

TCI 
professional led applications

SAMSUNG

COBs

Overview & Technology

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



Samsung Electronics



1969

Company
Founded



Vision 2020

Inspire the World,
Create the Future



308,745+

Employees
in 79 Countries

Innovation & Market Leadership



7

Design Centers



34

R&D Centers

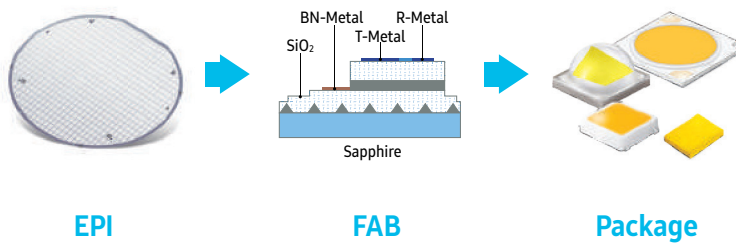


6th

Best Global Brand 2018

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.

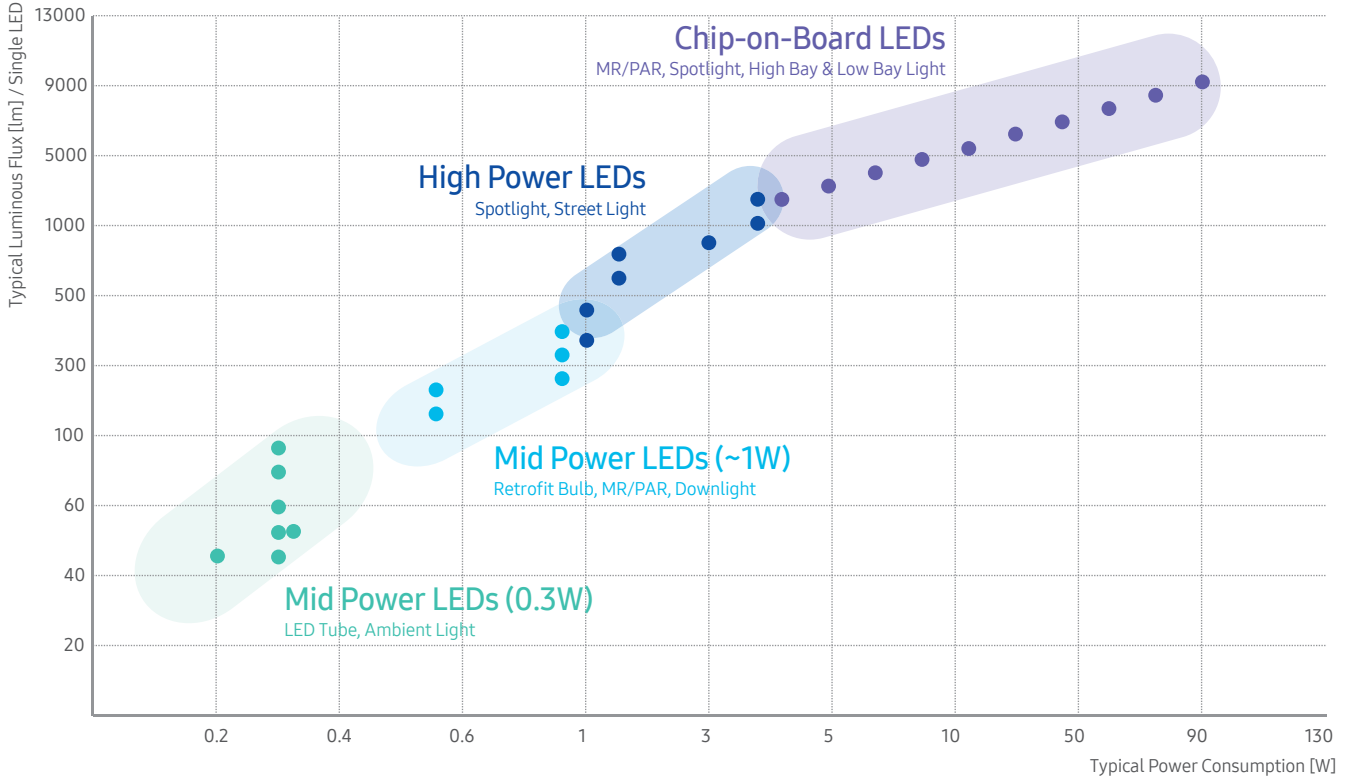
Vertically Integrated Solution Provider



Reliable, On-Time Delivery without Delays



Samsung LED Line-up for Illumination



Mid Power LEDs (0.3W)

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

Mid Power LEDs (~1W)

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

Chip-on-Board LEDs

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

High Power LEDs

- Ultra high flux
- Provides excellent color consistency
- Spotlight, Street Light

Perfect Atmosphere Created by Light

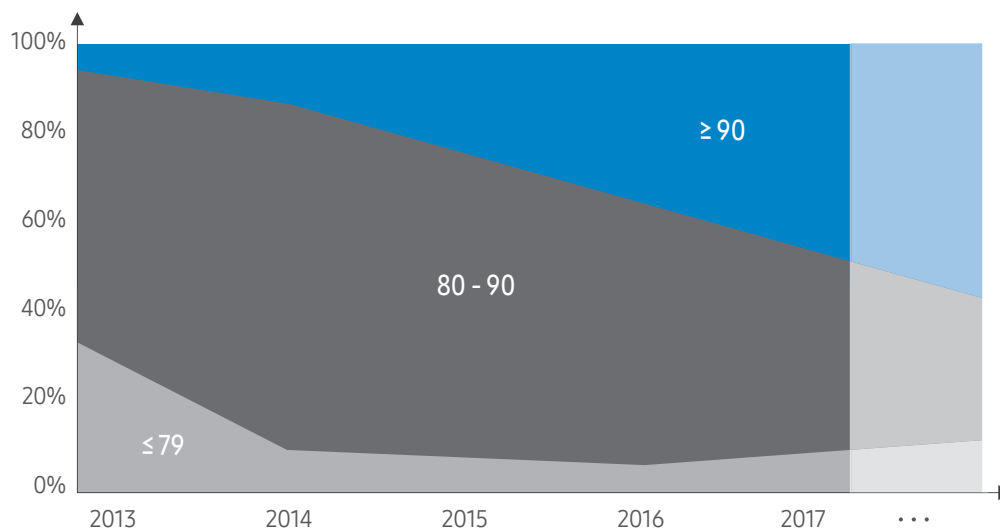
Carefully tuned light intensity and color can influence customers' behavior. It can lead customers to stay longer in the store and eventually result in sales increase



Adam de Guerra_Design Director, Glowing Structure (Light. Space. Design Summit, March 2019 Australia)

Lightings Go Natural

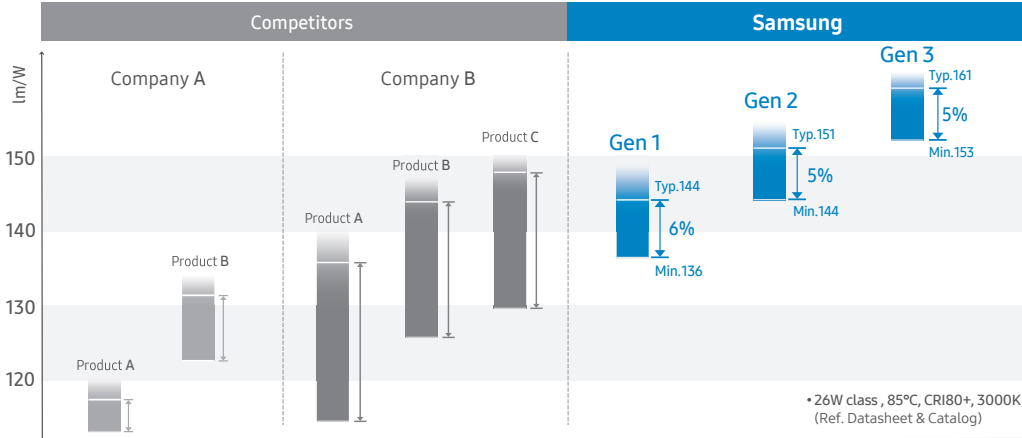
Market demands for more accurate rendering of natural color increased significantly from 4% to 49%



Energy Efficient Light Source

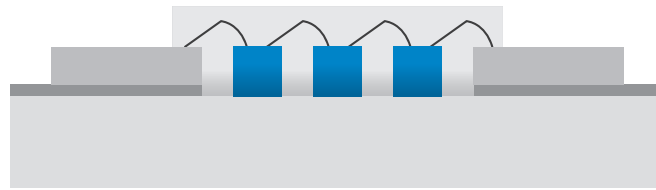
Industry-leading Efficacy

Superior performance based on advanced LED technologies, Samsung COB series provide the industry-leading light efficacy



High Reliability

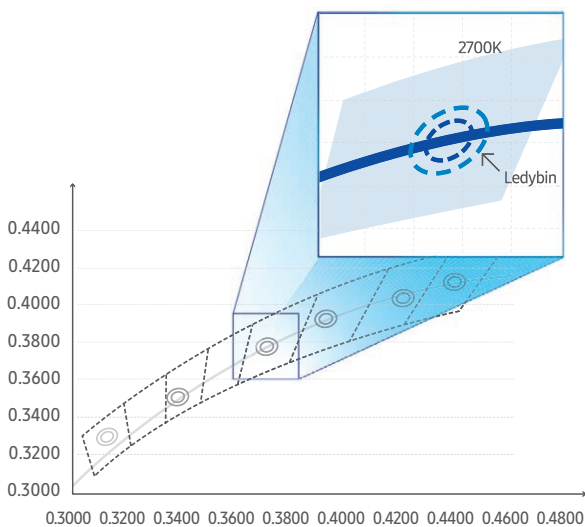
Metal substrate and small chip structure enable low thermal resistance and high reliability



