

Legal and additional information.

About Samsung Electronics Co., Ltd.

Samsung Electronics Co., Ltd. inspires the world and shapes the future with transformative ideas and technologies, redefining the worlds of TVs, smartphones, wearable devices, tablets, cameras, digital appliances, printers, medical equipment, network systems and semiconductors.

We are also leading in the Internet of Things space through, among others, our Digital Health and Smart Home initiatives. We employ 307,000 people across 83 countries. To discover more, please visit our official website at www.samsung.com and our official blog at global.samsungtomorrow.com.

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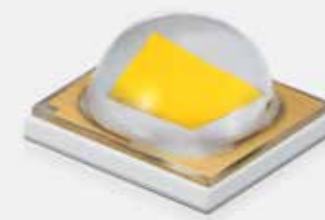
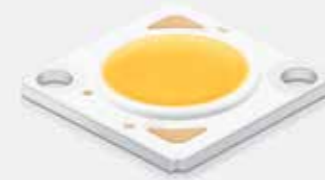
www.samsungled.com

SAMSUNG

Rev.3.0 Jun.2015

Samsung LED Component

The best solution for luminaires



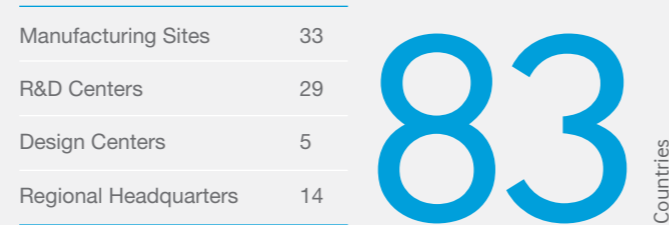
SAMSUNG

Overview & Performance

Samsung Electronics Co., Ltd. is a global leader in consumer electronics and the core components that go into them.

Overview

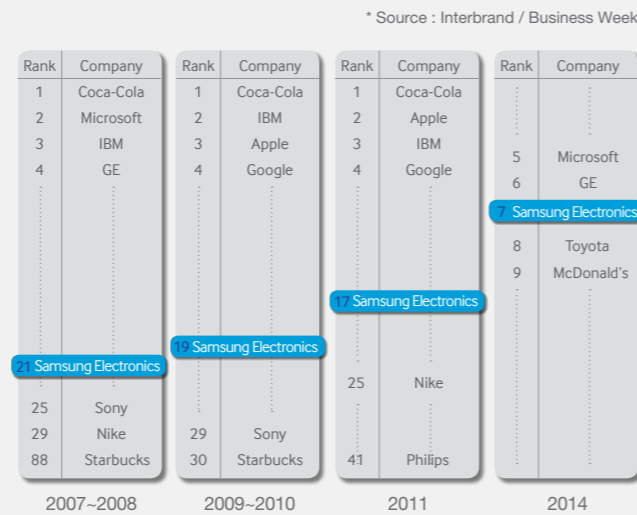
Samsung's global network extends across the world where the creativity, expertise and diverse perspectives of employees are helping to drive growth.



* As of Dec. 31, 2014.
Figures include domestic and overseas facilities.

Brand Value

Rising in rank from its No. 17 position in 2011, Samsung recorded a brand value of \$45.5 Billion in 2014, a 94% increase compared to 2011 \$23.4 billion.

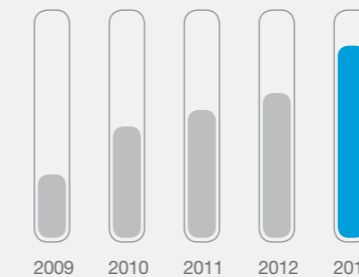


Samsung aspires to create new technologies and innovative products that inspire the world, while delivering new value to enhance the lives of customers, partners and employees.

Intellectual Property

In 2013, Samsung registered 5,946 new patents at the U.S. Patent & Trade Office. This placed it as the second-highest U.S. patent winner, a position it has held for the past six consecutive years.

Samsung Patents (U.S.)



* 5946 in 2013, includes patents From the display panel business

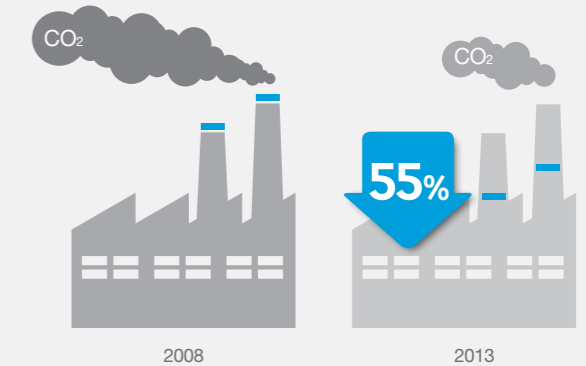
Top Patent Holders (U.S.)



