

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 that redefine the worlds of TVs, smartphones, wearable devices, tablets, cameras, digital appliances, printers, medical equipment, network systems, and semiconductor and LED solutions. We are also leading in the Internet of Things space with the open platform SmartThings, our broad range of smart devices, and through proactive crossindustry collaboration. We employ 319,000 people across 84 countries with annual sales of US \$196 billion. To discover more, and for the latest news, feature articles and press material, please visit the Samsung Newsroom at news.samsung.com.

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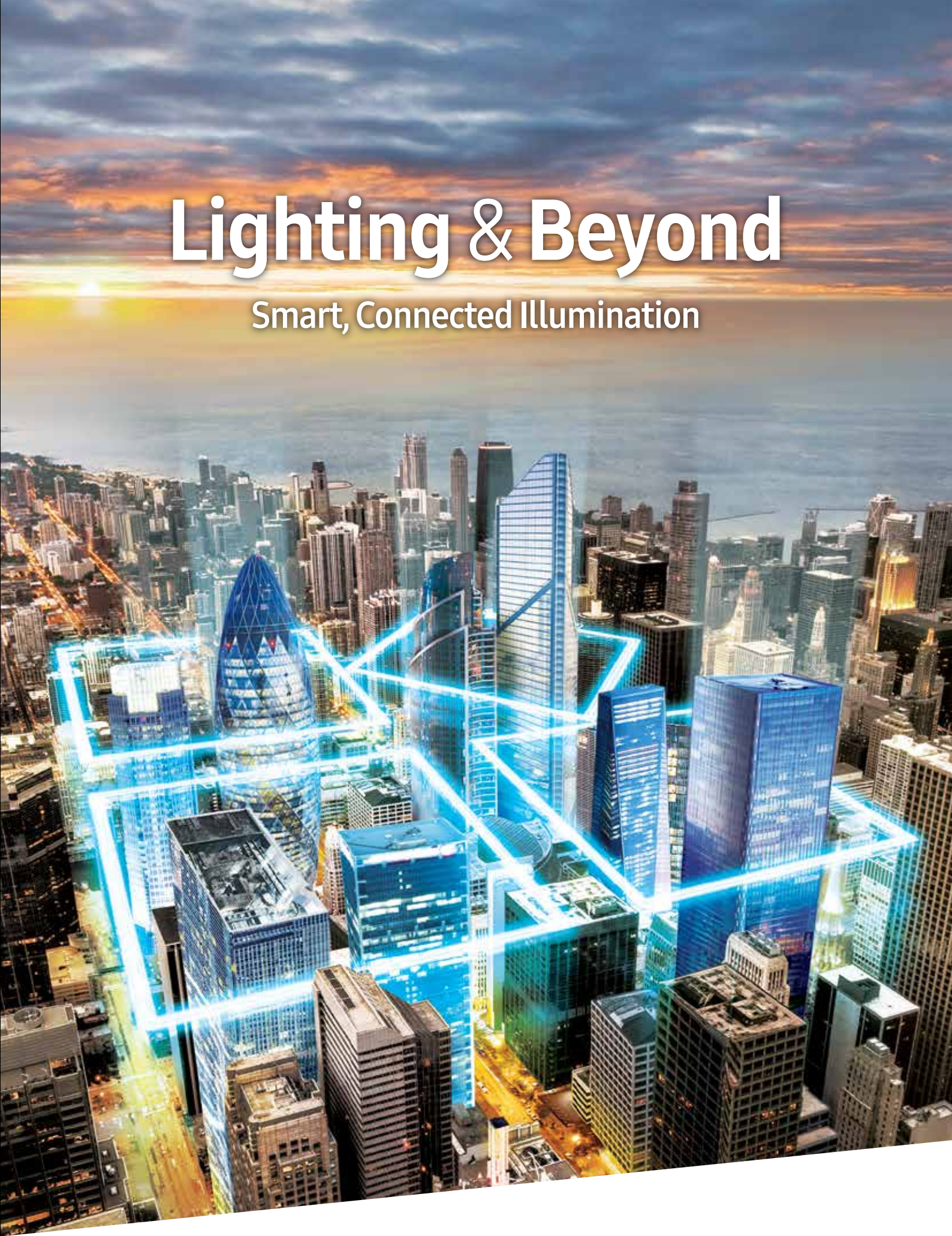
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www.samsungled.com

SAMSUNG

Lighting & Beyond

Smart, Connected Illumination



| Samsung LED Component

SAMSUNG

Overview & Technology

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 December 2015

Manufacturing Subsidiaries	32
R&D	33
Design Centers	6
Regional Headquarters	14

77

Countries

Brand Value

Ranked 7th in Global Brand Value, Samsung recorded a brand value of \$45.3 Billion in 2015.

※ Source : Interbrand / Business Week

Rank	Company	Rank	Company	Rank	Company	Rank	Company
1	Coca-Cola	1	Coca-Cola	1	Apple	5	IBM
2	IBM	2	Apple	2	Google	6	Toyota
3	Apple	3	IBM	3	Coca-Cola	8	GE
4	Google	4	Google	4	IBM	9	McDonald's
...	...	...	...	...	...	...	...
17	Samsung Electronics	7	Samsung Electronics	9	Intel	...	...
...	...	...	...	10	Toyota	...	...
35	Sony	19	Nokia	...	...	...	...
41	Phillips	20	Amazon	...	...	...	...

2011

2012

2013

2014-2015

Intellectual Property

In 2015, Samsung registered 5,072 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 10 consecutive years since 2006.

※ As of December 2015



2015 US Patents Registration

※ Source: The U.S. Patent and Trademark Office (USPTO)

SAMSUNG

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.

Vertical Integration

Unique company that has full in-house solutions from raw material to Light Engines and Smart Lighting Platform



