	120	
	4000	30	19	21	5.8-6.5	80	120	
	3000	30	17	19	5.8-6.5	80	120	
HL-A-2835DW-3C-S1-08	6000	30	30	32	8.8-9.8	80	120	
	4000	30	39	31	8.8-9.8	80	120	
	3000	30	26	28	8.8-9.8	80	120	



4.0X1.4X0.63(mm)

Applications: Tube, panel light

Model	CCT (K)	IF(mA)	Φv(lm) min	Φv(lm) typ.	VF(V)	Ra≥	2θ 1/2[°]	
<b>4014</b>	HL-A-4014HW-S1	6000	60	20	22	2.8-3.4	80	120
	HL-A-4014HW-S1	4000	60	19	21	2.8-3.4	80	120
	HL-A-4014HW-S1	3000	60	18	20	2.8-3.4	80	120



5.7X3.0X0.90(mm)

Tube light, panel light, bulb

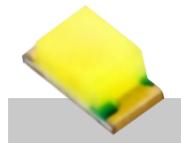
Model	CCT (K)	IF(mA)	Φv(lm) min	Φv(lm) typ.	VF(V)	Ra≥	2θ 1/2[°]	
<b>5730</b>	HL-A-5730DW-S1	6500	150	48	55	3.0-3.6	80	120
	HL-A-5730DW-S1	4000	150	45	52	3.0-3.6	80	120
	HL-A-5730DW-S1	3000	150	43	50	3.0-3.6	80	120



**5060**

Applications: Tube light, panel light, led strip, rope light, decorative lighting, indicator light

Model	CCT (K)	IF(mA)	Φv(lm) min	Φv(lm) typ.	VF(V)	Ra≥	2θ 1/2[°]
HL-AF-5060HW-3-S1-T1	6500	60	18	24	2.8-3.4	80	120
	4000	60	17	22	2.8-3.4	80	120
	3200	60	16	21	2.8-3.4	80	120



1.6X0.8X0.68(mm)

Applications: Indicator light, digital display, backlight, cellphone key etc

Model	Color	λ d(nm)	CCT (K)	IF(mA)	Iv(mcd) min.	Iv(mcd) typ.	VF(V)	2θ 1/2[°]
<b>1608</b>	○	-	6500	10	350	600	2.7-3.3	120
	●	518	-	10	210	460	2.7-3.3	120
	●	468	-	10	70	100	2.7-3.3	120

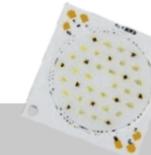


**E-Series**

Applications: Spot light, desk lamp

Model	CCT(K)	W	IF(mA)	Φv(lm) typ.	VF(V)	Rth (°C/W)	Ra≥	2θ 1/2[°]
HL-EFXXW1NAMS	2870-3220	1	350	100	2.8-3.5	6-12	70	140
	5665-6530	1	350	120	2.8-3.5	6-12	70	140
	2870-3220	3	700	160	3.0-3.6	4-10	70	140
	5665-6530	3	700	180	3.0-3.6	4-10	70	140

Stage lighting



**HL-LB045RGB F21-30B3C12**

Applications: Can be used for floodlight, moving head light (Dance Light) etc, which can make luminaires more compact structure, light and handy appearance, easier installation and low maintenance.

Color	Units	Forward Current	Forward Voltage		Luminous Flux		Dominant Wavelength		Viewing Angle
		mA	Min	Max	Min	Max	Min	Max	Typ
Red	Typ	350	25	28	360	420	620	630	120
	Min	350	35	38	700	800	520	530	120
	Max	350	37	40	160	180	450	460	120



**HL-ERGBWAF225RaT**

Applications: lighting source is widely used for full color luminaires such as stage lighting; it can also be used as replacement for other RGB lighting source.

Color	Units	Forward Current	Forward Voltage		Luminous Flux		Dominant Wavelength		Viewing Angle
		mA	Min	Max	Min	Max	Min	Max	Typ
Red	Typ	500	2.2	2.8	70	80	620	630	140
	Min	500	3	3.8	120	130	520	530	140
	Max	500	3	3.8	25	35	460	470	140
Green	Typ	500	3	3.8	105	115	6500	7500	140
	Min	500	3	3.8	105	115	6500	7500	140
	Max	500	2	2.8	60	70	485	495	140

TV backlight

Edge-lit backlight

Model	x (typ.)	Y (typ.)	IF(mA)	Φv(lm) min	Φv(lm) typ.	Φv(lm) max.	VF(V)	2θ 1/2[°]
<b>7020</b>	0.265	0.235	150	-	48	-	2.8-3.6	120
	0.265	0.235	60	-	20.5	-	2.8-3.6	120
<b>4014</b>	0.265	0.235	60	-	21	-	2.8-3.6	120
	0.265	0.235	60	-	21	-	2.8-3.6	120

Direct-lit backlight

Model	x (typ.)	Y (typ.)	IF(mA)	Φv(lm) min	Φv(lm) typ.	Φv(lm) max.	VF(V)	2θ 1/2[°]
<b>3528-08-PCT</b>	0.265	0.235	300	-	90	-	2.8-3.6	120
	0.265	0.235	150	-	90	-	5.6-7.2	120

IR LEDs



**Infrared LED**

Electronic whiteboard, camera, monitor, counter etc.

Model	λ d(nm)	IF(mA)	Io(mw/sr)typ.	VF(V)	2θ 1/2
HL-503IRC-L3	940	50	70	1.2-1.4	20
HL-503IRC-L5	850	50	154	1.2-1.4	20