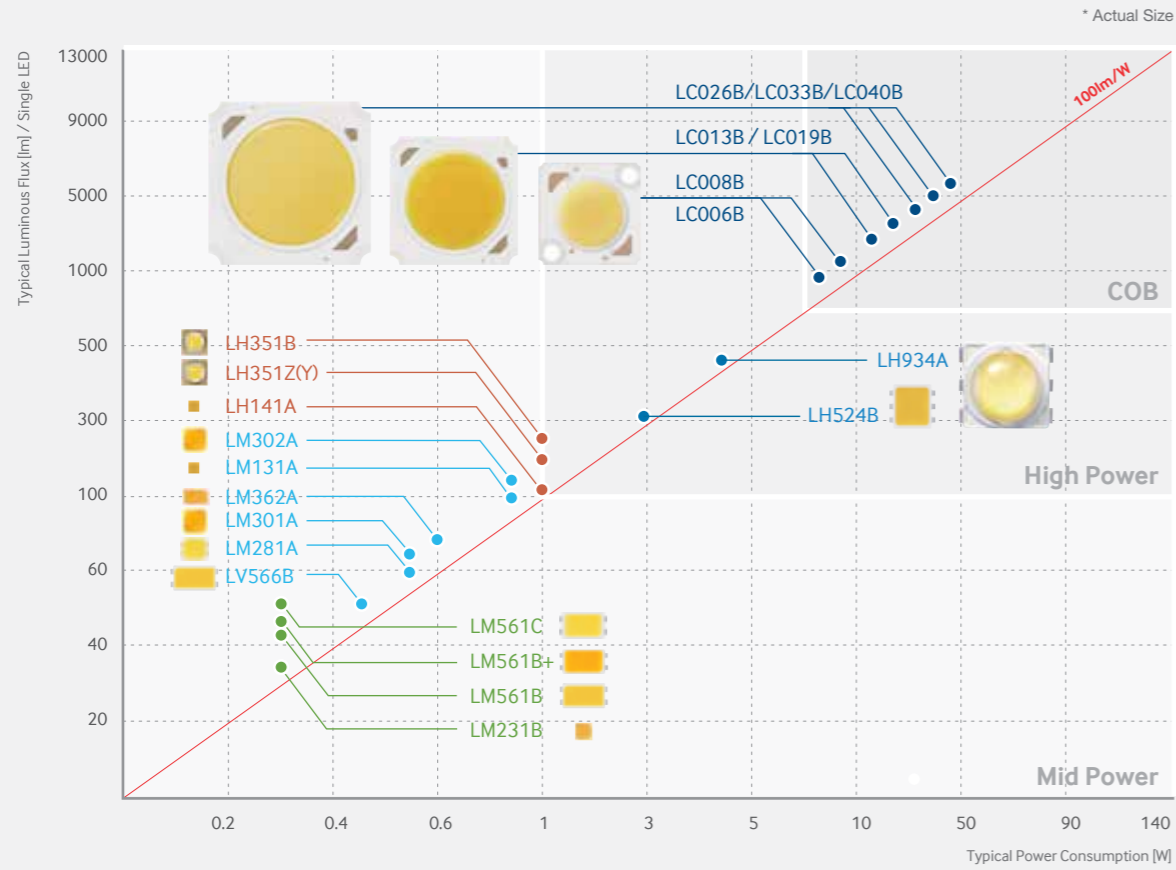
* Source: USPTO, based on registration

Sustainability

Samsung Electronics cares greatly about the environment and strives to make a positive impact. These efforts have led to a 55% reduction in greenhouse gas emissions from its factories in 2013 compared to the 2008 baseline. In addition, Samsung's products are also making a difference with 3,285 product models being certified with globally recognized eco-marks in 2013.



Samsung LED Line-up for illumination



Mid Power LED (0.3W)

- High efficacy
- Replacement for fluorescent lamps
- LED Tube, Ambient Light

Mid Power LED (~1W)

- High flux & better lm/\$
- Replacement for incandescent lamps
- Retrofit Bulb, MR/PAR, Downlight

High Power LED

- Ultra High Flux
- Provides excellent color consistency
- Spotlight, Street Light

AC LED

- PSU-less solution
- Designed for slim & light fixture
- Deco Lamp, Candelabra Bulb

COB

- Chip on Board solution
- Outstanding color rendering & consistency
- Spotlight, High Bay & Low Bay Light



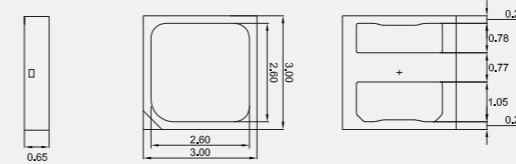
Mid Power LEDs

LM301A



Designed for best lm/\$, high bay & down light

- Mid-high power LED
- EMC resin for high reliability
- Standard footprint: 3.0mm x 3.0mm

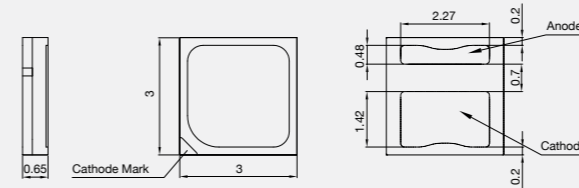


LM302A

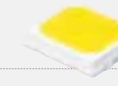


Designed for better lm/\$, lamps & down lights

- 1W class mid-high power LED
- EMC resin for high reliability
- Standard footprint: 3.0mm x 3.0mm

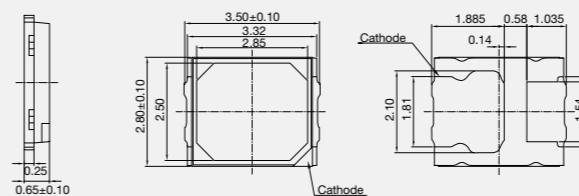


LM281A



Designed for better lm/\$, lamps, downlights and ambient lights

- 0.5W class mid power LED
- PCT Resin for high reliability
- Standard footprint: 2.8mm x 3.5mm



CRI Min.	CCT (K)	Luminous Flux (lm)		IF (mA)	Part Number
		Min.	Max.		
80	2700	51.0	63.0	150	SPMWHT328QD5WAW0S0
	3000	54.0	66.0		SPMWHT328QD5WAV0S0
	3500	55.0	67.0		SPMWHT328QD5WAW0S0
	4000	56.0	68.0		SPMWHT328QD5WAT0S0
	5000	58.0	70.0		SPMWHT328QD5WAR0S0
	5700	57.0	69.0		SPMWHT328QD5WAQ0S0
	6500	56.0	68.0	SPMWHT328QD5WAP0S0	

※ Bin option is available, please refer to data sheet for more details.