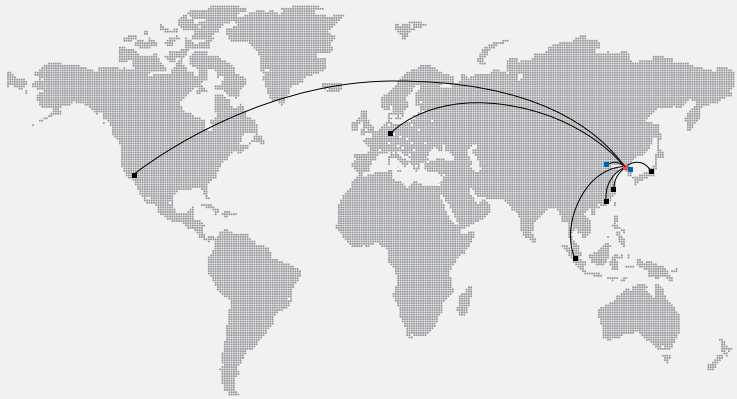
High Reliability

Quality management & design verification system for optimizing time-to-market



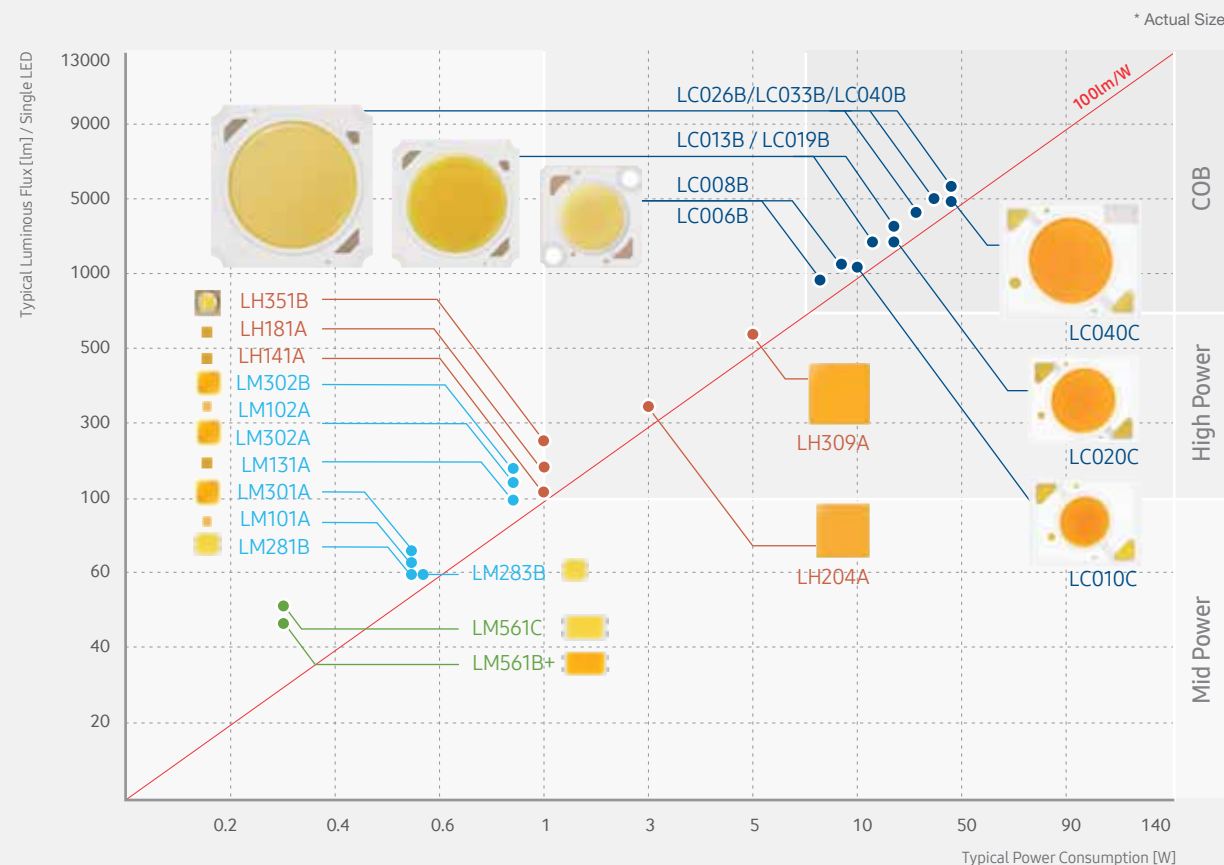
World Best SCM

Reliable, on-time delivery without delays



SAMSUNG

Samsung LED Line-up for illumination



Mid Power LED (0.3W)

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

High Power LED

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

Mid Power LED (~1W)

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

COB

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

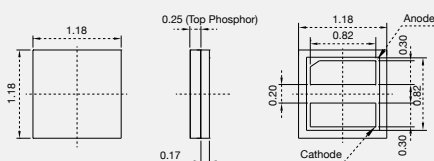
SAMSUNG

CSP

LM101A

Compact form factor for design flexibility

- 1 W class mid power LED
- Compact footprint: 1.18 mm x 1.18 mm



[150mA, 85°C]

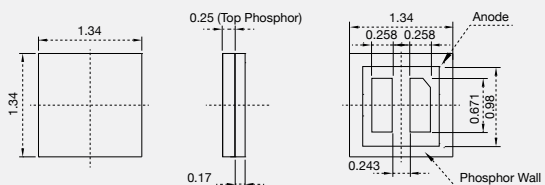
CRI Min.	CCT (K)	Luminous Flux (lm)		IF (mA)	Part Number
		Min.	Max.		
70	3000	55	67	150	SCS7VT78EPL1V0S06E
	3500	55	67		SCS7UT78EPL1U0S06E
	4000	59	71		SCS7TT78EPL1T0S06E
	5000	59	71		SCS7RT78EPL1R0S06E
	5700	59	71		SCS7QT78EPL1Q0S06E
	6500	59	71		SCS7PT78EPL1P0S06E
80	2700	47	59	150	SCS8WT78EPL1W0S06E
	3000	51	63		SCS8VT78EPL1V0S06E
	3500	51	63		SCS8UT78EPL1U0S06E
	4000	51	63		SCS8TT78EPL1T0S06E
	5000	55	67		SCS8RT78EPL1R0S06E
	5700	51	63		SCS8QT78EPL1Q0S06E
90	6500	51	63	150	SCS8PT78EPL1P0S06E
	2700	35	47		SCS9WT78EPL1W0S06E
	3000	35	47		SCS9VT78EPL1V0S06E
	3500	39	51		SCS9UT78EPL1U0S06E

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

LM102A

Compact form factor for design flexibility

- 1 W class mid power LED
- Compact footprint: 1.34 mm x 1.34 mm



[150mA, 85°C]

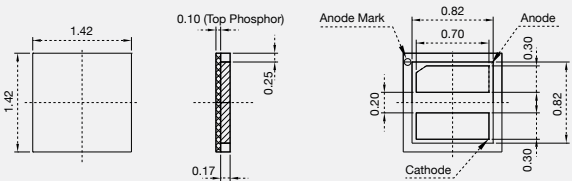
CRI Min.	CCT (K)	Luminous Flux (lm)		IF (mA)	Part Number
		Min.	Max.		
70	3000	103	119	150	SCS7VT93HPL2V0S03F
	3500	103	119		SCS7UT93HPL2U0S03F
	4000	119	135		SCS7TT93HPL2T0S03F
	5000	119	135		SCS7RT93HPL2R0S03F
	5700	127	143		SCS7QT93HPL2Q0S03F
	6500	127	143		SCS7PT93HPL2P0S03F
80	2700	95	111	150	SCS8WT93HPL2W0S03F
	3000	95	111		SCS8VT93HPL2V0S03F
	3500	103	119		SCS8UT93HPL2U0S03F
	4000	111	127		SCS8TT93HPL2T0S03F
	5000	111	127		SCS8RT93HPL2R0S03F
	5700	111	127		SCS8QT93HPL2Q0S03F
90	6500	111	127	150	SCS8PT93HPL2P0S03F
	2700	71	87		SCS9WT93HPL2W0S03F
	3000	63	79		SCS9VT93HPL2V0S03F
	3500	79	95		SCS9UT93HPL2U0S03F