High Color Quality

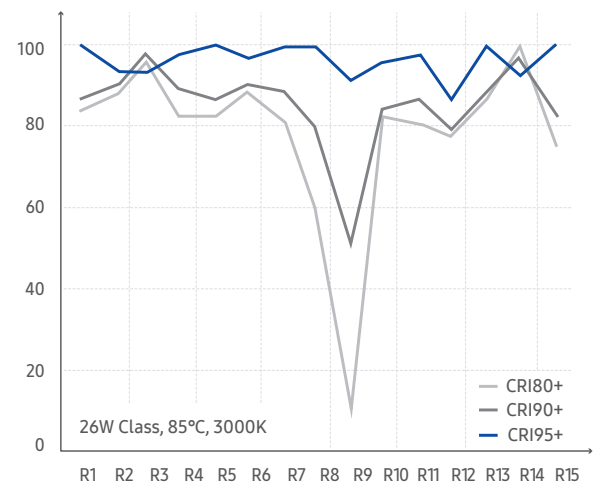
High Color Consistency

All COB LEDs are available in 2-step MacAdam ellipse and also 1-step



Superior Color Rendering

Ultra High CRI (Ra 95+): Typ. R9 ≈ 90



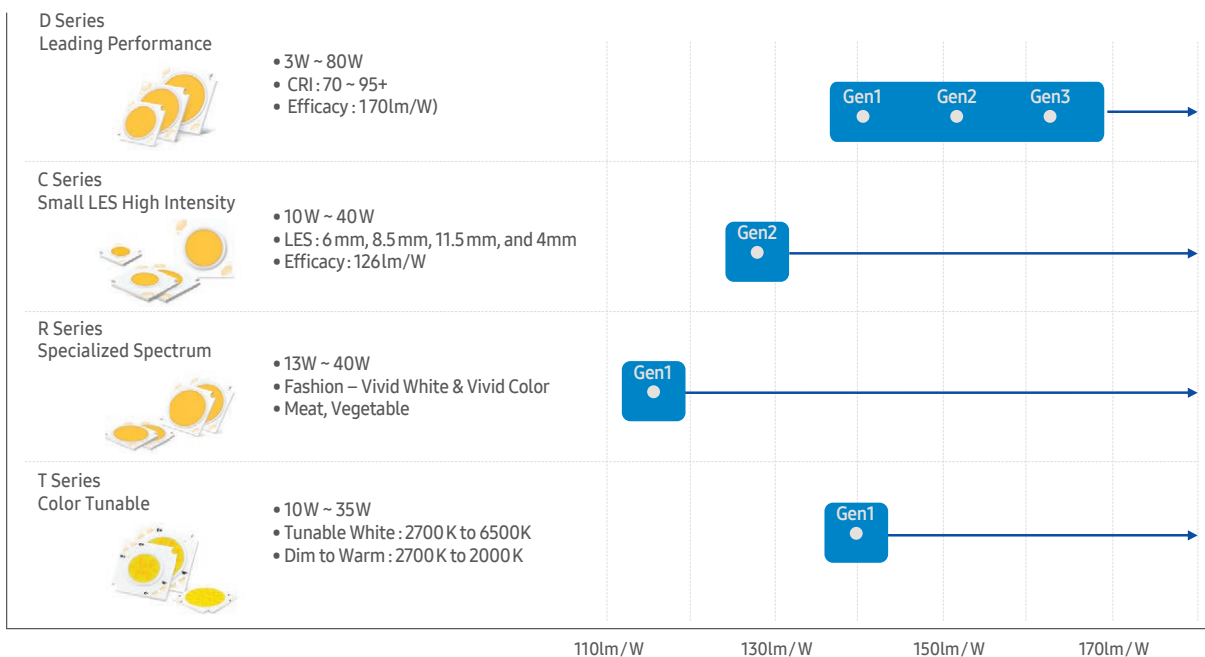
Advanced Spectrum Engineering

Samsung spectrum engineering creates the special color for retail lighting



One Stop Solution

A wide range of wattage and CRI options





D-Series

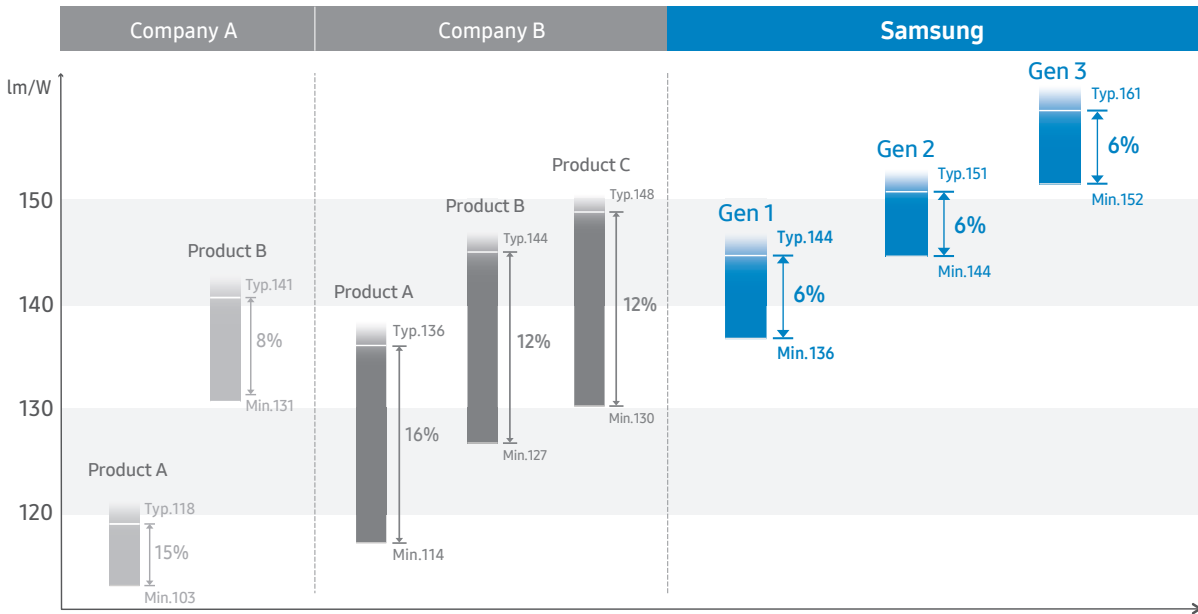
Flawless Lighting, Anywhere

Selective quality standards certify superior
lights for all applications

D-series with Leading Performance

Industry-leading performance in a wide range of wattage and CRI options

The industry-leading performance



D-series

A wide range of wattage and CRI options

D-series	Model LES	Wattage										
		3W	6W	9W	13W	16W	19W	26W	33W	40W	60W	80W
		9.8mm (13.5mm)				14.5mm (19x19mm)				22.0mm (28x28mm)		
Gen 1 D1rank:143lm/W D0rank:136lm/W	CRI 70+										●	●
	CRI 80+	●	●	●	●	●	●	●		●	●	●
	CRI 90+	●	●	●	●	●	●	●		●		
Gen 2 D2rank:151lm/W	CRI 70+			●	●	●	●	●	●	●	●	●
	CRI 80+	●	●	●	●	●	●	●	●	●	●	●
	CRI 90+	●	●	●	●	●	●	●	●	●	●	●
	CRI 95+				●	●	●	●	●	●		
Gen 3 D3rank:161lm/W	CRI 70+			●	●	●	●	●	●	●	●	●
	CRI 80+	●	●	●	●	●	●	●	●	●	●	●
	CRI 90+	●	●	●	●	●	●	●	●	●	●	●





D-series Gen 3



T _j =85°C	LC003D Gen 3	LC006D Gen 3	LC009D Gen 3	LC013D Gen 3	LC016D Gen 3	LC019D Gen 3	LC026D Gen 3	LC033D Gen 3	LC040D Gen 3	LC060D Gen 3	LC080D Gen 3
LES	9.8mm			14.5mm				22 mm			
Typical	33.8V									50.7V	
	3.0W (90mA)	6.1W (180mA)	9.1W (270mA)	12.2W (360mA)	15.2W (450mA)	18.3W (540mA)	24.3W (720mA)	30.4W (900mA)	36.5W (1080mA)	54.8W (1080mA)	82.1W (1620mA)
Max.	8.7W (230mA)	17.4W (460mA)	26.1W (690mA)	34.8W (920mA)	43.5W (1150mA)	52.2W (1380mA)	69.6W (1840mA)	86.9W (2300mA)	104.3W (2760mA)	152.9W (2760mA)	229.3W (4140mA)
Size	13.5mm x 13.5mm			19mm x 19mm				28mm x 28mm			

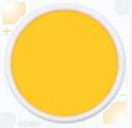

Color Variation



※ CRI: Minimum



Product	CRI90+					CRI80+							CRI70+		
	2700K	3000K	3500K	4000K	5000K	2700K	3000K	3500K	4000K	5000K	5700K	6500K	3000K	4000K	5000K
LC003D Gen3	0	0	0	0	0	0	0	0	0	0	0	0			
LC006D Gen3	0	0	0	0	0	0	0	0	0	0	0	0			
LC009D Gen3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LC013D Gen3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LC016D Gen3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LC019D Gen3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LC026D Gen3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LC033D Gen3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LC040D Gen3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LC060D Gen3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LC080D Gen3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MacAdam 2-Step	0	0	0	0	0	0	0	0	0						
MacAdam 3-Step	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0