CRI Min.	CCT (K)	Luminous Flux (lm)		IF (mA)	Part Number
		Min.	Max.		
80	2700	102.0	126.0	150	SPMWHT327FD5GBW0S0
	3000	104.0	128.0		SPMWHT327FD5GBV0S0
	3500	107.0	131.0		SPMWHT327FD5GBU0S0
	4000	109.0	133.0		SPMWHT327FD5GBT0S0
	5000	113.0	137.0		SPMWHT327FD5GBR0S0
	5700	111.0	135.0		SPMWHT327FD5GBQ0S0
70	6500	109.0	133.0	SPMWHT327FD5GBP0S0	
	3000	112.0	128.0	SPMWHT327FD3GBV0S0	
	4000	117.0	133.0	SPMWHT327FD3GBT0S0	
	5000	121.0	137.0	SPMWHT327FD3GBR0S0	
	5700	119.0	135.0	SPMWHT327FD3GBQ0S0	

※ Bin option is available, please refer to data sheet for more details.

CRI Min.	CCT (K)	Luminous Flux (lm)		IF (mA)	Part Number
		Min.	Max.		
80	2700	51.0	61.5	150	SPMWHT228FD5BAW0S0
	3000	52.0	62.5		SPMWHT228FD5BAV0S0
	3500	53.0	63.5		SPMWHT228FD5BAU0S0
	4000	55.5	66.0		SPMWHT228FD5BAT0S0
	5000	57.5	68.0		SPMWHT228FD5BAR0S0
	5700	56.5	67.0		SPMWHT228FD5BAQ0S0
	6500	55.5	66.0	SPMWHT228FD5BAP0S0	

※ Bin option is available, please refer to data sheet for more details.



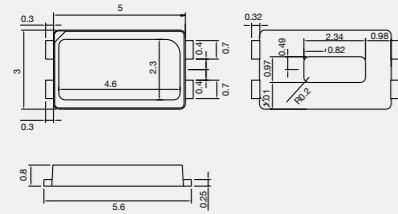
Mid Power LEDs

LM561B



High performance and high lm/W for fluorescent lamp replacement

- 0.3W class mid power LED
- High efficacy for distributed light
- UL Recognized Component
- Completed 10,000 hours of LM-80 testing @ 180mA, 105 °C
- Standard footprint: 5.6mm x 3.0mm



CRI Min.	CCT (K)	Luminous Flux (lm)		IF (mA)	Part Number
		Min.	Max.		
90	2700	20.0	26.0	65	SPMWHT541MD7WAW0S0
	3000	20.5	26.5		SPMWHT541MD7WAV0S0
	3500	22.0	28.0		SPMWHT541MD7WAU0S0
	4000	23.0	29.0		SPMWHT541MD7WAT0S0
80	2700	24.0	32.0	65	SPMWHT541MD5WAW0S0
	3000	24.5	32.5		SPMWHT541MD5WAV0S0
	3500	25.0	33.0		SPMWHT541MD5WAU0S0
	4000	26.0	34.0		SPMWHT541MD5WAT0S0
	5000	27.0	35.0		SPMWHT541MD5WAR0S0
	5700	26.5	34.5		SPMWHT541MD5WAQ0S0
75	6500	26.0	34.0	65	SPMWHT541MD5WAP0S0
	10000	24.0	31.5		SPMWHT541MN4WAAUS0

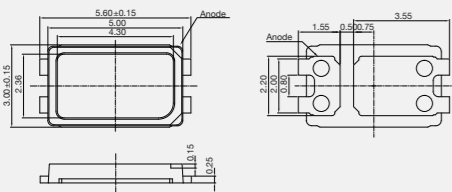
※ Bin option is available, please refer to data sheet for more details.

LM561B Plus



Improved efficacy and performance of LM561B to provide better solution

- 0.3W class mid power LED
- High efficacy for distributed light
- Standard footprint: 5.6mm x 3.0mm



CRI Min.	CCT (K)	Luminous Flux (lm)		IF (mA)	Part Number
		Min.	Max.		
80	2700	30.0	32.0	65	SPMWHT541MP5WAW0S0
	3000	30.5	32.5		SPMWHT541MP5WAV0S0
	3500	31.0	33.0		SPMWHT541MP5WAU0S0
	4000	32.0	34.0		SPMWHT541MP5WAT0S0
80	5000	33.0	35.0	65	SPMWHT541MP5WAR0S0
	5700	32.5	34.5		SPMWHT541MP5WAQ0S0
	6500	32.0	34.0		SPMWHT541MP5WAP0S0

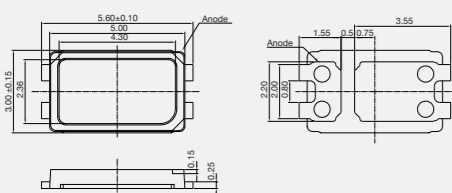
※ Bin option is available, please refer to data sheet for more details.

LM561C



Highest performance, highest lm/W for fluorescent lamp replacement

- 0.3W class mid power LED
- Highest efficacy: 200lm/W @ 65mA, 5000K, 80CRI
- Standard footprint: 5.6mm x 3.0mm



CRI Min.	CCT (K)	Luminous Flux (lm)		IF (mA)	Part Number
		Min.	Max.		
80	2700	30.0	36.0	65	SPMWHT542MD5XAW0S0
	3000	30.5	36.5		SPMWHT542MD5XAV0S0
	3500	31.0	37.0		SPMWHT542MD5XAU0S0
80	4000	32.0	38.0	65	SPMWHT542MD5XAT0S0
	5000	33.0	39.0		SPMWHT542MD5XAR0S0
	5700	32.5	38.5		SPMWHT542MD5XAQ0S0
	6500	32.0	38.0		SPMWHT542MD5XAP0S0

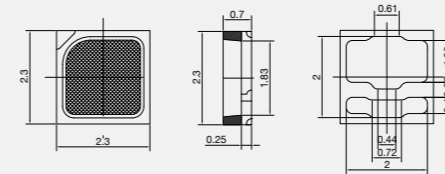
※ Bin option is available, please refer to data sheet for more details.