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

LM131A

Compact form factor for design flexibility

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



[300mA, 25°C]

CRI Min.	CCT (K)	Luminous Flux (lm)		IF (mA)	Part Number
		Min.	Max.		
80	2700	82	106	300	SCS8WT78EFL1W08ECK
	3000	86	110		SCS8VT78EFL1V09FCK
	4000	94	118		SCS8TT78EFL1T0BHCK
	5000	98	122		SCS8RT78EFL1R0CICK
	6500	94	118		SCS8PT78EFL1P0BHCK

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

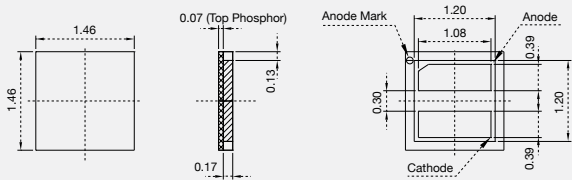
SAMSUNG

CSP

LH141A

Samsung flip chip provides optimized solution for torch / flash light

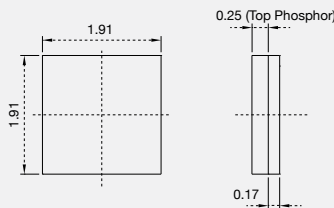
- 2 W class high power LED
- Phosphor film directly attached to flip chip surface
- Plastic-free structure delivers low thermal resistance
- Compact footprint: 1.46 mm x 1.46 mm



LH181A

Compact form factor for design flexibility

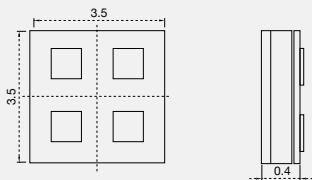
- 1W class high power LED
- High performance and superior lm/\$
- Compact form factor: 1.9 mm x 1.9 mm



LH204A

Compact form factor for design flexibility

- 3~5W class high power LED
- 2x2 CSP array provides high flux and great CBCP
- Compact form factor: 3.5 mm x 3.5 mm



[300mA, 25℃]

CRI Min.	CCT (K)	Luminous Flux (lm)		IF (mA)	Part Number
		Min.	Typ.		
68	5000	110	135	350	SCS6RTB6EFL1R0FZ6K
	6000	110	131		SCS6JTB6EFL1J0FZ6K
	7600	110	124		SCS6NTB6EFL1N0FZ6K

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

[350mA, 85℃]

CRI Min.	CCT (K)	Luminous Flux (lm)		IF (mA)	Part Number
		Typ.			
80	2700	133	350		SCS8W7FFHPL1W0XX6K
	4000	158			SCS7T7FFHPL1T0XX6K
70	5000	160			SCS7R7FFHPL1RTXX6K

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

[150mA, 85℃]

CRI Min.	CCT (K)	Luminous Flux (lm)		IF (mA)	Part Number
		Typ.			
90	2700	176	150		SPHWHTCAN50GW1W0XX
	3000	181			SPHWHTCAN50GW1V0XX
	2700	215			SPHWHTCAN50EW1W0XX
80	3000	221			SPHWHTCAN50EW1V0XX
	3500	228			SPHWHTCAN50EW1U0XX
	4000	233			SPHWHTCAN50EW1T0XX
	5000	239			SPHWHTCAN50EW1R0XX

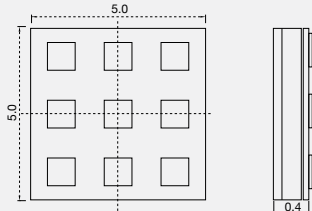
※ Bin option is available, please refer to data sheet for more details.

CSP / Mid Power LEDs

LH309A

Compact form factor for design flexibility

- 5~10W class high power LED
- 3x3 CSP array provides high flux and great CBCP
- Compact form factor: 5.0 mm x 5.0 mm



[150mA, 85℃]

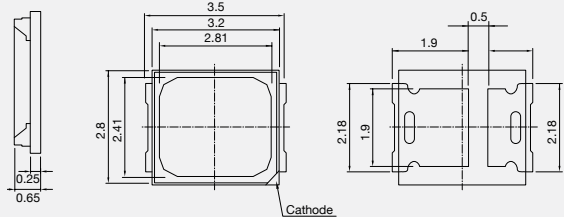
CRI Min.	CCT (K)	Luminous Flux (lm)		IF (mA)	Part Number
		Typ.			
90	2700	406	150		SPHWHTCAN00GX5W0XX
	3000	419			SPHWHTCAN00GX5V0XX
	2700	495			SPHWHTCAN00EX5W0XX
80	3000	509			SPHWHTCAN00EX5V0XX
	3500	527			SPHWHTCAN00EX5U0XX
	4000	537			SPHWHTCAN00EX5T0XX
	5000	552			SPHWHTCAN00EX5R0XX

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

LM281B

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

- 0.5 W class mid power LED
- Standard footprint: 2.8 mm x 3.5 mm



[150mA, 25℃]

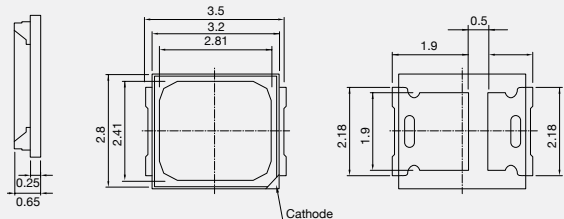
CRI Min.	CCT (K)	Luminous Flux (lm)		IF (mA)	Part Number
		Min.	Max.		
80	2700	53.3	65.3	150	SPMWH1228FD5WAW0S3
	3000	54.3	66.3		SPMWH1228FD5WAV0S3
	3500	55.3	67.3		SPMWH1228FD5WAW0S3
	4000	57.3	69.3		SPMWH1228FD5WAT0S3
	5000	59.3	71.3		SPMWH1228FD5WAR0S3
	5700	58.3	70.3		SPMWH1228FD5WAQ0S3
	6500	57.3	69.3		SPMWH1228FD5WAP0S3