Product	CRI	CCT (K)	Color Rank	Part Number	T _j = 85°C		I _F (mA) V _F (V)
					Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)	
 LC003D Gen 3	80+	2700	MacAdam 2step	SPHWHAHDNA25YZW2D3	475	156	90mA 33.8V
			MacAdam 3step	SPHWHAHDNA25YZW3D3			
		3000	MacAdam 2step	SPHWHAHDNA25YZV2D3	499	164	
			MacAdam 3step	SPHWHAHDNA25YZV3D3			
		3500	MacAdam 2step	SPHWHAHDNA25YZU2D3	514	169	
			MacAdam 3step	SPHWHAHDNA25YZU3D3			
		4000	MacAdam 2step	SPHWHAHDNA25YZT2D3	524	172	
			MacAdam 3step	SPHWHAHDNA25YZT3D3			
		5000	MacAdam 3step	SPHWHAHDNA25YZR3D3	529	174	
		5700	MacAdam 3step	SPHWHAHDNA25YZQ3D3	529	174	
		6500	MacAdam 3step	SPHWHAHDNA25YZP3D3	524	172	
		90+	2700	MacAdam 2step	SPHWHAHDNA27YZW2D3	407	
	MacAdam 3step			SPHWHAHDNA27YZW3D3			
	3000		MacAdam 2step	SPHWHAHDNA27YZV2D3	428	141	
			MacAdam 3step	SPHWHAHDNA27YZV3D3			
	3500		MacAdam 2step	SPHWHAHDNA27YZU2D3	441	145	
			MacAdam 3step	SPHWHAHDNA27YZU3D3			
	4000	MacAdam 2step	SPHWHAHDNA27YZT2D3	450	148		
5000	MacAdam 3step	SPHWHAHDNA27YZR3D3	453	149			
 LC006D Gen 3	80+	2700	MacAdam 2step	SPHWHAHDNB25YZW2D3	946	155	180mA 33.8V
			MacAdam 3step	SPHWHAHDNB25YZW3D3			
		3000	MacAdam 2step	SPHWHAHDNB25YZV2D3	994	163	
			MacAdam 3step	SPHWHAHDNB25YZV3D3			
		3500	MacAdam 2step	SPHWHAHDNB25YZU2D3	1023	168	
			MacAdam 3step	SPHWHAHDNB25YZU3D3			
		4000	MacAdam 2step	SPHWHAHDNB25YZT2D3	1043	171	
			MacAdam 3step	SPHWHAHDNB25YZT3D3			
		5000	MacAdam 3step	SPHWHAHDNB25YZR3D3	1052	173	
		5700	MacAdam 3step	SPHWHAHDNB25YZQ3D3	1052	173	
		6500	MacAdam 3step	SPHWHAHDNB25YZP3D3	1043	171	
		90+	2700	MacAdam 2step	SPHWHAHDNB27YZW2D3	809	
	MacAdam 3step			SPHWHAHDNB27YZW3D3			
	3000		MacAdam 2step	SPHWHAHDNB27YZV2D3	851	140	
			MacAdam 3step	SPHWHAHDNB27YZV3D3			
	3500		MacAdam 2step	SPHWHAHDNB27YZU2D3	877	144	
			MacAdam 3step	SPHWHAHDNB27YZU3D3			
	4000	MacAdam 2step	SPHWHAHDNB27YZT2D3	895	147		
5000	MacAdam 3step	SPHWHAHDNB27YZR3D3	902	148			


Product	CRI	CCT (K)	Color Rank	Part Number	T _j = 85°C		I _F (mA) V _F (V)
					Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)	
 <p>LC009D Gen 3</p>	70+	3000	MacAdam 3step	SPHWHAHDC23YZV3D3	1594	174	270mA 33.8V
		4000	MacAdam 3step	SPHWHAHDC23YZT3D3	1624	177	
		5000	MacAdam 3step	SPHWHAHDC23YZR3D3	1653	180	
	80+	2700	MacAdam 2step	SPHWHAHDC25YZW2D3	1405	154	
			MacAdam 3step	SPHWHAHDC25YZW3D3			
		3000	MacAdam 2step	SPHWHAHDC25YZV2D3	1476	162	
			MacAdam 3step	SPHWHAHDC25YZV3D3			
		3500	MacAdam 2step	SPHWHAHDC25YZU2D3	1519	166	
			MacAdam 3step	SPHWHAHDC25YZU3D3			
		4000	MacAdam 2step	SPHWHAHDC25YZT2D3	1550	170	
			MacAdam 3step	SPHWHAHDC25YZT3D3			
		5000	MacAdam 3step	SPHWHAHDC25YZR3D3	1563	171	
	5700		MacAdam 3step	SPHWHAHDC25YZQ3D3	1563	171	
	6500	MacAdam 3step	SPHWHAHDC25YZP3D3	1550	170		
	90+	2700	MacAdam 2step	SPHWHAHDC27YZW2D3	1202	132	
			MacAdam 3step	SPHWHAHDC27YZW3D3			
		3000	MacAdam 2step	SPHWHAHDC27YZV2D3	1264	139	
			MacAdam 3step	SPHWHAHDC27YZV3D3			
		3500	MacAdam 2step	SPHWHAHDC27YZU2D3	1302	143	
			MacAdam 3step	SPHWHAHDC27YZU3D3			
		4000	MacAdam 2step	SPHWHAHDC27YZT2D3	1329	146	
MacAdam 3step			SPHWHAHDC27YZT3D3				
5000		MacAdam 3step	SPHWHAHDC27YZR3D3	1340	147		
 <p>LC013D Gen 3</p>	70+	3000	MacAdam 3step	SPHWHAHDC23YZV3D3	2094	171	
		4000	MacAdam 3step	SPHWHAHDC23YZT3D3	2133	174	
		5000	MacAdam 3step	SPHWHAHDC23YZR3D3	2171	177	
	80+	2700	MacAdam 2step	SPHWHAHDC25YZW2D3	1845	152	
			MacAdam 3step	SPHWHAHDC25YZW3D3			
		3000	MacAdam 2step	SPHWHAHDC25YZV2D3	1939	159	
			MacAdam 3step	SPHWHAHDC25YZV3D3			
		3500	MacAdam 2step	SPHWHAHDC25YZU2D3	1996	164	
			MacAdam 3step	SPHWHAHDC25YZU3D3			
		4000	MacAdam 2step	SPHWHAHDC25YZT2D3	2036	167	
			MacAdam 3step	SPHWHAHDC25YZT3D3			
	5000	MacAdam 3step	SPHWHAHDC25YZR3D3	2053	169		
	5700	MacAdam 3step	SPHWHAHDC25YZQ3D3	2053	169		
	6500	MacAdam 3step	SPHWHAHDC25YZP3D3	2036	167		
	90+	2700	MacAdam 2step	SPHWHAHDC27YZW2D3	1579	130	
MacAdam 3step			SPHWHAHDC27YZW3D3				
3000		MacAdam 2step	SPHWHAHDC27YZV2D3	1661	137		
		MacAdam 3step	SPHWHAHDC27YZV3D3				
3500		MacAdam 2step	SPHWHAHDC27YZU2D3	1710	141		
		MacAdam 3step	SPHWHAHDC27YZU3D3				
4000		MacAdam 2step	SPHWHAHDC27YZT2D3	1745	143		
	MacAdam 3step	SPHWHAHDC27YZT3D3					
5000	MacAdam 3step	SPHWHAHDC27YZR3D3	1760	145			

Product	CRI	CCT (K)	Color Rank	Part Number	T _j = 85°C		I _F (mA) V _F (V)
					Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)	
 LC016D Gen 3	70+	3000	MacAdam 3step	SPHWAHDNE23YZV3D3	2697	176	450mA 33.8V
		4000	MacAdam 3step	SPHWAHDNE23YZT3D3	2747	180	
		5000	MacAdam 3step	SPHWAHDNE23YZR3D3	2797	183	
	80+	2700	MacAdam 2step	SPHWAHDNE25YZW2D3	2376	156	
			MacAdam 3step	SPHWAHDNE25YZW3D3			
		3000	MacAdam 2step	SPHWAHDNE25YZV2D3	2497	164	
			MacAdam 3step	SPHWAHDNE25YZV3D3			
		3500	MacAdam 2step	SPHWAHDNE25YZU2D3	2570	169	
			MacAdam 3step	SPHWAHDNE25YZU3D3			
		4000	MacAdam 2step	SPHWAHDNE25YZT2D3	2622	172	
			MacAdam 3step	SPHWAHDNE25YZT3D3			
		5000	MacAdam 3step	SPHWAHDNE25YZR3D3	2644	174	
		5700	MacAdam 3step	SPHWAHDNE25YZQ3D3	2644	174	
	6500	MacAdam 3step	SPHWAHDNE25YZP3D3	2622	172		
	90+	2700	MacAdam 2step	SPHWAHDNE27YZW2D3	2033	134	
			MacAdam 3step	SPHWAHDNE27YZW3D3			
		3000	MacAdam 2step	SPHWAHDNE27YZV2D3	2139	141	
			MacAdam 3step	SPHWAHDNE27YZV3D3			
		3500	MacAdam 2step	SPHWAHDNE27YZU2D3	2203	145	
			MacAdam 3step	SPHWAHDNE27YZU3D3			
		4000	MacAdam 2step	SPHWAHDNE27YZT2D3	2248	148	
MacAdam 3step			SPHWAHDNE27YZT3D3				
5000		MacAdam 3step	SPHWAHDNE27YZR3D3	2267	149		
 LC019D Gen 3		70+	3000	MacAdam 3step	SPHWAHDNF23YZV3D3	3220	175
	4000		MacAdam 3step	SPHWAHDNF23YZT3D3	3280	179	
	5000		MacAdam 3step	SPHWAHDNF23YZR3D3	3339	182	
	80+	2700	MacAdam 2step	SPHWAHDNF25YZW2D3	2837	155	
			MacAdam 3step	SPHWAHDNF25YZW3D3			
		3000	MacAdam 2step	SPHWAHDNF25YZV2D3	2982	163	
			MacAdam 3step	SPHWAHDNF25YZV3D3			
		3500	MacAdam 2step	SPHWAHDNF25YZU2D3	3069	168	
			MacAdam 3step	SPHWAHDNF25YZU3D3			
		4000	MacAdam 2step	SPHWAHDNF25YZT2D3	3130	171	
			MacAdam 3step	SPHWAHDNF25YZT3D3			
		5000	MacAdam 3step	SPHWAHDNF25YZR3D3	3157	173	
		5700	MacAdam 3step	SPHWAHDNF25YZQ3D3	3157	173	
	6500	MacAdam 3step	SPHWAHDNF25YZP3D3	3130	171		
	90+	2700	MacAdam 2step	SPHWAHDNF27YZW2D3	2428	133	
			MacAdam 3step	SPHWAHDNF27YZW3D3			
		3000	MacAdam 2step	SPHWAHDNF27YZV2D3	2554	140	
			MacAdam 3step	SPHWAHDNF27YZV3D3			
		3500	MacAdam 2step	SPHWAHDNF27YZU2D3	2630	144	
			MacAdam 3step	SPHWAHDNF27YZU3D3			
		4000	MacAdam 2step	SPHWAHDNF27YZT2D3	2684	147	
MacAdam 3step			SPHWAHDNF27YZT3D3				
5000		MacAdam 3step	SPHWAHDNF27YZR3D3	2707	148		