LM231B



Small form factor for design flexibility

- 0.3W class mid power LED
- Optimized for ambient lights and LED tubes
- UL Recognized Component
- Completed 10,000 hours of LM-80 testing @ 130mA, 105 °C
- Compact footprint: 2.3mm x 2.3mm



CRI Min.	CCT (K)	Luminous Flux (lm)		IF (mA)	Part Number
		Min.	Max.		
90	2700	16.5	24.0	65	SPMWHT223MD7WAW0S0
	3000	17.0	24.5		SPMWHT223MD7WAV0S0
	3500	17.5	25.0		SPMWHT223MD7WAU0S0
	4000	18.0	25.5		SPMWHT223MD7WAT0S0
80	2700	19.8	30.1	65	SPMWHT223MD5WAW0S0
	3000	19.8	30.1		SPMWHT223MD5WAV0S0
	3500	19.8	30.1		SPMWHT223MD5WAU0S0
	4000	20.6	31.2		SPMWHT223MD5WAT0S0
	5000	20.6	31.2		SPMWHT223MD5WAR0S0
	5700	20.6	31.2		SPMWHT223MD5WAQ0S0
80	6500	20.6	31.2	65	SPMWHT223MD5WAP0S0

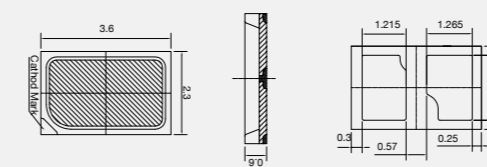
※ Bin option is available, please refer to data sheet for more details.

LM362A



High quality light output makes the LM362A the optimal solution for lamps and downlights

- 0.6W class mid power LED
- 2-Die (6 V) MPL
- UL Recognized Component
- Completed 6,000 hours of LM-80 testing @ 200mA, 105 °C
- Footprint: 3.6mm x 2.3mm



CRI Min.	CCT (K)	Luminous Flux (lm)		IF (mA)	Part Number
		Min.	Max.		
90	2700	48.0	63.0	100	SPMWHT325AD7YBW0S0
	3000	50.0	65.0		SPMWHT325AD7YBV0S0
	3500	52.0	67.0		SPMWHT325AD7YBU0S0
	4000	54.0	69.0		SPMWHT325AD7YBT0S0
80	2700	51.0	88.0	100	SPMWHT325AD5YBW0S0
	3000	51.0	90.0		SPMWHT325AD5YBV0S0
	3500	51.0	93.0		SPMWHT325AD5YBU0S0
	4000	55.0	95.0		SPMWHT325AD5YBT0S0
	5000	55.0	96.0		SPMWHT325AD5YBR0S0
	5700	55.0	95.0		SPMWHT325AD5YBQ0S0
80	6500	55.0	95.0	100	SPMWHT325AD5YBP0S0

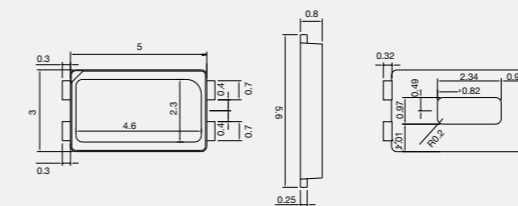
※ Bin option is available, please refer to data sheet for more details.

LV566B



High voltage LED designed for downlight with AC step IC module

- Optimized solution for below 1000lm D/L
- 18V high voltage LED



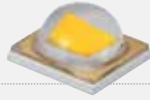
CRI Min.	CCT (K)	Luminous Flux (lm)		IF (mA)	Part Number
		Min.	Max.		
80	2700	38.8	53.0	20	SPMWHT5492D5SGW0S0
	3000	39.4	53.6		SPMWHT5492D5SGV0S0
	3500	40.4	55.3		SPMWHT5492D5SGU0S0
80	4000	41.4	56.4	20	SPMWHT5492D5SGT0S0
	5000	41.8	56.9		SPMWHT5492D5SGR0S0
	5700	41.4	56.5		SPMWHT5492D5SGQ0S0
	6500	40.8	55.8		SPMWHT5492D5SGP0S0

※ Bin option is available, please refer to data sheet for more details.



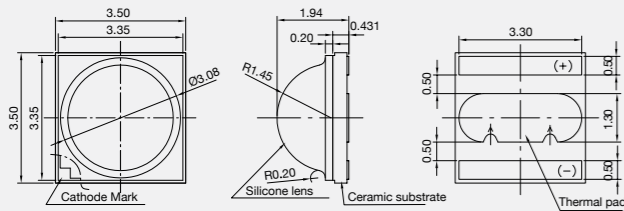
High Power LEDs

LH351Z



Cost effective solution for industrial & directional lighting

- Superior lm/\$ proposition (32% Smaller die than standard 3535 LED)
- Delivering set efficacy over 95lm/W@550mA
- Hot binning @ 85 °C
- UL Recognized Component
- Excellent lifetime (>147Khr @L70, 105°C, 1A)
- Footprint: 3.5mm x 3.5mm