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

LM283B

Designed for better lm/\$, lamps and downlights

- 0.5 W class mid power LED (9V)
- Standard footprint: 2.8 mm x 3.5 mm



[100mA, 25℃]

CRI Min.	CCT (K)	Luminous Flux (lm)		IF (mA)	Part Number
		Min.	Max.		
80	2700	98	118	100	SPMWH1229AD5SGW0SA
	3000	100	120		SPMWH1229AD5SGV0SA
	3500	103	123		SPMWH1229AD5SGU0SA
	4000	105	125		SPMWH1229AD5SGT0SA
	5000	110	130		SPMWH1229AD5SGR0SA
	5700	108	128		SPMWH1229AD5SGQ0SA
	6500	105	125		SPMWH1229AD5SGP0SA

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

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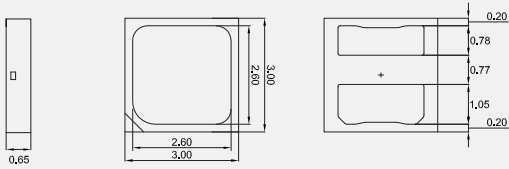
SAMSUNG

Mid Power LEDs

LM301A

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

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



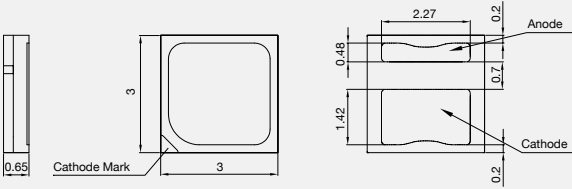
CRI Min.	CCT (K)	Luminous Flux (lm)		IF (mA)	Part Number
		Min.	Max.		
80	2700	50	58	150	SPMWHT328FD5WAW0S0
	3000	54	62		SPMWHT328FD5WAV0S0
	3500	54	62		SPMWHT328FD5WU0S0
	4000	58	66		SPMWHT328FD5WAT0S0
	5000	58	66		SPMWHT328FD5WAR0S0
	5700	58	66		SPMWHT328FD5WAQ0S0
70	6500	58	66	150	SPMWHT328FD5WAP0S0
	2700	54	62		SPMWHT328FD3WAW0S0
	3000	58	66		SPMWHT328FD3WAV0S0
	3500	58	66		SPMWHT328FD3WU0S0
	4000	62	70		SPMWHT328FD3WAT0S0
	5000	62	70		SPMWHT328FD3WAR0S0
	5700	62	70		SPMWHT328FD3WAQ0S0
	6500	62	70		SPMWHT328FD3WAP0S0

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

LM302A

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

- 1 W class mid-high power LED (6V)
- EMC resin for high reliability
- Standard footprint: 3.0 mm x 3.0 mm



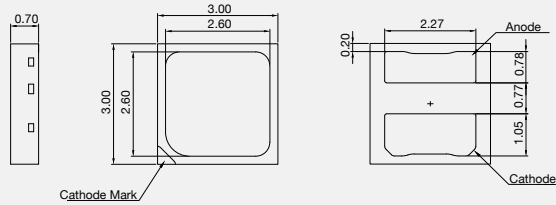
CRI Min.	CCT (K)	Luminous Flux (lm)		IF (mA)	Part Number
		Min.	Max.		
90	2700	88	96	150	SPMWHT327FD7GBW0S0
	3000	85	101		SPMWHT327FD7GBV0S0
	3500	87	103		SPMWHT327FD7GBU0S0
	4000	89	103		SPMWHT327FD7GBT0S0
	5000	89	105		SPMWHT327FD7GBR0S0
	5700	85	101		SPMWHT327FD7GBQ0S0
80	6500	83	99	150	SPMWHT327FD7GBP0S0
	2700	102	126		SPMWHT327FD5GBW0S0
	3000	104	128		SPMWHT327FD5GBV0S0
	3500	107	131		SPMWHT327FD5GBU0S0
	4000	109	133		SPMWHT327FD5GBT0S0
	5000	113	137		SPMWHT327FD5GBR0S0
70	5700	111	135	150	SPMWHT327FD5GBQ0S0
	6500	109	133		SPMWHT327FD5GBP0S0
	3000	112	128		SPMWHT327FD3GBV0S0
	4000	117	133		SPMWHT327FD3GBT0S0
	5000	121	137		SPMWHT327FD3GBR0S0
	5700	119	135		SPMWHT327FD3GBQ0S0

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

LM302B

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

- Superior mid power LED with wide over-drive range up to 1.5W
- Mold resin for high reliability
- Standard footprint: 3.0 mm x 3.0mm



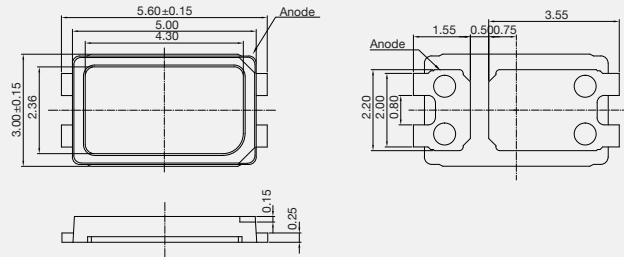
CRI Min.	CCT (K)	Luminous Flux (lm)		IF (mA)	Part Number
		Min.	Max.		
80	2700	100	116	150	SPMWHT329FD5YBW0S0
	3000	100	116		SPMWHT329FD5YBV0S0
	3500	108	124		SPMWHT329FD5YBU0S0
	4000	116	132		SPMWHT329FD5YBT0S0
	5000	116	132		SPMWHT329FD5YBR0S0
	5700	116	132		SPMWHT329FD5YBQ0S0
	6500	116	132		SPMWHT329FD5YBP0S0

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

LM561B Plus

Improved efficacy and performance of LM561B to provide better solution

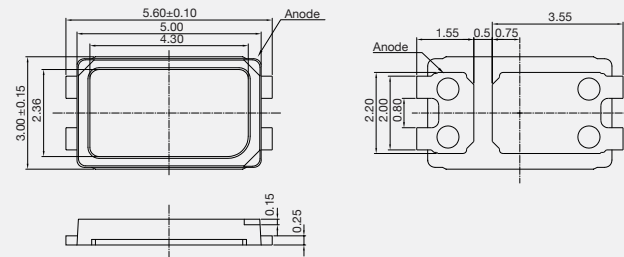
- 0.3 W class mid power LED
- High efficacy for distributed light
- Standard footprint: 5.6 mm x 3.0 mm



LM561C

Highest performance, highest lm/W for fluorescent lamp replacement

- 0.3 W class mid power LED
- Highest efficacy: 201 lm/W @ 65 mA, 5000 K, 80 CRI, 25°C
- Standard footprint: 5.6 mm x 3.0 mm