Product	CRI	CCT (K)	Color Rank	Part Number	T _j = 85°C		I _F (mA) V _F (V)	
					Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)		
 <p>LC026D Gen 3</p>	70+	3000	MacAdam 3step	SPHWAHDNG23YZV3D3	4230	174	720mA 33.8V	
		4000	MacAdam 3step	SPHWAHDNG23YZT3D3	4308	177		
		5000	MacAdam 3step	SPHWAHDNG23YZR3D3	4387	180		
	80+	2700	MacAdam 2step	SPHWAHDNG25YZW2D3	3727	153		
			MacAdam 3step	SPHWAHDNG25YZW3D3				
		3000	MacAdam 2step	SPHWAHDNG25YZV2D3	3917	161		
			MacAdam 3step	SPHWAHDNG25YZV3D3				
		3500	MacAdam 2step	SPHWAHDNG25YZU2D3	4032	166		
			MacAdam 3step	SPHWAHDNG25YZU3D3				
		4000	MacAdam 2step	SPHWAHDNG25YZT2D3	4112	169		
			MacAdam 3step	SPHWAHDNG25YZT3D3				
		5000	MacAdam 3step	SPHWAHDNG25YZR3D3	4147	170		
		5700	MacAdam 3step	SPHWAHDNG25YZQ3D3	4147	170		
		6500	MacAdam 3step	SPHWAHDNG25YZP3D3	4112	169		
		90+	2700	MacAdam 2step	SPHWAHDNG27YZW2D3	3190		131
	MacAdam 3step			SPHWAHDNG27YZW3D3				
	3000		MacAdam 2step	SPHWAHDNG27YZV2D3	3355	138		
			MacAdam 3step	SPHWAHDNG27YZV3D3				
3500	MacAdam 2step		SPHWAHDNG27YZU2D3	3455	142			
	MacAdam 3step		SPHWAHDNG27YZU3D3					
4000	MacAdam 2step		SPHWAHDNG27YZT2D3	3526	145			
	MacAdam 3step		SPHWAHDNG27YZT3D3					
5000	MacAdam 3step		SPHWAHDNG27YZR3D3	3556	146			
 <p>LC033D Gen 3</p>	70+		3000	MacAdam 3step	SPHWAHDNH23YZV3D3	5235	172	900mA 33.8V
			4000	MacAdam 3step	SPHWAHDNH23YZT3D3	5332	175	
			5000	MacAdam 3step	SPHWAHDNH23YZR3D3	5429	178	
	80+	2700	MacAdam 2step	SPHWAHDNH25YZW2D3	4612	152		
			MacAdam 3step	SPHWAHDNH25YZW3D3				
		3000	MacAdam 2step	SPHWAHDNH25YZV2D3	4847	159		
			MacAdam 3step	SPHWAHDNH25YZV3D3				
		3500	MacAdam 2step	SPHWAHDNH25YZU2D3	4989	164		
			MacAdam 3step	SPHWAHDNH25YZU3D3				
		4000	MacAdam 2step	SPHWAHDNH25YZT2D3	5089	167		
			MacAdam 3step	SPHWAHDNH25YZT3D3				
		5000	MacAdam 3step	SPHWAHDNH25YZR3D3	5132	169		
		5700	MacAdam 3step	SPHWAHDNH25YZQ3D3	5132	169		
		6500	MacAdam 3step	SPHWAHDNH25YZP3D3	5089	167		

Product	CRI	CCT (K)	Color Rank	Part Number	T _J = 85°C		I _F (mA) V _F (V)
					Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)	
 LC033D Gen 3	90+	2700	MacAdam 2step	SPHWAHDNH27YZW2D3	3947	130	900mA 33.8V
			MacAdam 3step	SPHWAHDNH27YZW3D3			
		3000	MacAdam 2step	SPHWAHDNH27YZV2D3	4152	136	
			MacAdam 3step	SPHWAHDNH27YZV3D3			
		3500	MacAdam 2step	SPHWAHDNH27YZU2D3	4276	141	
			MacAdam 3step	SPHWAHDNH27YZU3D3			
		4000	MacAdam 2step	SPHWAHDNH27YZT2D3	4364	143	
			MacAdam 3step	SPHWAHDNH27YZT3D3			
		5000	MacAdam 3step	SPHWAHDNH27YZR3D3	4401	145	
		 LC040D Gen 3	70+	3000	MacAdam 3step	SPHWAHDNK23YZV3D3	
4000	MacAdam 3step			SPHWAHDNK23YZT3D3	6560	180	
5000	MacAdam 3step			SPHWAHDNK23YZR3D3	6679	183	
80+	2700		MacAdam 2step	SPHWAHDNK25YZW2D3	5675	155	
			MacAdam 3step	SPHWAHDNK25YZW3D3			
	3000		MacAdam 2step	SPHWAHDNK25YZV2D3	5963	163	
			MacAdam 3step	SPHWAHDNK25YZV3D3			
	3500		MacAdam 2step	SPHWAHDNK25YZU2D3	6138	168	
			MacAdam 3step	SPHWAHDNK25YZU3D3			
	4000		MacAdam 2step	SPHWAHDNK25YZT2D3	6261	172	
			MacAdam 3step	SPHWAHDNK25YZT3D3			
	5000		MacAdam 3step	SPHWAHDNK25YZR3D3	6313	173	
	5700		MacAdam 3step	SPHWAHDNK25YZQ3D3	6313	173	
6500	MacAdam 3step		SPHWAHDNK25YZP3D3	6261	172		
90+	2700		MacAdam 2step	SPHWAHDNK27YZW2D3	4856	133	
			MacAdam 3step	SPHWAHDNK27YZW3D3			
	3000		MacAdam 2step	SPHWAHDNK27YZV2D3	5108	140	
			MacAdam 3step	SPHWAHDNK27YZV3D3			
	3500		MacAdam 2step	SPHWAHDNK27YZU2D3	5260	144	
		MacAdam 3step	SPHWAHDNK27YZU3D3				
	4000	MacAdam 2step	SPHWAHDNK27YZT2D3	5369	147		
		MacAdam 3step	SPHWAHDNK27YZT3D3				
	5000	MacAdam 3step	SPHWAHDNK27YZR3D3	5415	148		

Product	CRI	CCT (K)	Color Rank	Part Number	T _j = 85°C		I _F (mA) V _F (V)
					Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)	
 <p>LC060D Gen 3</p>	70+	3000	MacAdam 3step	SPHWAHDNL231ZV3D3	9518	174	1080mA 50.7V
		4000	MacAdam 3step	SPHWAHDNL231ZT3D3	9694	177	
		5000	MacAdam 3step	SPHWAHDNL231ZR3D3	9870	180	
	80+	2700	MacAdam 2step	SPHWAHDNL251ZW2D3	8386	153	
			MacAdam 3step	SPHWAHDNL251ZW3D3			
		3000	MacAdam 2step	SPHWAHDNL251ZV2D3	8813	161	
			MacAdam 3step	SPHWAHDNL251ZV3D3			
		3500	MacAdam 2step	SPHWAHDNL251ZU2D3	9071	166	
			MacAdam 3step	SPHWAHDNL251ZU3D3			
		4000	MacAdam 2step	SPHWAHDNL251ZT2D3	9253	169	
			MacAdam 3step	SPHWAHDNL251ZT3D3			
		5000	MacAdam 3step	SPHWAHDNL251ZR3D3	9330	170	
		5700	MacAdam 3step	SPHWAHDNL251ZQ3D3	9330	170	
		6500	MacAdam 3step	SPHWAHDNL251ZP3D3	9253	169	
		90+	2700	MacAdam 2step	SPHWAHDNL271ZW2D3	7177	
	MacAdam 3step			SPHWAHDNL271ZW3D3			
	3000		MacAdam 2step	SPHWAHDNL271ZV2D3	7549	138	
			MacAdam 3step	SPHWAHDNL271ZV3D3			
	3500		MacAdam 2step	SPHWAHDNL271ZU2D3	7774	142	
			MacAdam 3step	SPHWAHDNL271ZU3D3			
	4000		MacAdam 2step	SPHWAHDNL271ZT2D3	7934	145	
MacAdam 3step			SPHWAHDNL271ZT3D3				
5000	MacAdam 3step		SPHWAHDNL271ZR3D3	8002	146		

Product	CRI	CCT (K)	Color Rank	Part Number	T _j = 85°C		I _F (mA) V _F (V)
					Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)	
 <p>LC080D Gen 3</p>	70+	3000	MacAdam 3step	SPHWAHDNM231ZV3D3	14115	172	1620mA 50.7V
		4000	MacAdam 3step	SPHWAHDNM231ZT3D3	14376	175	
		5000	MacAdam 3step	SPHWAHDNM231ZR3D3	14637	178	
	80+	2700	MacAdam 2step	SPHWAHDNM251ZW2D3	12437	151	
			MacAdam 3step	SPHWAHDNM251ZW3D3			
		3000	MacAdam 2step	SPHWAHDNM251ZV2D3	13069	159	
			MacAdam 3step	SPHWAHDNM251ZV3D3			
		3500	MacAdam 2step	SPHWAHDNM251ZU2D3	13452	164	
			MacAdam 3step	SPHWAHDNM251ZU3D3			
		4000	MacAdam 2step	SPHWAHDNM251ZT2D3	13721	167	
			MacAdam 3step	SPHWAHDNM251ZT3D3			
		5000	MacAdam 3step	SPHWAHDNM251ZR3D3	13836	168	
		5700	MacAdam 3step	SPHWAHDNM251ZQ3D3	13836	168	
		6500	MacAdam 3step	SPHWAHDNM251ZP3D3	13721	167	
		90+	2700	MacAdam 2step	SPHWAHDNM271ZW2D3	10643	
	MacAdam 3step			SPHWAHDNM271ZW3D3			
	3000		MacAdam 2step	SPHWAHDNM271ZV2D3	11195	136	
			MacAdam 3step	SPHWAHDNM271ZV3D3			
	3500		MacAdam 2step	SPHWAHDNM271ZU2D3	11529	140	
			MacAdam 3step	SPHWAHDNM271ZU3D3			
	4000		MacAdam 2step	SPHWAHDNM271ZT2D3	11766	143	
			MacAdam 3step	SPHWAHDNM271ZT3D3			
	5000	MacAdam 3step	SPHWAHDNM271ZR3D3	11867	144		