CRI Min.	CCT (K)	Luminous Flux (lm)		IF (mA)	Part Number
		Min.	Max.		
80	2700	90.0	120.0	350	SPHWHTL3D20EE3W0F3
		100.0	130.0		SPHWHTL3D20EE3W0G3
		110.0	140.0		SPHWHTL3D20EE3W0H3
		100.0	130.0		SPHWHTL3D20EE3V0G3
	3000	110.0	140.0		SPHWHTL3D20EE3V0H3
		90.0	120.0		SPHWHTL3D20EE3U0F3
		100.0	130.0		SPHWHTL3D20EE3U0G3
		110.0	140.0		SPHWHTL3D20EE3U0H3
	4000	110.0	140.0		SPHWHTL3D20EE3T0H3
		120.0	150.0		SPHWHTL3D20EE3T0J3
		120.0	150.0		SPHWHTL3D20DE3RTJ3
		130.0	160.0		SPHWHTL3D20DE3RTK3
75	5700	130.0	160.0	SPHWHTL3D20DE3QTK3	
	4000	130.0	160.0	SPHWHTL3D20CE3T0K3	
	140.0	170.0	SPHWHTL3D20CE3T0M3		
	5000	130.0	160.0	SPHWHTL3D20CE3RTK3	
70	5700	140.0	170.0	SPHWHTL3D20CE3RTM3	
	5000	130.0	160.0	SPHWHTL3D20CE3QTK3	
	140.0	170.0	SPHWHTL3D20CE3QTM3		
	6500	130.0	160.0	SPHWHTL3D20CE3PTK3	
		140.0	170.0	SPHWHTL3D20CE3PTM3	

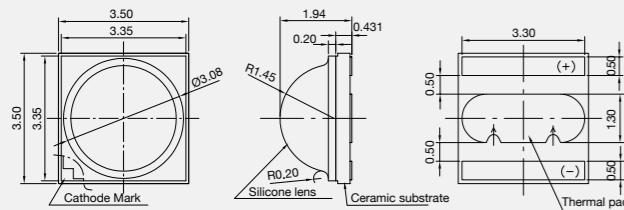
※ Bin option is available, please refer to data sheet for more details.

LH351Y



Powerful performance optimized to torch application

- Single-chip LED recommended for quality of output beam shape
- Convenient light source to collect beam to spot area through reflector
- UL Recognized Component
- Completed LM-80 testing @ 700 mA, 105°C
- Footprint: 3.5mm x 3.5mm



CRI Min.	CCT (K)	Luminous Flux (lm)		IF (mA)	Part Number
		Min.	Max.		
68	7000	120.0	150.0	350	SPHWHTL3D201F3PSJ3
		120.0	150.0		SPHWHTL3D201F3ASJ3
		120.0	150.0		SPHWHTL3D201F3NSJ3

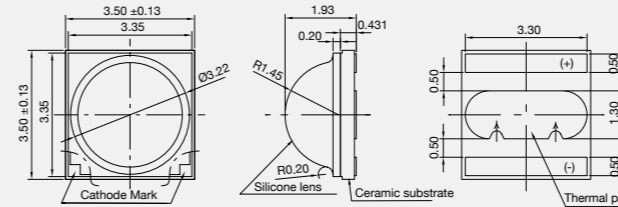
※ Bin option is available, please refer to data sheet for more details.

LH351B



High performance for outdoor & directional lighting application

- Operates at a maximum current of up to 1.5A
- High efficacy outdoor solution (Delivering set efficacy over 100lm/W@700mA)
- Excellent efficacy : 158lm/W @350mA, 85°C 4000K
- LM80 Certified @ 1A, 105°C (Ts) (L70>60,000 @ 1A, 85°C)
- Footprint: 3.5mm x 3.5mm



CRI Min.	CCT (K)	Luminous Flux (lm)		IF (mA)	Part Number
		Min.	Max.		
80	2700	100.0	130.0	350	SPHWH2L3D30ED4W0G3
		110.0	140.0		SPHWH2L3D30ED4W0H3
		120.0	150.0		SPHWH2L3D30ED4W0J3
		110.0	140.0		SPHWH2L3D30ED4V0H3
	3000	120.0	150.0		SPHWH2L3D30ED4V0J3
		130.0	160.0		SPHWH2L3D30ED4V0K3
		120.0	150.0		SPHWH2L3D30ED4U0J3
		130.0	160.0		SPHWH2L3D30ED4V0K3
	4000	120.0	150.0		SPHWH2L3D30ED4T0J3
		130.0	160.0		SPHWH2L3D30ED4T0K3
		130.0	160.0		SPHWH2L3D30ED4RTK3
		140.0	170.0		SPHWH2L3D30ED4RTM3
75	5000	140.0	170.0	SPHWH2L3D30DD4RTM3	
	5700	140.0	170.0	SPHWH2L3D30CD4QTM3	
	3000	120.0	150.0	SPHWH2L3D30CD4V0J3	
	130.0	160.0	SPHWH2L3D30CD4V0K3		
70	4000	130.0	160.0	SPHWH2L3D30CD4T0K3	
	150.0	180.0	SPHWH2L3D30CD4T0N3		
	130.0	160.0	SPHWH2L3D30CD4RTK3		
	140.0	170.0	SPHWH2L3D30CD4RTM3		
5000	150.0	180.0	SPHWH2L3D30CD4RTN3		
	130.0	160.0	SPHWH2L3D30CD4QTK3		
	140.0	170.0	SPHWH2L3D30CD4QTM3		
	150.0	180.0	SPHWH2L3D30CD4QTN3		
6500	130.0	160.0	SPHWH2L3D30CD4PTK3		
	140.0	170.0	SPHWH2L3D30CD4PTM3		
		150.0	180.0	SPHWH2L3D30CD4PTN3	

※ Bin option is available, please refer to data sheet for more details.