CRI Min.	CCT (K)	Luminous Flux (lm)		IF (mA)	Part Number
		Min.	Max.		
90	2700	22	28	65	SPMWHT541MP7WAW0S0
	3000	22.5	28.5		SPMWHT541MP7WAV0S0
	3500	23	29		SPMWHT541MP7WU0S0
	4000	24	30		SPMWHT541MP7WAT0S0
	5000	25	31		SPMWHT541MP7WAR0S0
	5700	24.5	30.5		SPMWHT541MP7WAQ0S0
80	6500	24	30	65	SPMWHT541MP7WAP0S0
	2700	30	32		SPMWHT541MP5WAW0S0
	3000	30.5	32.5		SPMWHT541MP5WAV0S0
	3500	31	33		SPMWHT541MP5WU0S0
	4000	32	34		SPMWHT541MP5WAT0S0
	5000	33	35		SPMWHT541MP5WAR0S0
80	5700	32.5	34.5	65	SPMWHT541MP5WAQ0S0
	6500	32	34		SPMWHT541MP5WAP0S0
	2700	30	34		SPMWHT541MP5WAWUS0
	3000	30.5	34.5		SPMWHT541MP5WAVUS0
	3500	31	35		SPMWHT541MP5WAUUS0
	4000	32	36		SPMWHT541MP5WATUS0
MacAdam 3 step	5000	33	37	65	SPMWHT541MP5WARUS0
	5700	32.5	36.5		SPMWHT541MP5WAQUS0
	6500	32	36		SPMWHT541MP5WAPUS0

※ 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	30	34	65	SPMWHT541ML5XAW0S0
	3000	30.5	34.5		SPMWHT541ML5XAV0S0
	3500	31	35		SPMWHT541ML5XAU0S0
	4000	32	36		SPMWHT541ML5XAT0S0
	5000	33	37		SPMWHT541ML5XAR0S0
	5700	32.5	36.5		SPMWHT541ML5XAQ0S0
80	6500	32	36	65	SPMWHT541ML5XAP0S0
	2700	30	34		SPMWHT541ML5XAWUS0
	3000	30.5	34.5		SPMWHT541ML5XAVUS0
	3500	31	35		SPMWHT541ML5XAUS0
	4000	32	36		SPMWHT541ML5XATUS0
	5000	33	37		SPMWHT541ML5XARUS0
MacAdam 3 step	5700	32.5	36.5	65	SPMWHT541ML5XAQUS0
	6500	32	36		SPMWHT541ML5XAPUS0

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

SAMSUNG

SAMSUNG

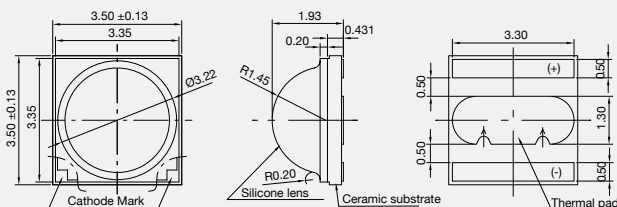
High Power LEDs

LH351B



High performance for outdoors & directional lighting applications

- Operates at a maximum current of up to 1.5A
- High efficacy outdoor solution (Delivering set efficacy over 110lm/W@700mA)
- Excellent efficacy : 172lm/W @350mA, 85°C 5000K
- LM80 Certified @ 1A, 105°C (Ts) (L70>60,000 @ 1A)
- Footprint: 3.5 mm x 3.5 mm



[350mA, 85°C]

CRI Min.	CCT (K)	Luminous Flux (lm)		IF (mA)	Part Number
		Min.	Max.		
90	2700	90	120	350	SPHWH2L3D30GD4W0F3
		100	130		SPHWH2L3D30GD4W0G3
	3000	90	120		SPHWH2L3D30GD4V0F3
		100	130		SPHWH2L3D30GD4V0G3
	3500	100	130		SPHWH2L3D30GD4U0G3
		110	140		SPHWH2L3D30GD4U0H3
80	2700	110	140		SPHWH2L3D30ED4W0H3
		120	150		SPHWH2L3D30ED4W0J3
	3000	110	140		SPHWH2L3D30ED4V0H3
		120	150		SPHWH2L3D30ED4V0J3
	3500	120	150		SPHWH2L3D30ED4V0K3
		130	160		SPHWH2L3D30ED4U0J3
75	3500	120	150	350	SPHWH2L3D30ED4U0K3
		130	160		SPHWH2L3D30ED4T0J3
	4000	130	160		SPHWH2L3D30ED4T0K3
		140	170		SPHWH2L3D30ED4T0M3
	5000	130	160		SPHWH2L3D30ED4RTK3
		140	170		SPHWH2L3D30ED4RTM3
70	5000	140	170		SPHWH1L3D30DD4RTM3
		150	180		SPHWH1L3D30DD4RTN3
	5700	140	170		SPHWH2L3D30DD4QTM3
		150	180		SPHWH2L3D30DD4QTN3
	3000	130	160		SPHWH2L3D30CD4V0K3
		140	170		SPHWH2L3D30CD4V0M3
65	4000	140	170		SPHWH2L3D30CD4T0M3
		150	180		SPHWH2L3D30CD4T0N3
	5000	140	170		SPHWH2L3D30CD4RTM3
		150	180		SPHWH2L3D30CD4RTN3
	5700	140	170		SPHWH2L3D30CD4RTP3
		150	180		SPHWH2L3D30CD4QTM3
60	6500	140	170		SPHWH2L3D30CD4QTN3
		150	180		SPHWH2L3D30CD4PTM3
	4000	140	170		SPHWH2L3D30CD4PTN3
		150	180		SPHWH2L3D30BD4T0M3
	5000	140	170		SPHWH2L3D30BD4T0N3
		160	190		SPHWH2L3D30BD4T0P3
55	5000	150	180		SPHWH2L3D30BD4RTN3
		160	190		SPHWH2L3D30BD4RTP3
	5700	150	180		SPHWH2L3D30BD4RTQ3
		160	190		SPHWH2L3D30BD4QTN3
	6500	150	180		SPHWH2L3D30BD4QTP3
		160	190		SPHWH2L3D30BD4PTN3
50	6500	160	190		SPHWH2L3D30BD4PTP3
		170	200		SPHWH2L3D30BD4PTQ3