D-series Gen 2



T _j =85°C	LC003D Gen 2	LC006D Gen 2	LC009D Gen 2	LC013D Gen 2	LC016D Gen 2	LC019D Gen 2	LC026D Gen 2	LC033D Gen 2	LC040D Gen 2	LC060D Gen 2	LC080D Gen 2
LES	9.8mm			14.5mm				22 mm			
Typical	34.6 V									52 V	
	3.1 W (90 mA)	6.2 W (180 mA)	9.4 W (270 mA)	12.5 W (360 mA)	15.6 W (450 mA)	18.7 W (540 mA)	24.9 W (720 mA)	31.1 W (900 mA)	37.4 W (1080 mA)	56.1 W (1080 mA)	84.2 W (1620 mA)
Max.	8.6 W (230 mA)	17.2 W (460 mA)	25.9 W (690 mA)	34.5 W (920 mA)	43.1 W (1150 mA)	51.8 W (1380 mA)	69 W (1840 mA)	86.2 W (2300 mA)	103.5 W (2760 mA)	143.4 W (2760 mA)	215 W (4140 mA)
Size	13.5mm x 13.5mm			19mm x 19mm				28mm x 28mm			



Color Variation



※ CRI: Minimum



Product	CRI95+					CRI90+					CRI80+						CRI70+			
	2700K	3000K	3500K	4000K	5000K	2700K	3000K	3500K	4000K	5000K	2700K	3000K	3500K	4000K	5000K	5700K	6500K	3000K	4000K	5000K
LC003D Gen2						o	o	o	o	o	o	o	o	o	o	o	o			
LC006D Gen2						o	o	o	o	o	o	o	o	o	o	o	o			
LC009D Gen2						o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
LC013D Gen2	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
LC016D Gen2	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
LC019D Gen2	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
LC026D Gen2	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
LC033D Gen2	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
LC040D Gen2	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
LC060D Gen2						o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
LC080D Gen2						o	o	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	o						
MacAdam 3-Step	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o



Product	CRI	CCT (K)	Color Rank	Part Number	T _j = 85°C		I _F (mA) V _F (V)
					Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)	
 <p>LC003D Gen 2</p>	80+	2700	MacAdam 2step	SPHWHAHDNA25YZW2D2	459	147	90mA 34.6V
			MacAdam 3step	SPHWHAHDNA25YZW3D2			
		3000	MacAdam 2step	SPHWHAHDNA25YZV2D2	483	155	
			MacAdam 3step	SPHWHAHDNA25YZV3D2			
		3500	MacAdam 2step	SPHWHAHDNA25YZU2D2	501	161	
			MacAdam 3step	SPHWHAHDNA25YZU3D2			
		4000	MacAdam 2step	SPHWHAHDNA25YZT2D2	507	163	
			MacAdam 3step	SPHWHAHDNA25YZT3D2			
		5000	MacAdam 3step	SPHWHAHDNA25YZR3D2	513	165	
		5700	MacAdam 3step	SPHWHAHDNA25YZQ3D2	513	165	
	6500	MacAdam 3step	SPHWHAHDNA25YZP3D2	507	163		
	90+	2700	MacAdam 2step	SPHWHAHDNA27YZW2D2	388	125	
			MacAdam 3step	SPHWHAHDNA27YZW3D2			
		3000	MacAdam 2step	SPHWHAHDNA27YZV2D2	406	130	
			MacAdam 3step	SPHWHAHDNA27YZV3D2			
		3500	MacAdam 2step	SPHWHAHDNA27YZU2D2	419	135	
			MacAdam 3step	SPHWHAHDNA27YZU3D2			
		4000	MacAdam 2step	SPHWHAHDNA27YZT2D2	427	137	
MacAdam 3step			SPHWHAHDNA27YZT3D2				
5000		MacAdam 3step	SPHWHAHDNA27YZR3D2	430	138		
 <p>LC006D Gen 2</p>		80+	2700	MacAdam 2step	SPHWHAHDNB25YZW2D2	924	148
	MacAdam 3step			SPHWHAHDNB25YZW3D2			
	3000		MacAdam 2step	SPHWHAHDNB25YZV2D2	971	156	
			MacAdam 3step	SPHWHAHDNB25YZV3D2			
	3500		MacAdam 2step	SPHWHAHDNB25YZU2D2	1001	161	
			MacAdam 3step	SPHWHAHDNB25YZU3D2			
	4000		MacAdam 2step	SPHWHAHDNB25YZT2D2	1024	164	
			MacAdam 3step	SPHWHAHDNB25YZT3D2			
	5000	MacAdam 3step	SPHWHAHDNB25YZR3D2	1030	165		
	5700	MacAdam 3step	SPHWHAHDNB25YZQ3D2	1030	165		
	6500	MacAdam 3step	SPHWHAHDNB25YZP3D2	1018	163		
	90+	2700	MacAdam 2step	SPHWHAHDNB27YZW2D2	786	126	
			MacAdam 3step	SPHWHAHDNB27YZW3D2			
		3000	MacAdam 2step	SPHWHAHDNB27YZV2D2	824	132	
			MacAdam 3step	SPHWHAHDNB27YZV3D2			
		3500	MacAdam 2step	SPHWHAHDNB27YZU2D2	853	137	
			MacAdam 3step	SPHWHAHDNB27YZU3D2			
		4000	MacAdam 2step	SPHWHAHDNB27YZT2D2	870	140	
MacAdam 3step			SPHWHAHDNB27YZT3D2				
5000		MacAdam 3step	SPHWHAHDNB27YZR3D2	874	140		



Product	CRI	CCT (K)	Color Rank	Part Number	T _j = 85°C		I _F (mA) V _F (V)
					Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)	
 <p>LC009D Gen 2</p>	70+	3000	MacAdam 3step	SPHWH AHDNC23YZV3D2	1578	161	270mA 34.6V
		4000	MacAdam 3step	SPHWH AHDNC23YZT3D2	1654	169	
		5000	MacAdam 3step	SPHWH AHDNC23YZR3D2	1707	174	
	80+	2700	MacAdam 2step	SPHWH AHDNC25YZW2D2	1342	144	
			MacAdam 3step	SPHWH AHDNC25YZW3D2			
		3000	MacAdam 2step	SPHWH AHDNC25YZV2D2	1418	152	
			MacAdam 3step	SPHWH AHDNC25YZV3D2			
		3500	MacAdam 2step	SPHWH AHDNC25YZU2D2	1459	156	
			MacAdam 3step	SPHWH AHDNC25YZU3D2			
		4000	MacAdam 2step	SPHWH AHDNC25YZT2D2	1494	160	
			MacAdam 3step	SPHWH AHDNC25YZT3D2			
		5000	MacAdam 3step	SPHWH AHDNC25YZR3D2	1506	161	
	5700	MacAdam 3step	SPHWH AHDNC25YZQ3D2	1506	161		
	6500	MacAdam 3step	SPHWH AHDNC25YZP3D2	1488	159		
	90+	2700	MacAdam 2step	SPHWH AHDNC27YZW2D2	1152	123	
			MacAdam 3step	SPHWH AHDNC27YZW3D2			
		3000	MacAdam 2step	SPHWH AHDNC27YZV2D2	1206	129	
			MacAdam 3step	SPHWH AHDNC27YZV3D2			
		3500	MacAdam 2step	SPHWH AHDNC27YZU2D2	1245	133	
			MacAdam 3step	SPHWH AHDNC27YZU3D2			
		4000	MacAdam 2step	SPHWH AHDNC27YZT2D2	1273	136	
			MacAdam 3step	SPHWH AHDNC27YZT3D2			
		5000	MacAdam 3step	SPHWH AHDNC27YZR3D2	1278	137	
	 <p>LC013D Gen 2</p>	70+	3000	MacAdam 3step	SPHWH AHDND23YZV3D2	2106	
4000			MacAdam 3step	SPHWH AHDND23YZT3D2	2173	166	
5000			MacAdam 3step	SPHWH AHDND23YZR3D2	2207	169	
80+		2700	MacAdam 2step	SPHWH AHDND25YZW2D2	1764	142	
			MacAdam 3step	SPHWH AHDND25YZW3D2			
		3000	MacAdam 2step	SPHWH AHDND25YZV2D2	1857	149	
			MacAdam 3step	SPHWH AHDND25YZV3D2			
		3500	MacAdam 2step	SPHWH AHDND25YZU2D2	1915	154	
			MacAdam 3step	SPHWH AHDND25YZU3D2			
		4000	MacAdam 2step	SPHWH AHDND25YZT2D2	1950	157	
			MacAdam 3step	SPHWH AHDND25YZT3D2			
		5000	MacAdam 3step	SPHWH AHDND25YZR3D2	1967	158	
5700		MacAdam 3step	SPHWH AHDND25YZQ3D2	1967	158		
6500		MacAdam 3step	SPHWH AHDND25YZP3D2	1938	156		
90+		2700	MacAdam 2step	SPHWH AHDND27YZW2D2	1509	121	
			MacAdam 3step	SPHWH AHDND27YZW3D2			
		3000	MacAdam 2step	SPHWH AHDND27YZV2D2	1580	127	
			MacAdam 3step	SPHWH AHDND27YZV3D2			
		3500	MacAdam 2step	SPHWH AHDND27YZU2D2	1635	131	
			MacAdam 3step	SPHWH AHDND27YZU3D2			
		4000	MacAdam 2step	SPHWH AHDND27YZT2D2	1670	134	
			MacAdam 3step	SPHWH AHDND27YZT3D2			
		5000	MacAdam 3step	SPHWH AHDND27YZR3D2	1674	134	