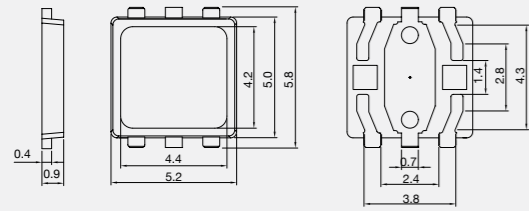
High Power LEDs

LH524B



The LH524B provide PSUless solution for candelabra

- 2W class AC LED
- 100 / 200V AC
- Footprint: 5.2mm x 5.8mm



CRI	CCT (K)	Luminous Flux (lm)		Forward Voltage (V)		IF (mA)	Part Number
		Min.	Typ.	Min.	Max.		
80	2700	150.0		220	240	13.5	SPHWHTHAN205S0W0JZ
	3000	150.0		100	120	27	SPHWHTHAN205S0V0JZ

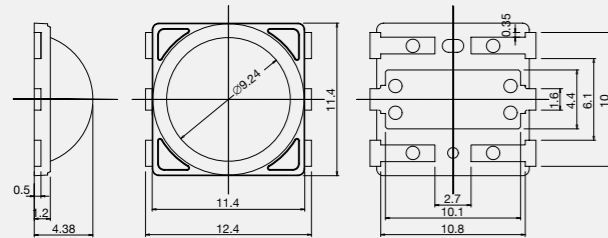
※ Bin option is available, please refer to data sheet for more details.

LH934A



AC direct powered LED eliminates the need for PSUs simplifying design requirements

- Suitable for retrofit lamps
- Reduced system complexity makes it easier to design-in
- Eliminating the PSU yields longer lifetimes and makes it more eco-friendly
- UL Recognized Component
- Footprint: 12.4mm x 11.4mm



CRI	CCT (K)	Luminous Flux (lm)		Forward Voltage (V)		IF (mA)	Part Number
		Min.	Typ.	Min.	Max.		
80	2700	355.0					SPHWHTHAD605S0W0U4
	3000	365.0					SPHWHTHAD605S0V0VZ
	3500	365.0		220	240	29	SPHWHTHAD605S0U0VZ
	4000	375.0		100	120	58	SPHWHTHAD605S0T0WZ
70	5000	460.0					SPHWHTHAD603S0R0MZ
	6500	460.0					SPHWHTHAD603S0P0LZ

※ Bin option is available, please refer to data sheet for more details.

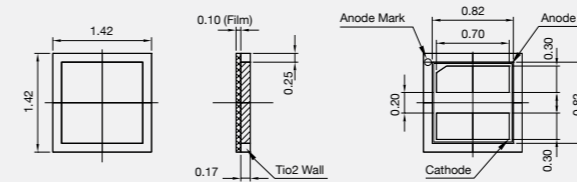
CSP

LM131A



Compact form factor for design flexibility

- 1W class mid power LED
- Completed 6,000 hours of LM-80 testing @ 350mA, 105 °C
- Compact footprint: 1.42mm x 1.42mm



CRI	CCT (K)	Luminous Flux (lm)		IF (mA)	Part Number
		Min.	Max.		
80	2700	82.0	106.0	300	SCS8WT78EFL1W08ECK
	3000	86.0	110.0		SCS8VT78EFL1V09FCK
	4000	94.0	118.0		SCS8TT78EFL1T0BHCK
	5000	98.0	122.0		SCS8RT78EFL1R0CICK
	6500	94.0	118.0		SCS8PT78EFL1P0BHCK

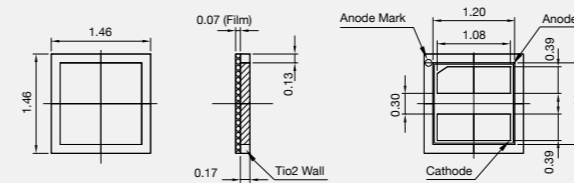
※ Bin option is available, please refer to data sheet for more details.

LH141A



Samsung flip chip provides optimized solution for torch / flash light

- 2W class high power LED
- Phosphor film directly attached to flip chip surface
- Plastic-free structure delivers low thermal resistance
- Compact footprint: 1.46mm x 1.46mm



CRI	CCT (K)	Luminous Flux (lm)		IF (mA)	Part Number
		Min.	Typ.		
68	5000	110.0	135.0	350	SCS6RTB6EFL1R0FZ6K
	6000	110.0	131.0		SCS6JTB6EFL1J0FZ6K
	7600	110.0	124.0		SCS6NTB6EFL1N0FZ6K

※ Bin option is available, please refer to data sheet for more details.

COB LEDs

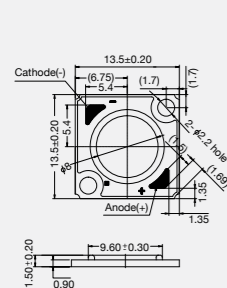
LC Series

High efficacy COB LED package with 90 CRI performance, well-suited for use in spotlight applications

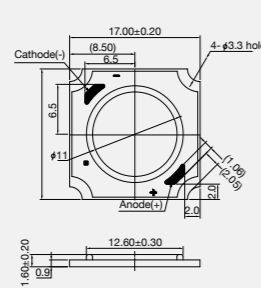
- Chip on Board (COB) solution makes it easy to design in
- Simple assembly reduces manufacturing cost
- Low thermal resistance
- InGaN/GaN MQW LED with long time reliability
- Completed 6,000 hours of LM-80 testing