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

SAMSUNG

COB LEDs

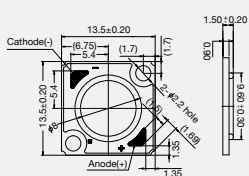
LC Series

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

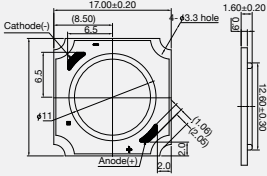
- Chip on Board (COB) solution makes it easy to design in
- Simple assembly reduces manufacturing cost
- Low thermal resistance
- InGaN/GaN MQW LED with long time reliability
- Completed 6,000 hours of LM-80 testing



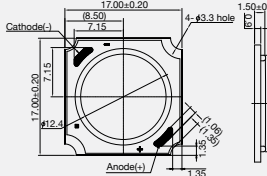
	Standard COB							Small LES COB		
	LC006B	LC008B	LC013B	LC019B	LC026B	LC033B	LC040B	LC010C	LC020C	LC040C
LES	8 mm		11 mm	12.4 mm	17 mm			6 mm	8 mm	11 mm
Typical	35.5 V @25°C		36.5 V @25°C		35.5 V @25°C			34.5 V @85°C		
Max.	6.4 W (180 mA)	8.6 W (240 mA)	12.8 W (360 mA)	19.2 W (540 mA)	25.6 W (720 mA)	32 W (900 mA)	38.3 W (1,080 mA)	9.3 W (270 mA)	18.6 W (540 mA)	37.3 W (1,080 mA)
Size	13.5 x 13.5 mm		17.0 x 17.0 mm		21.5 x 21.5 mm			12.0 x 15.0 mm		16.0 x 19.0 mm



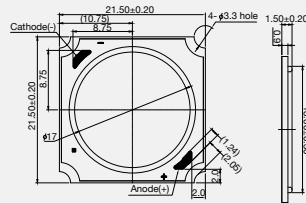
LC006B / LC008B



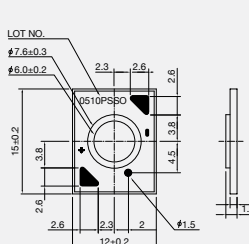
LC013B



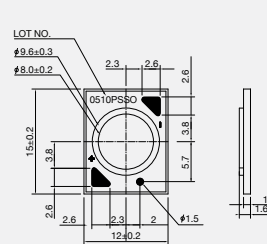
LC019B



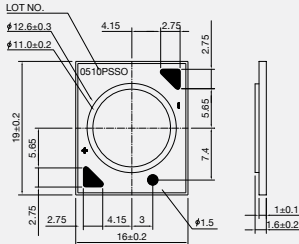
LC026B / LC033B / LC040B



LC010C



LC020C



LC040C

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COB LEDs | Standard COB Gen2

Product	CRI Min.	CCT (K)	Tc = 25℃		Tc = 85℃		IF (mA)	Part Number
			Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)	Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)		
LC006B	Vivid	3000	800	125	728	118	180	SPHWW1HDN82VYHV3CF
		3500	816	128	742	120		SPHWW1HDN82VYHU3CF
		4000	824	129	749	121		SPHWW1HDN82VYHT3CF
	95	2700	683	107	622	101		SPHWW1HDN828YHW3CC
		3000	704	110	641	104		SPHWW1HDN828YHV3CC
		3500	726	114	660	107		SPHWW1HDN828YHU3CC
	90	2700	768	120	698	113		SPHWW1HDN827YHW3CG
		3000	800	125	728	118		SPHWW1HDN827YHV3CG
		3500	816	128	742	120		SPHWW1HDN827YHU3CG
	80	4000	824	129	749	121		SPHWW1HDN827YHT3CG
		2700	914	143	832	134		SPHWW1HDN825YHW3EE
		3000	952	149	866	140		SPHWW1HDN825YHV3EE
		3500	971	152	884	143		SPHWW1HDN825YHU3EE
	70	4000	990	155	901	146		SPHWW1HDN825YHT3EE
		5000	980	153	892	144		SPHCW1HDN825YHRT EE
		5700	980	153	892	144		SPHCW1HDN825YHQT EE
	Vivid	3000	980	153	882	143		SPHWW1HDN823YHVTGE
		4000	1,029	161	926	150		SPHWW1HDN823YHTTGE
		5000	1,039	163	935	151		SPHCW1HDN823YHRTGE
LC008B	Vivid	3000	1,091	124	992	117	240	SPHWW1HDN94VYHV3FG
		3500	1,112	127	1,012	119		SPHWW1HDN94VYHU3FG
		4000	1,123	128	1,022	121		SPHWW1HDN94VYHT3FG
	95	2700	932	106	848	100		SPHWW1HDN948YHW3EC
		3000	961	110	874	103		SPHWW1HDN948YHV3EC
		3500	990	113	900	106		SPHWW1HDN948YHU3EC
	90	2700	1,047	120	953	112		SPHWW1HDN947YHW3FG
		3000	1,091	124	992	117		SPHWW1HDN947YHV3FG
		3500	1,112	127	1,012	119		SPHWW1HDN947YHU3FG
	80	4000	1,123	128	1,022	121		SPHWW1HDN947YHT3FG
		2700	1,246	142	1,134	134		SPHWW1HDN945YHW3KH
		3000	1,298	148	1,181	139		SPHWW1HDN945YHV3KH
		3500	1,324	151	1,205	142		SPHWW1HDN945YHU3KH
	70	4000	1,351	154	1,229	145		SPHWW1HDN945YHT3KH
		5000	1,337	153	1,217	143		SPHCW1HDN945YHRTKH
		5700	1,337	153	1,217	143		SPHCW1HDN945YHQT KH
	Vivid	3000	1,337	153	1,203	142		SPHWW1HDN943YHVTMG
		4000	1,404	160	1,264	149		SPHWW1HDN943YHTTMG
		5000	1,417	162	1,276	150		SPHCW1HDN943YHRTMG
LC013B	Vivid	3000	1,632	128	1,485	120	360	SPHWW1HDNA2VYHV31F
		3500	1,664	130	1,515	122		SPHWW1HDNA2VYHU31F
		4000	1,681	132	1,529	124		SPHWW1HDNA2VYHT31F
	95	2700	1,394	109	1,269	103		SPHWW1HDNA28YHW31E
		3000	1,437	112	1,308	106		SPHWW1HDNA28YHV31E
		3500	1,481	116	1,347	109		SPHWW1HDNA28YHU31E
	90	2700	1,566	123	1,425	115		SPHWW1HDNA27YHW31G
		3000	1,632	128	1,485	120		SPHWW1HDNA27YHV31G
		3500	1,664	130	1,515	122		SPHWW1HDNA27YHU31G
	80	4000	1,681	132	1,529	124		SPHWW1HDNA27YHT31G
		2700	1,865	146	1,697	137		SPHWW1HDNA25YHW31E
		3000	1,943	152	1,768	143		SPHWW1HDNA25YHV31E
		3500	1,981	155	1,803	146		SPHWW1HDNA25YHU31E
	70	4000	2,021	158	1,839	149		SPHWW1HDNA25YHT31E
		5000	2,001	157	1,821	147		SPHCW1HDNA25YHRT1E
		5700	2,001	157	1,821	147		SPHCW1HDNA25YHQT1E
	Vivid	3000	2,001	157	1,801	146		SPHWW1HDNA23YHVT1F
		4000	2,101	164	1,891	153		SPHWW1HDNA23YHTT1F
		5000	2,121	166	1,909	154		SPHCW1HDNA23YHRT1F