Product	CRI	CCT (K)	Color Rank	Part Number	T _j = 85°C		I _F (mA) V _F (V)
					Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)	
 LC013D Gen 2	95+	2700	MacAdam 2step	SPHWWAHDND28YZW2D2	1223	98	360mA 34.6V
			MacAdam 3step	SPHWWAHDND28YZW3D2			
		3000	MacAdam 2step	SPHWWAHDND28YZV2D2	1285	103	
			MacAdam 3step	SPHWWAHDND28YZV3D2			
		3500	MacAdam 2step	SPHWWAHDND28YZU2D2	1337	107	
			MacAdam 3step	SPHWWAHDND28YZU3D2			
		4000	MacAdam 2step	SPHWWAHDND28YZT2D2	1379	111	
			MacAdam 3step	SPHWWAHDND28YZT3D2			
		5000	MacAdam 3step	SPHWWAHDND28YZR3D2	1390	112	
		 LC016D Gen 2	70+	3000	MacAdam 3step	SPHWWAHDNE23YZV3D2	
4000	MacAdam 3step			SPHWWAHDNE23YZT3D2	2701	173	
5000	MacAdam 3step			SPHWWAHDNE23YZR3D2	2742	176	
80+	2700		MacAdam 2step	SPHWWAHDNE25YZW2D2	2293	147	
			MacAdam 3step	SPHWWAHDNE25YZW3D2			
	3000		MacAdam 2step	SPHWWAHDNE25YZV2D2	2423	156	
			MacAdam 3step	SPHWWAHDNE25YZV3D2			
	3500		MacAdam 2step	SPHWWAHDNE25YZU2D2	2513	161	
			MacAdam 3step	SPHWWAHDNE25YZU3D2			
	4000		MacAdam 2step	SPHWWAHDNE25YZT2D2	2558	164	
			MacAdam 3step	SPHWWAHDNE25YZT3D2			
	5000		MacAdam 3step	SPHWWAHDNE25YZR3D2	2581	166	
	5700		MacAdam 3step	SPHWWAHDNE25YZQ3D2	2581	166	
6500	MacAdam 3step		SPHWWAHDNE25YZP3D2	2558	164		
90+	2700		MacAdam 2step	SPHWWAHDNE27YZW2D2	1967	126	
			MacAdam 3step	SPHWWAHDNE27YZW3D2			
	3000		MacAdam 2step	SPHWWAHDNE27YZV2D2	2084	134	
			MacAdam 3step	SPHWWAHDNE27YZV3D2			
	3500		MacAdam 2step	SPHWWAHDNE27YZU2D2	2146	138	
			MacAdam 3step	SPHWWAHDNE27YZU3D2			
	4000		MacAdam 2step	SPHWWAHDNE27YZT2D2	2189	141	
MacAdam 3step			SPHWWAHDNE27YZT3D2				
5000	MacAdam 3step		SPHWWAHDNE27YZR3D2	2209	142		
95+	2700		MacAdam 2step	SPHWWAHDNE28YZW2D2	1575	101	
			MacAdam 3step	SPHWWAHDNE28YZW3D2			
	3000		MacAdam 2step	SPHWWAHDNE28YZV2D2	1655	106	
			MacAdam 3step	SPHWWAHDNE28YZV3D2			
	3500		MacAdam 2step	SPHWWAHDNE28YZU2D2	1722	111	
		MacAdam 3step	SPHWWAHDNE28YZU3D2				
	4000	MacAdam 2step	SPHWWAHDNE28YZT2D2	1776	114		
		MacAdam 3step	SPHWWAHDNE28YZT3D2				
5000	MacAdam 3step	SPHWWAHDNE28YZR3D2	1791	115			

Product	CRI	CCT (K)	Color Rank	Part Number	T _j = 85°C		I _F (mA) V _F (V)
					Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)	
 LC019D Gen 2	70+	3000	MacAdam 3step	SPHWAHDNF23YZV3D2	3107	166	540mA 34.6V
		4000	MacAdam 3step	SPHWAHDNF23YZT3D2	3207	172	
		5000	MacAdam 3step	SPHWAHDNF23YZR3D2	3256	174	
	80+	2700	MacAdam 2step	SPHWAHDNF25YZW2D2	2728	146	
			MacAdam 3step	SPHWAHDNF25YZW3D2			
		3000	MacAdam 2step	SPHWAHDNF25YZV2D2	2877	154	
			MacAdam 3step	SPHWAHDNF25YZV3D2			
		3500	MacAdam 2step	SPHWAHDNF25YZU2D2	2965	159	
			MacAdam 3step	SPHWAHDNF25YZU3D2			
		4000	MacAdam 2step	SPHWAHDNF25YZT2D2	3026	162	
			MacAdam 3step	SPHWAHDNF25YZT3D2			
		5000	MacAdam 3step	SPHWAHDNF25YZR3D2	3059	164	
	5700	MacAdam 3step	SPHWAHDNF25YZQ3D2	3059	164		
	6500	MacAdam 3step	SPHWAHDNF25YZP3D2	3026	162		
	90+	2700	MacAdam 2step	SPHWAHDNF27YZW2D2	2336	125	
			MacAdam 3step	SPHWAHDNF27YZW3D2			
		3000	MacAdam 2step	SPHWAHDNF27YZV2D2	2449	131	
			MacAdam 3step	SPHWAHDNF27YZV3D2			
		3500	MacAdam 2step	SPHWAHDNF27YZU2D2	2539	136	
			MacAdam 3step	SPHWAHDNF27YZU3D2			
	4000	MacAdam 2step	SPHWAHDNF27YZT2D2	2594	139		
MacAdam 3step		SPHWAHDNF27YZT3D2					
5000	MacAdam 3step	SPHWAHDNF27YZR3D2	2596	139			
95+	2700	MacAdam 2step	SPHWAHDNF28YZW2D2	1880	101		
		MacAdam 3step	SPHWAHDNF28YZW3D2				
	3000	MacAdam 2step	SPHWAHDNF28YZV2D2	1976	106		
		MacAdam 3step	SPHWAHDNF28YZV3D2				
	3500	MacAdam 2step	SPHWAHDNF28YZU2D2	2056	110		
		MacAdam 3step	SPHWAHDNF28YZU3D2				
	4000	MacAdam 2step	SPHWAHDNF28YZT2D2	2121	114		
		MacAdam 3step	SPHWAHDNF28YZT3D2				
5000	MacAdam 3step	SPHWAHDNF28YZR3D2	2138	114			
 LC026D Gen 2	70+	3000	MacAdam 3step	SPHWAHDNG23YZV3D2	4063	163	720mA 34.6V
		4000	MacAdam 3step	SPHWAHDNG23YZT3D2	4193	168	
		5000	MacAdam 3step	SPHWAHDNG23YZR3D2	4258	171	
	80+	2700	MacAdam 2step	SPHWAHDNG25YZW2D2	3580	144	
			MacAdam 3step	SPHWAHDNG25YZW3D2			
		3000	MacAdam 2step	SPHWAHDNG25YZV2D2	3762	151	
			MacAdam 3step	SPHWAHDNG25YZV3D2			
		3500	MacAdam 2step	SPHWAHDNG25YZU2D2	3872	155	
			MacAdam 3step	SPHWAHDNG25YZU3D2			
		4000	MacAdam 2step	SPHWAHDNG25YZT2D2	3950	159	
			MacAdam 3step	SPHWAHDNG25YZT3D2			
		5000	MacAdam 3step	SPHWAHDNG25YZR3D2	3983	160	
5700	MacAdam 3step	SPHWAHDNG25YZQ3D2	3983	160			
6500	MacAdam 3step	SPHWAHDNG25YZP3D2	3950	159			

Product	CRI	CCT (K)	Color Rank	Part Number	T _j = 85°C		I _F (mA) V _F (V)
					Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)	
 LC026D Gen 2	90+	2700	MacAdam 2step	SPHWAHDNG27YZW2D2	3064	123	720mA 34.6V
			MacAdam 3step	SPHWAHDNG27YZW3D2			
		3000	MacAdam 2step	SPHWAHDNG27YZV2D2	3223	129	
			MacAdam 3step	SPHWAHDNG27YZV3D2			
		3500	MacAdam 2step	SPHWAHDNG27YZU2D2	3319	133	
			MacAdam 3step	SPHWAHDNG27YZU3D2			
	4000	MacAdam 2step	SPHWAHDNG27YZT2D2	3387	136		
		MacAdam 3step	SPHWAHDNG27YZT3D2				
	95+	2700	MacAdam 2step	SPHWAHDNG28YZW2D2	2470	99	
			MacAdam 3step	SPHWAHDNG28YZW3D2			
		3000	MacAdam 2step	SPHWAHDNG28YZV2D2	2596	104	
			MacAdam 3step	SPHWAHDNG28YZV3D2			
		3500	MacAdam 2step	SPHWAHDNG28YZU2D2	2701	108	
			MacAdam 3step	SPHWAHDNG28YZU3D2			
4000		MacAdam 2step	SPHWAHDNG28YZT2D2	2786	112		
		MacAdam 3step	SPHWAHDNG28YZT3D2				
5000	MacAdam 3step	SPHWAHDNG28YZR3D2	2809	113			
 LC033D Gen 2	70+	3000	MacAdam 3step	SPHWAHDNH23YZV3D2	5014	161	
		4000	MacAdam 3step	SPHWAHDNH23YZT3D2	5175	166	
		5000	MacAdam 3step	SPHWAHDNH23YZR3D2	5255	169	
	80+	2700	MacAdam 2step	SPHWAHDNH25YZW2D2	4418	142	
			MacAdam 3step	SPHWAHDNH25YZW3D2			
		3000	MacAdam 2step	SPHWAHDNH25YZV2D2	4643	149	
			MacAdam 3step	SPHWAHDNH25YZV3D2			
		3500	MacAdam 2step	SPHWAHDNH25YZU2D2	4779	153	
			MacAdam 3step	SPHWAHDNH25YZU3D2			
		4000	MacAdam 2step	SPHWAHDNH25YZT2D2	4875	157	
			MacAdam 3step	SPHWAHDNH25YZT3D2			
		5000	MacAdam 3step	SPHWAHDNH25YZR3D2	4916	158	
	5700	MacAdam 3step	SPHWAHDNH25YZQ3D2	4916	158		
	6500	MacAdam 3step	SPHWAHDNH25YZP3D2	4875	157		
	90+	2700	MacAdam 2step	SPHWAHDNH27YZW2D2	3781	121	
			MacAdam 3step	SPHWAHDNH27YZW3D2			
		3000	MacAdam 2step	SPHWAHDNH27YZV2D2	3977	128	
			MacAdam 3step	SPHWAHDNH27YZV3D2			
		3500	MacAdam 2step	SPHWAHDNH27YZU2D2	4096	132	
			MacAdam 3step	SPHWAHDNH27YZU3D2			
	4000	MacAdam 2step	SPHWAHDNH27YZT2D2	4180	134		
		MacAdam 3step	SPHWAHDNH27YZT3D2				
	5000	MacAdam 3step	SPHWAHDNH27YZR3D2	4216	135		
	95+	2700	MacAdam 2step	SPHWAHDNH28YZW2D2	3057	98	
MacAdam 3step			SPHWAHDNH28YZW3D2				
3000		MacAdam 2step	SPHWAHDNH28YZV2D2	3212	103		
		MacAdam 3step	SPHWAHDNH28YZV3D2				
3500		MacAdam 2step	SPHWAHDNH28YZU2D2	3343	107		
		MacAdam 3step	SPHWAHDNH28YZU3D2				
4000		MacAdam 2step	SPHWAHDNH28YZT2D2	3447	111		
		MacAdam 3step	SPHWAHDNH28YZT3D2				
5000	MacAdam 3step	SPHWAHDNH28YZR3D2	3476	112			