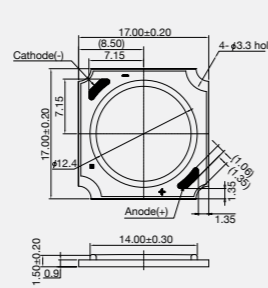
	LC006B	LC008B	LC013B	LC019B	LC026B	LC033B	LC040B
LES	8 mm		11 mm	12.4 mm	17 mm		
Typical	35.5 V	36.5 V	35.5 V				
	6.4 W (180 mA)	8.6 W (240 mA)	12.8 W (360 mA)	19.2 W (540 mA)	25.6 W (720 mA)	32 W (900 mA)	38.3 W (1080 mA)
Max.	12.2 W (320 mA)	15.8 W (430 mA)	24.4 W (660 mA)	36.3 W (980 mA)	48.1 W (1300 mA)	59.9 W (1620 mA)	70.3 W (1900 mA)
Size	13.5 x 13.5 mm		17.0 x 17.0 mm		21.5 x 21.5 mm		



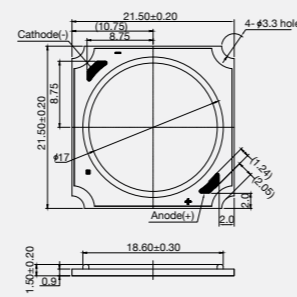
LC006B / LC008B



LC013B



LC019B



LC026B / LC033B / LC040B



Product	CRI Min.	CCT (K)	Tc = 25°C		Tc = 85°C		IF (mA)	Part Number
			Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)	Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)		
LC006B	95	2700	676	106	615	101	180	SPHWW1HDN828YHW3CC
		3000	719	113	655	107		SPHWW1HDN828YHV3CC
		3500	741	116	674	110		SPHWW1HDN828YHU3CC
	90	2700	755	118	687	112		SPHWW1HDN827YHW3CF
		3000	804	126	731	119		SPHWW1HDN827YHV3CF
		3500	828	130	753	123		SPHWW1HDN827YHU3CF
	80	4000	852	133	775	127		SPHWW1HDN827YHT3CF
		2700	878	137	799	131		SPHWW1HDN825YHW3ED
		3000	935	146	850	139		SPHWW1HDN825YHV3ED
		3500	963	151	876	143		SPHWW1HDN825YHU3ED
		4000	991	155	901	147		SPHWW1HDN825YHT3ED
		5000	1,001	157	911	149		SPHCW1HDN825YHRTED
70	5700	1,001	157	911	149	SPHCW1HDN825YHQTED		
	3000	994	156	894	146	SPHWW1HDN823YHVTGE		
	4000	1,057	165	951	156	SPHWW1HDN823YHTTGE		
LC008B	95	2700	927	106	844	101	240	SPHCW1HDN823YHRTGE
		3000	986	113	897	107		SPHWW1HDN948YHW3EC
		3500	1,016	116	924	110		SPHWW1HDN948YHV3EC
	90	2700	1,036	118	942	112		SPHWW1HDN948YHU3EC
		3000	1,102	126	1,003	119		SPHWW1HDN947YHW3FG
		3500	1,135	130	1,033	123		SPHWW1HDN947YHV3FG
	80	4000	1,168	133	1,063	127		SPHWW1HDN947YHT3FG
		2700	1,204	137	1,096	131		SPHWW1HDN945YHW3KE
		3000	1,281	146	1,166	139		SPHWW1HDN945YHV3KE
		3500	1,320	151	1,201	143		SPHWW1HDN945YHU3KE
		4000	1,358	155	1,236	147		SPHWW1HDN945YHT3KE
		5000	1,372	157	1,248	149		SPHCW1HDN945YHRTKE
70	5700	1,372	157	1,248	149	SPHCW1HDN945YHQTKKE		
	3000	1,362	156	1,226	146	SPHWW1HDN943YHVTMG		
	4000	1,440	164	1,296	154	SPHWW1HDN943YHTTGM		
LC013B	95	2700	1,387	109	1,304	103	360	SPHCW1HDN943YHRTMG
		3000	1,476	115	1,343	110		SPHWW1HDNA28YHW31E
		3500	1,520	119	1,383	113		SPHWW1HDNA28YHV31E
	90	2700	1,550	121	1,410	115		SPHWW1HDNA28YHU31F
		3000	1,649	129	1,500	123		SPHWW1HDNA27YHW31F
		3500	1,698	133	1,545	126		SPHWW1HDNA27YHV31F
	80	4000	1,749	137	1,592	130		SPHWW1HDNA27YHT31F
		2700	1,802	141	1,640	134		SPHWW1HDNA25YHW31F
		3000	1,917	150	1,744	143		SPHWW1HDNA25YHV31F
		3500	1,975	155	1,797	147		SPHWW1HDNA25YHU31F
		4000	2,032	159	1,849	151		SPHWW1HDNA25YHT31F
		5000	2,051	161	1,867	152		SPHCW1HDNA25YHRT1F
70	5700	2,051	161	1,867	152	SPHCW1HDNA25YHQ1F		
	3000	2,030	159	1,827	149	SPHWW1HDNA23YHVT1F		
	4000	2,157	169	1,941	159	SPHWW1HDNA23YHTT1F		
LC019B	95	2700	2,171	170	1,954	160	540	SPHCW1HDNA23YHRT1F
		3000	2,039	106	1,855	101		SPHWW1HDNB28YHW31F
		3500	2,169	113	1,974	107		SPHWW1HDNB28YHV31F
	90	2700	2,234	117	2,033	111		SPHWW1HDNB28YHU31F
		3000	2,278	119	2,073	113		SPHWW1HDNB27YHW32J
		3500	2,423	126	2,205	120		SPHWW1HDNB27YHV32J
	80	4000	2,496	130	2,272	124		SPHWW1HDNB27YHU32J
		2700	2,569	134	2,338	127		SPHWW1HDNB27YHT32J
		3000	2,649	138	2,411	131		SPHWW1HDNB25YHW32J
		3500	2,818	147	2,564	140		SPHWW1HDNB25YHV32J
		4000	2,903	151	2,641	144		SPHWW1HDNB25YHU32J
		5000	2,987	156	2,718	148		SPHWW1HDNB25YHT32J
70	5700	3,015	157	2,744	149	SPHCW1HDNB25YHRT2J		
	3000	3,015	157	2,744	149	SPHCW1HDNB25YHQ2J		
	4000	2,981	156	2,683	146	SPHWW1HDNB23YHVT2F		
LC019B	70	4000	3,172	165	2,854	156	SPHWW1HDNB23YHT2F	
		5000	3,193	167	2,873	157	SPHCW1HDNB23YHRT2F	

※ Bin option is available, please refer to data sheet for more details.