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

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Product	CRI Min.	CCT (K)	Tc = 25℃		Tc = 85℃		IF (mA)	Part Number
			Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)	Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)		
LC019B	Vivid	3000	2,399	125	2,183	118	540	SPHWW1HDNB2VYHV32J
		3500	2,447	128	2,226	120		SPHWW1HDNB2VYHU32J
		4000	2,471	129	2,248	121		SPHWW1HDNB2VYHT32J
	95	2700	2,050	107	1,865	101		SPHWW1HDNB28YHW31F
		3000	2,113	110	1,923	104		SPHWW1HDNB28YHV31F
		3500	2,177	114	1,981	107		SPHWW1HDNB28YHU31F
	90	2700	2,303	120	2,095	113		SPHWW1HDNB27YHW32K
		3000	2,399	125	2,183	118		SPHWW1HDNB27YHV32K
		3500	2,447	128	2,226	120		SPHWW1HDNB27YHU32K
	80	4000	2,471	129	2,248	121		SPHWW1HDNB27YHT32K
		2700	2,741	143	2,495	134		SPHWW1HDNB25YHW31H
		3000	2,856	149	2,599	140		SPHWW1HDNB25YHV31H
		3500	2,913	152	2,651	143		SPHWW1HDNB25YHU31H
	70	4000	2,971	155	2,704	146		SPHWW1HDNB25YHT31H
		5000	2,941	153	2,677	144		SPHCW1HDNB25YHRT1H
		5700	2,941	153	2,677	144		SPHCW1HDNB25YHQT1H
	70	3000	2,941	153	2,647	143		SPHWW1HDNB23YHVT2F
		4000	3,088	161	2,779	150		SPHWW1HDNB23YHTT2F
		5000	3,118	163	2,806	151		SPHCW1HDNB23YHRT2F
LC026B	Vivid	3000	3,264	128	2,970	120	720	SPHWW1HDNC2VYHV32F
		3500	3,329	130	3,029	122		SPHWW1HDNC2VYHU32F
		4000	3,361	132	3,059	124		SPHWW1HDNC2VYHT32F
	95	2700	2,789	109	2,538	103		SPHWW1HDNC28YHW32F
		3000	2,875	112	2,616	106		SPHWW1HDNC28YHV32F
		3500	2,961	116	2,695	109		SPHWW1HDNC28YHU32F
	90	2700	3,133	123	2,851	115		SPHWW1HDNC27YHW32G
		3000	3,264	128	2,970	120		SPHWW1HDNC27YHV32G
		3500	3,329	130	3,029	122		SPHWW1HDNC27YHU32G
	80	4000	3,361	132	3,059	124		SPHWW1HDNC27YHT32G
		2700	3,730	146	3,394	137		SPHWW1HDNC25YHW32H
		3000	3,885	152	3,535	143		SPHWW1HDNC25YHV32H
		3500	3,963	155	3,606	146		SPHWW1HDNC25YHU32H
	70	4000	4,042	158	3,678	149		SPHWW1HDNC25YHT32H
		5000	4,002	157	3,642	147		SPHCW1HDNC25YHRT2H
		5700	4,002	157	3,642	147		SPHCW1HDNC25YHQT2H
	70	3000	4,002	157	3,602	146		SPHWW1HDNC23YHVT3F
		4000	4,202	164	3,782	153		SPHWW1HDNC23YHTT3F
		5000	4,242	166	3,818	154		SPHCW1HDNC23YHRT3F
LC033B	Vivid	3000	4,018	126	3,657	118	900	SPHWW1HDND2VYHV33P
		3500	4,099	128	3,730	121		SPHWW1HDND2VYHU33P
		4000	4,139	130	3,766	122		SPHWW1HDND2VYHT33P
	95	2700	3,434	107	3,125	101		SPHWW1HDND28YHW33J
		3000	3,540	111	3,221	104		SPHWW1HDND28YHV33J
		3500	3,646	114	3,318	107		SPHWW1HDND28YHU33J
	90	2700	3,857	121	3,510	113		SPHWW1HDND27YHW33Q
		3000	4,018	126	3,657	118		SPHWW1HDND27YHV33Q
		3500	4,099	128	3,730	121		SPHWW1HDND27YHU33Q
	80	4000	4,139	130	3,766	122		SPHWW1HDND27YHT33Q
		2700	4,592	144	4,179	135		SPHWW1HDND25YHW33H
		3000	4,784	150	4,353	141		SPHWW1HDND25YHV33H
		3500	4,879	153	4,440	144		SPHWW1HDND25YHU33H
	70	4000	4,977	156	4,529	146		SPHWW1HDND25YHT33H
		5000	4,927	154	4,484	145		SPHCW1HDND25YHRT3H
		5700	4,927	154	4,484	145		SPHCW1HDND25YHQT3H
	70	3000	4,927	154	4,434	143		SPHWW1HDND23YHVT4P
		4000	5,173	162	4,656	151		SPHWW1HDND23YHTT4P
		5000	5,223	163	4,700	152		SPHCW1HDND23YHRT4P
LC040B	Vivid	3000	4,773	124	4,343	117	1,080	SPHWW1HDNE2VYHV34J
		3500	4,868	127	4,430	119		SPHWW1HDNE2VYHU34J
		4000	4,916	128	4,474	121		SPHWW1HDNE2VYHT34J
	95	2700	4,079	106	3,711	100		SPHWW1HDNE28YHW33M
		3000	4,205	110	3,826	103		SPHWW1HDNE28YHV33M
		3500	4,331	113	3,941	106		SPHWW1HDNE28YHU33M
	90	2700	4,582	120	4,170	112		SPHWW1HDNE27YHW34K
		3000	4,773	124	4,343	117		SPHWW1HDNE27YHV34K
		3500	4,868	127	4,430	119		SPHWW1HDNE27YHU34K
	80	4000	4,916	128	4,474	121		SPHWW1HDNE27YHT34K
		2700	5,455	142	4,964	134		SPHWW1HDNE25YHW34H
		3000	5,682	148	5,171	139		SPHWW1HDNE25YHV34H
		3500	5,796	151	5,274	142		SPHWW1HDNE25YHU34H
	70	4000	5,912	154	5,380	145		SPHWW1HDNE25YHT34H
		5000	5,852	153	5,326	143		SPHCW1HDNE25YHRT4H
		5700	5,852	153	5,326	143		SPHCW1HDNE25YHQT4H
	70	3000	5,852	153	5,267	142		SPHWW1HDNE28YHW33M
		4000	6,145	160	5,531	149		SPHWW1HDNE28YHV33M
		5000	6,204	162	5,583	150		SPHWW1HDNE28YHU33M