Product	CRI	CCT (K)	Color Rank	Part Number	T _j = 85°C		I _F (mA) V _F (V)
					Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)	
 <p>LC040D Gen 2</p>	70+	3000	MacAdam 3step	SPHWHAHNDNK23YZV3D2	6304	169	1080mA 34.6V
		4000	MacAdam 3step	SPHWHAHNDNK23YZT3D2	6506	174	
		5000	MacAdam 3step	SPHWHAHNDNK23YZR3D2	6607	177	
	80+	2700	MacAdam 2step	SPHWHAHNDNK25YZW2D2	5547	148	
			MacAdam 3step	SPHWHAHNDNK25YZW3D2			
		3000	MacAdam 2step	SPHWHAHNDNK25YZV2D2	5837	156	
			MacAdam 3step	SPHWHAHNDNK25YZV3D2			
		3500	MacAdam 2step	SPHWHAHNDNK25YZU2D2	6016	161	
			MacAdam 3step	SPHWHAHNDNK25YZU3D2			
		4000	MacAdam 2step	SPHWHAHNDNK25YZT2D2	6146	164	
			MacAdam 3step	SPHWHAHNDNK25YZT3D2			
		5000	MacAdam 3step	SPHWHAHNDNK25YZR3D2	6175	165	
		5700	MacAdam 3step	SPHWHAHNDNK25YZQ3D2	6205	166	
	6500	MacAdam 3step	SPHWHAHNDNK25YZP3D2	6138	164		
	90+	2700	MacAdam 2step	SPHWHAHNDNK27YZW2D2	4755	127	
			MacAdam 3step	SPHWHAHNDNK27YZW3D2			
		3000	MacAdam 2step	SPHWHAHNDNK27YZV2D2	5024	134	
			MacAdam 3step	SPHWHAHNDNK27YZV3D2			
		3500	MacAdam 2step	SPHWHAHNDNK27YZU2D2	5152	138	
			MacAdam 3step	SPHWHAHNDNK27YZU3D2			
		4000	MacAdam 2step	SPHWHAHNDNK27YZT2D2	5266	141	
	MacAdam 3step		SPHWHAHNDNK27YZT3D2				
	5000	MacAdam 3step	SPHWHAHNDNK27YZR3D2	5325	143		
	95+	2700	MacAdam 2step	SPHWHAHNDNK28YZW2D2	3760	101	
			MacAdam 3step	SPHWHAHNDNK28YZW3D2			
		3000	MacAdam 2step	SPHWHAHNDNK28YZV2D2	3952	106	
			MacAdam 3step	SPHWHAHNDNK28YZV3D2			
3500		MacAdam 2step	SPHWHAHNDNK28YZU2D2	4113	110		
		MacAdam 3step	SPHWHAHNDNK28YZU3D2				
4000		MacAdam 2step	SPHWHAHNDNK28YZT2D2	4241	113		
		MacAdam 3step	SPHWHAHNDNK28YZT3D2				
5000	MacAdam 3step	SPHWHAHNDNK28YZR3D2	4277	114			
 <p>LC060D Gen 2</p>	70+	3000	MacAdam 3step	SPHWHAHNDNL231ZV3D2	9225	164	1080mA 52V
		4000	MacAdam 3step	SPHWHAHNDNL231ZT3D2	9521	170	
		5000	MacAdam 3step	SPHWHAHNDNL231ZR3D2	9668	172	
	80+	2700	MacAdam 2step	SPHWHAHNDNL251ZW2D2	8107	144	
			MacAdam 3step	SPHWHAHNDNL251ZW3D2			
		3000	MacAdam 2step	SPHWHAHNDNL251ZV2D2	8542	152	
			MacAdam 3step	SPHWHAHNDNL251ZV3D2			
		3500	MacAdam 2step	SPHWHAHNDNL251ZU2D2	8812	157	
			MacAdam 3step	SPHWHAHNDNL251ZU3D2			
		4000	MacAdam 2step	SPHWHAHNDNL251ZT2D2	8995	160	
			MacAdam 3step	SPHWHAHNDNL251ZT3D2			
		5000	MacAdam 3step	SPHWHAHNDNL251ZR3D2	9039	161	
		5700	MacAdam 3step	SPHWHAHNDNL251ZQ3D2	9084	162	
		6500	MacAdam 3step	SPHWHAHNDNL251ZP3D2	8990	160	

Product	CRI	CCT (K)	Color Rank	Part Number	T _J = 85°C		I _F (mA) V _F (V)
					Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)	
 LC060D Gen 2	90+	2700	MacAdam 2step	SPHWHAHNDNL271ZW2D2	6959	124	1080mA 52V
			MacAdam 3step	SPHWHAHNDNL271ZW3D2			
		3000	MacAdam 2step	SPHWHAHNDNL271ZV2D2	7352	131	
			MacAdam 3step	SPHWHAHNDNL271ZV3D2			
		3500	MacAdam 2step	SPHWHAHNDNL271ZU2D2	7539	134	
			MacAdam 3step	SPHWHAHNDNL271ZU3D2			
		4000	MacAdam 2step	SPHWHAHNDNL271ZT2D2	7706	137	
			MacAdam 3step	SPHWHAHNDNL271ZT3D2			
		5000	MacAdam 3step	SPHWHAHNDNL271ZR3D2	7793	139	
		 LC080D Gen 2	70+	3000	MacAdam 3step	SPHWHAHNDNM231ZV3D2	
4000	MacAdam 3step			SPHWHAHNDNM231ZT3D2	13896	165	
5000	MacAdam 3step			SPHWHAHNDNM231ZR3D2	14112	168	
80+	2700		MacAdam 2step	SPHWHAHNDNM251ZW2D2	11815	140	
			MacAdam 3step	SPHWHAHNDNM251ZW3D2			
	3000		MacAdam 2step	SPHWHAHNDNM251ZV2D2	12468	148	
			MacAdam 3step	SPHWHAHNDNM251ZV3D2			
	3500		MacAdam 2step	SPHWHAHNDNM251ZU2D2	12852	153	
			MacAdam 3step	SPHWHAHNDNM251ZU3D2			
	4000		MacAdam 2step	SPHWHAHNDNM251ZT2D2	13123	156	
			MacAdam 3step	SPHWHAHNDNM251ZT3D2			
	5000		MacAdam 3step	SPHWHAHNDNM251ZR3D2	13196	157	
	5700		MacAdam 3step	SPHWHAHNDNM251ZQ3D2	13258	157	
6500	MacAdam 3step		SPHWHAHNDNM251ZP3D2	13121	156		
90+	2700		MacAdam 2step	SPHWHAHNDNM271ZW2D2	10157	121	
			MacAdam 3step	SPHWHAHNDNM271ZW3D2			
	3000		MacAdam 2step	SPHWHAHNDNM271ZV2D2	10731	127	
			MacAdam 3step	SPHWHAHNDNM271ZV3D2			
	3500		MacAdam 2step	SPHWHAHNDNM271ZU2D2	11004	131	
		MacAdam 3step	SPHWHAHNDNM271ZU3D2				
	4000	MacAdam 2step	SPHWHAHNDNM271ZT2D2	11247	134		
		MacAdam 3step	SPHWHAHNDNM271ZT3D2				
5000	MacAdam 3step	SPHWHAHNDNM271ZR3D2	11375	135			

C-Series

Make Your Business Shine

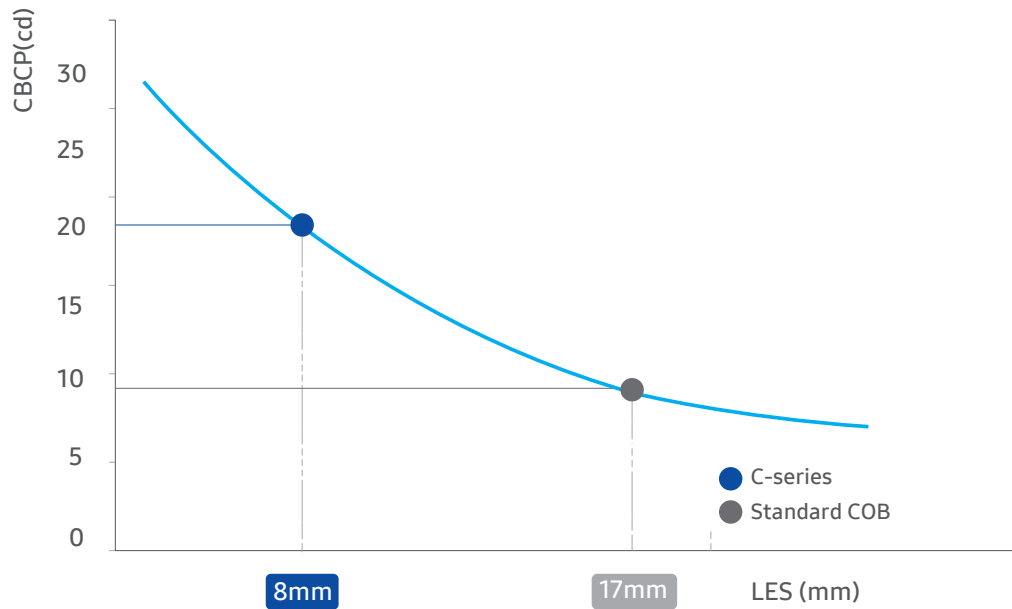
High-intensity small LES for powerfully
effective retail lighting



C-series with High Intensity

Smaller LES, high intensity, higher CBCP

High lumen density COB



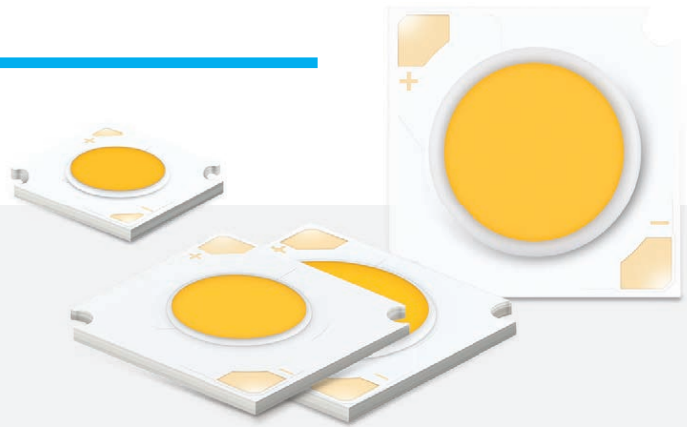
C-series



Standard COB



C-Series



C-series Gen 2 [Small LES COB]