COB LEDs

Product	CRI Min.	CCT (K)	Tc = 25°C		Tc = 85°C		If (mA)	Part Number		
			Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)	Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)				
LC026B	95	2700	2,774	109	2,524	103	720	SPHWW1HDNC28YHW32F		
		3000	2,951	115	2,685	110		SPHWW1HDNC28YHV32F		
		3500	3,040	119	2,766	113		SPHWW1HDNC28YHU32F		
	90	2700	3,099	121	2,820	115		SPHWW1HDNC27YHW32F		
		3000	3,297	129	3,000	123		SPHWW1HDNC27YHV32F		
		3500	3,396	133	3,091	126		SPHWW1HDNC27YHU32F		
	80	4000	3,495	137	3,181	130		SPHWW1HDNC27YHT32F		
		2700	3,604	141	3,280	134		SPHWW1HDNC25YHW32F		
		3000	3,834	150	3,489	143		SPHWW1HDNC25YHV32F		
		3500	3,949	155	3,594	147		SPHWW1HDNC25YHU32F		
		4000	4,064	159	3,698	151		SPHWW1HDNC25YHT32F		
		5000	4,102	161	3,733	152		SPHCW1HDNC25YHRT3F		
70	5700	4,102	161	3,733	152	SPHCW1HDNC25YHQT3F				
	3000	4,064	159	3,658	149	SPHWW1HDNC23YHVT3F				
	4000	4,227	165	3,804	155	SPHWW1HDNC23YHTT3F				
	5000	4,267	167	3,841	157	SPHCW1HDNC23YHRT3F				
LC033B	95	2700	3,415	107	3,108	102	900	SPHWW1HDND28YHW33J		
		3000	3,633	114	3,306	108		SPHWW1HDND28YHV33J		
		3500	3,742	117	3,406	111		SPHWW1HDND28YHU33J		
	90	2700	3,816	119	3,473	113		SPHWW1HDND27YHW33P		
		3000	4,060	127	3,694	121		SPHWW1HDND27YHV33P		
		3500	4,182	131	3,805	124		SPHWW1HDND27YHU33P		
	80	4000	4,303	135	3,916	128		SPHWW1HDND27YHT33P		
		2700	4,437	139	4,038	132		SPHWW1HDND25YHW33P		
		3000	4,721	148	4,296	140		SPHWW1HDND25YHV33P		
		3500	4,862	152	4,425	145		SPHWW1HDND25YHU33P		
		4000	5,004	157	4,554	149		SPHWW1HDND25YHT33P		
		5000	5,051	158	4,596	150		SPHCW1HDND25YHRT3P		
	70	5700	5,051	158	4,596	150		SPHCW1HDND25YHQT3P		
		3000	5,004	157	4,504	147		SPHWW1HDND23YHVT4P		
		4000	5,215	163	4,694	153		SPHWW1HDND23YHTT4P		
		5000	5,251	164	4,726	154		SPHCW1HDND23YHRT4P		
	LC040B	95	2700	4,057	106	3,692		101	1,080	SPHWW1HDNE28YHW33M
			3000	4,316	113	3,927		107		SPHWW1HDNE28YHV33M
3500			4,445	116	4,045	110	SPHWW1HDNE28YHU33M			
90		2700	4,533	118	4,125	112	SPHWW1HDNE27YHW34J			
		3000	4,822	126	4,388	119	SPHWW1HDNE27YHV34J			
		3500	4,967	130	4,520	123	SPHWW1HDNE27YHU34J			
80		4000	5,112	133	4,652	127	SPHWW1HDNE27YHT34J			
		2700	5,271	137	4,796	131	SPHWW1HDNE25YHW34J			
		3000	5,607	146	5,103	139	SPHWW1HDNE25YHV34J			
		3500	5,775	151	5,256	143	SPHWW1HDNE25YHU34J			
		4000	5,944	155	5,409	147	SPHWW1HDNE25YHT34J			
		5000	6,000	156	5,460	149	SPHCW1HDNE25YHRT4J			
70		5700	6,000	156	5,460	149	SPHCW1HDNE25YHQT4J			
		3000	5,944	155	5,349	146	SPHWW1HDNE23YHVT4J			
		4000	6,181	161	5,563	152	SPHWW1HDNE23YHTT4J			
	5000	6,241	163	5,617	153	SPHCW1HDNE23YHRT5J				

※ Bin option is available, please refer to data sheet for more details.

Smart, Connected Illumination

Innovative platform solutions for the world of IoT

	CRI 95 Min.			CRI 90 Min.				CRI 80 Min.					CRI 70 Min.			
	2700K	3000K	3500K	2700K	3000K	3500K	4000K	2700K	3000K	3500K	4000K	5000K	5700K	3000K	4000K	5000K
MacAdam 3-Step	○	○	○	○	○	○	○	○	○	○	○	○	○			
MacAdam 2-Step	○	○	○	○	○	○	○	○	○	○	○					
MacAdam 7-Step (ANSI)												○	○	○	○	○