COB LEDs | Small LES COB

Product	CRI Min.	CCT (K)	Tc = 25℃		Tc = 85℃		IF (mA)	Part Number
			Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)	Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)		
LC010C	90	2700	962	99	871	93	270	SPHWH2HDNA07YHW3C1
		3000	985	101	892	96		SPHWH2HDNA07YHV3C1
		3500	997	103	903	97		SPHWH2HDNA07YHU3C1
		4000	1,020	105	924	99		SPHWH2HDNA07YHT3C1
	80	2700	1,102	113	998	107		SPHWH2HDNA05YHW3C1
		3000	1,173	121	1,062	114		SPHWH2HDNA05YHV3C1
		3500	1,229	126	1,113	119		SPHWH2HDNA05YHU3C1
		4000	1,277	131	1,156	124		SPHWH2HDNA05YHT3C1
		5000	1,337	138	1,211	130		SPHWH2HDNA05YHRTC1
		5700	1,337	138	1,211	130		SPHWH2HDNA05YHQTCT1
LC020C	90	2700	1,923	99	1,742	93	540	SPHWH2HDNC07YHW3C1
		3000	1,970	101	1,784	96		SPHWH2HDNC07YHV3C1
		3500	1,993	103	1,805	97		SPHWH2HDNC07YHU3C1
		4000	2,040	105	1,848	99		SPHWH2HDNC07YHT3C1
	80	2700	2,204	113	1,996	107		SPHWH2HDNC05YHW3C1
		3000	2,345	121	2,124	114		SPHWH2HDNC05YHV3C1
		3500	2,458	126	2,226	119		SPHWH2HDNC05YHU3C1
		4000	2,554	131	2,313	124		SPHWH2HDNC05YHT3C1
		5000	2,673	138	2,421	130		SPHWH2HDNC05YHRTC1
		5700	2,673	138	2,421	130		SPHWH2HDNC05YHQTCT1
LC040C	90	2700	3,846	99	3,483	93	1,080	SPHWH2HDNE07YHW3C1
		3000	3,940	101	3,568	96		SPHWH2HDNE07YHV3C1
		3500	3,987	103	3,610	97		SPHWH2HDNE07YHU3C1
		4000	4,081	105	3,695	99		SPHWH2HDNE07YHT3C1
	80	2700	4,409	113	3,993	107		SPHWH2HDNE05YHW3C1
		3000	4,690	121	4,248	114		SPHWH2HDNE05YHV3C1
		3500	4,915	126	4,452	119		SPHWH2HDNE05YHU3C1
		4000	5,108	131	4,626	124		SPHWH2HDNE05YHT3C1
		5000	5,347	138	4,842	130		SPHWH2HDNE05YHRTC1
		5700	5,347	138	4,842	130		SPHWH2HDNE05YHQTCT1

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

	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	O	O	O	O	O	O	O	O	O	O	O	O	O			
MacAdam 2-Step	O	O	O	O	O	O	O	O	O	O	O					
MacAdam 7-Step (ANSI)												O	O	O	O	O

SAMSUNG

Certification Support Program

To provide more valuable services for your successful business

Program Overview

Pre-Certification Test Support

Product structure, test and review by Samsung.
Samsung is an accredited partner of UL, VDE & KOLAS

Certification Accreditations Support

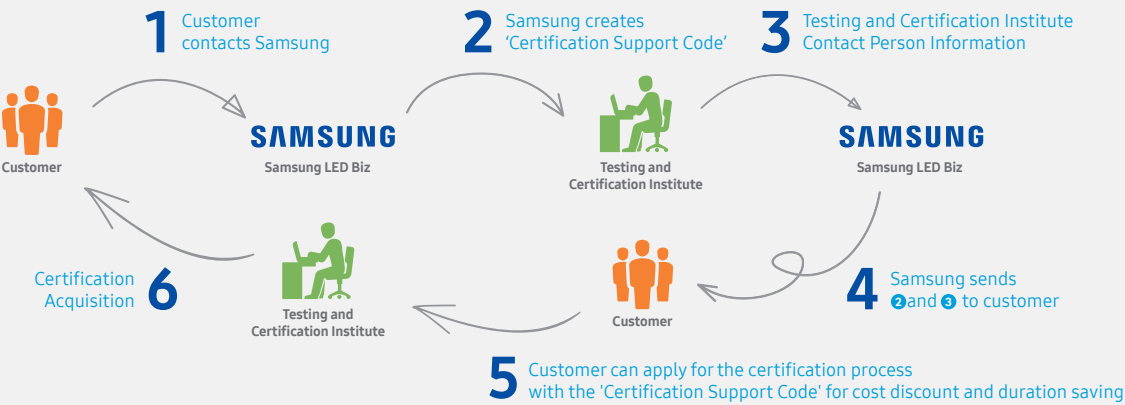
- Customer support for **Cost and Test Period Saving for the EU, US & ASIA certification**
- Global certification program roll out soon to be available

Customer Benefit

Certification		ETL, Energy Star, DLC ¹⁾ , FCC, LM 79		KS/High Efficiency	PSE	S-Mark	CE, ErP, ENEC, ENEC+, EU Eco-Label, GS mark		CCC/CQC	
Customer Location		US	Korea/China	-			EU/US/Asia	China	Korea	China
Cost Discount	Testing	-20%	-30%	-30%	-30%	-30%	-20%	-30%	-20%	-30%
	Handling	-	-	-	-	-	-	-	-	-
Test Period Savings		-30 ~ -50%	-30 ~ -50%	-20 ~ -30%			-20 ~ -30%	-20 ~ -30%	-20 ~ -30%	-20 ~ -30%
Company		Intertek		KTL (Korea Testing Laboratory)			TUV SUD		CCIC	
Branch		North America, China, Hong Kong, Korea		Korea, China			North America, Germany, China, Hong Kong, Singapore, Taiwan, Korea		Korea, China	

1) Energy Star, DLC's duration is not included for Lumen Maintenance test duration.
2) Discount rate is based on the standard price of Companies.

Process



Testing and Certification Institute



Contact us : www.samsung.com/global/business/led/contact-us

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