T _j =85°C	LC010C Gen 2	LC020C Gen 2	LC030C Gen 2	LC040C Gen 2
LES	6.0mm	8.5mm	11.5mm	
Typical	35.0V			
	10.5W (300mA)	21.0W (600mA)	31.5W (900mA)	36.8W (1050mA)
Max.	13.8W (380mA)	34.0W (920mA)	51.1W (1380mA)	59.5W (1610mA)
Size	13.5mm x 13.5mm	19mm x 19mm	19mm x 19mm	

Color Variation

Product	CRI90+					CRI80+				
	2700K	3000K	3500K	4000K	5000K	2700K	3000K	3500K	4000K	5000K
LC010C Gen 2	0	0	0	0	0	0	0	0	0	0
LC020C Gen 2	0	0	0	0	0	0	0	0	0	0
LC030C Gen 2	0	0	0	0	0	0	0	0	0	0
LC040C Gen 2	0	0	0	0	0	0	0	0	0	0
MacAdam 3-Step	0	0	0	0	0	0	0	0	0	0

Specifications

Product	CRI	CCT (K)	Color Rank	Part Number	T _j = 85°C		I _F (mA) V _F (V)
					Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)	
 LC010C Gen 2	80+	2700	MacAdam 3step	SPHWAHDNC25YZW3C2	1212	115	300mA 35.0V
		3000	MacAdam 3step	SPHWAHDNC25YZV3C2	1274	121	
		3500	MacAdam 3step	SPHWAHDNC25YZU3C2	1311	125	
		4000	MacAdam 3step	SPHWAHDNC25YZT3C2	1337	127	
		5000	MacAdam 3step	SPHWAHDNC25YZR3C2	1348	128	
	90+	2700	MacAdam 3step	SPHWAHDNC27YZW3C2	1037	99	
		3000	MacAdam 3step	SPHWAHDNC27YZV3C2	1091	104	
		3500	MacAdam 3step	SPHWAHDNC27YZU3C2	1123	107	
		4000	MacAdam 3step	SPHWAHDNC27YZT3C2	1147	109	
		5000	MacAdam 3step	SPHWAHDNC27YZR3C2	1156	110	

Product	CRI	CCT (K)	Color Rank	Part Number	T _J = 85°C		I _F (mA) V _F (V)
					Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)	
 LC020C Gen 2	80+	2700	MacAdam 3step	SPHWAHDNF25YZW3C2	2485	118	600mA 35.0V
		3000	MacAdam 3step	SPHWAHDNF25YZV3C2	2625	125	
		3500	MacAdam 3step	SPHWAHDNF25YZU3C2	2688	128	
		4000	MacAdam 3step	SPHWAHDNF25YZT3C2	2742	131	
		5000	MacAdam 3step	SPHWAHDNF25YZR3C2	2765	132	
	90+	2700	MacAdam 3step	SPHWAHDNF27YZW3C2	2127	101	
		3000	MacAdam 3step	SPHWAHDNF27YZV3C2	2237	107	
		3500	MacAdam 3step	SPHWAHDNF27YZU3C2	2304	110	
		4000	MacAdam 3step	SPHWAHDNF27YZT3C2	2351	112	
		5000	MacAdam 3step	SPHWAHDNF27YZR3C2	2372	113	
 LC030C Gen 2	80+	2700	MacAdam 3step	SPHWAHDNH25YZW3C2	3765	120	900mA 35.0V
		3000	MacAdam 3step	SPHWAHDNH25YZV3C2	3956	126	
		3500	MacAdam 3step	SPHWAHDNH25YZU3C2	4072	129	
		4000	MacAdam 3step	SPHWAHDNH25YZT3C2	4154	132	
		5000	MacAdam 3step	SPHWAHDNH25YZR3C2	4188	133	
	90+	2700	MacAdam 3step	SPHWAHDNH27YZW3C2	3222	102	
		3000	MacAdam 3step	SPHWAHDNH27YZV3C2	3389	108	
		3500	MacAdam 3step	SPHWAHDNH27YZU3C2	3490	111	
		4000	MacAdam 3step	SPHWAHDNH27YZT3C2	3562	113	
		5000	MacAdam 3step	SPHWAHDNH27YZR3C2	3592	114	
 LC040C Gen 2	80+	2700	MacAdam 3step	SPHWAHDNK25YZW3C2	4305	117	1050mA 35.0V
		3000	MacAdam 3step	SPHWAHDNK25YZV3C2	4524	123	
		3500	MacAdam 3step	SPHWAHDNK25YZU3C2	4657	127	
		4000	MacAdam 3step	SPHWAHDNK25YZT3C2	4750	129	
		5000	MacAdam 3step	SPHWAHDNK25YZR3C2	4790	130	
	90+	2700	MacAdam 3step	SPHWAHDNK27YZW3C2	3684	100	
		3000	MacAdam 3step	SPHWAHDNK27YZV3C2	3875	105	
		3500	MacAdam 3step	SPHWAHDNK27YZU3C2	3991	109	
		4000	MacAdam 3step	SPHWAHDNK27YZT3C2	4073	111	
		5000	MacAdam 3step	SPHWAHDNK27YZR3C2	4108	112	

C-series

R-Series

Enriched Colors for Displaying

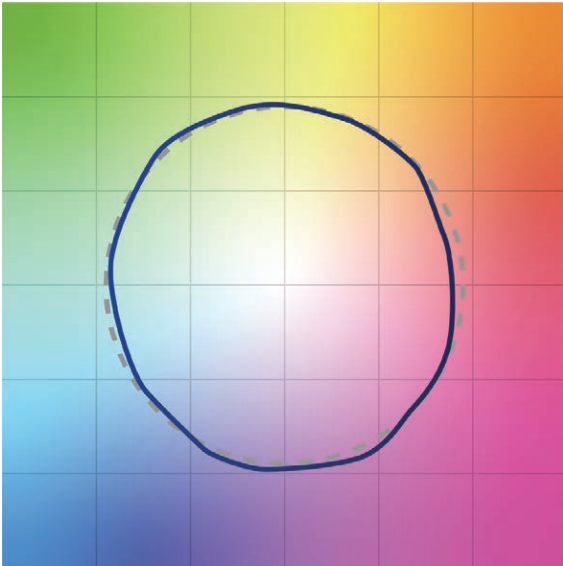
Vividly enhanced premium colors, contrast
and exceptional white light



R-series with Specialized Spectrum

Enhanced color appearance based on color gamut and preference survey

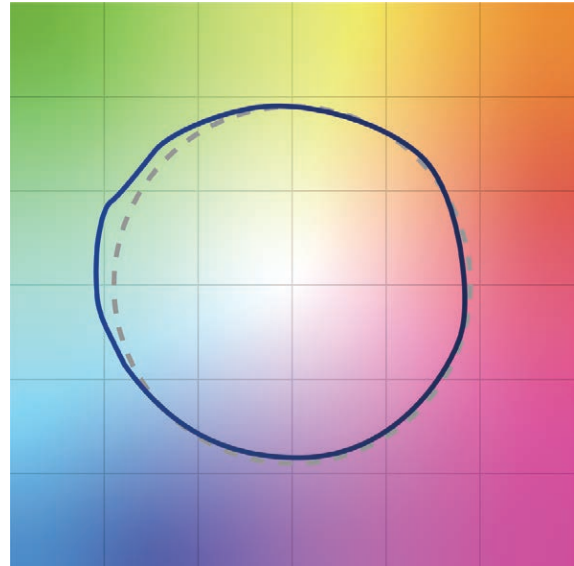
Fashion Vivid Color



— Fashion Vivid Color LED - - - Color Standard by TM 30

Enhanced whiteness and vividness by diminishing of yellowish

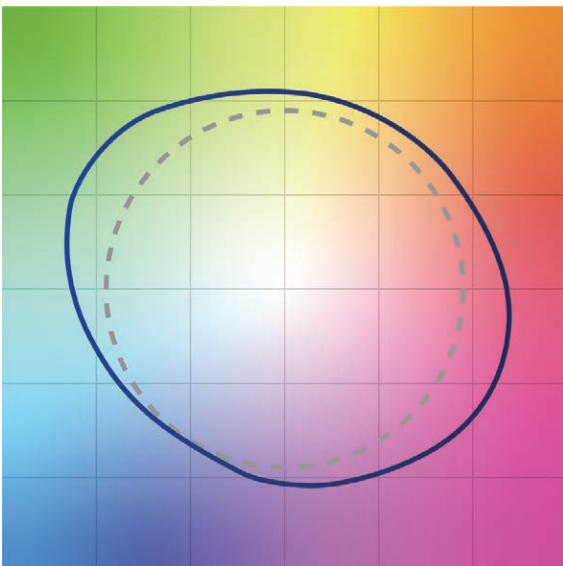
Fashion Vivid White



— Fashion Vivid White LED - - - Color Standard by TM 30

Emphasizing whiteness by adjusting color point below blackbody locus

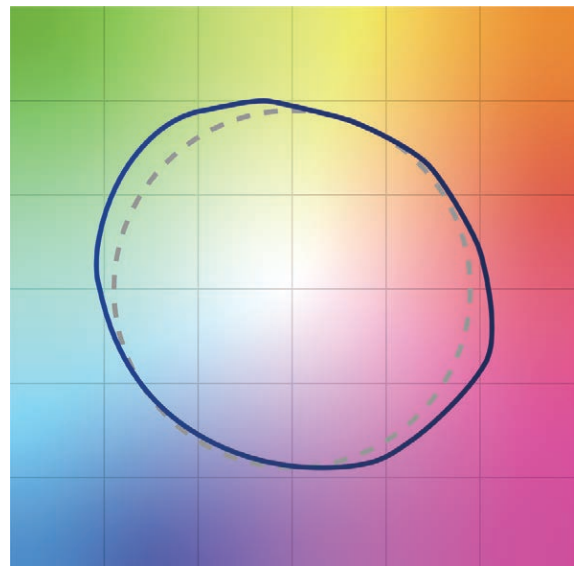
Meat



— Meat LED - - - Color Standard by TM 30

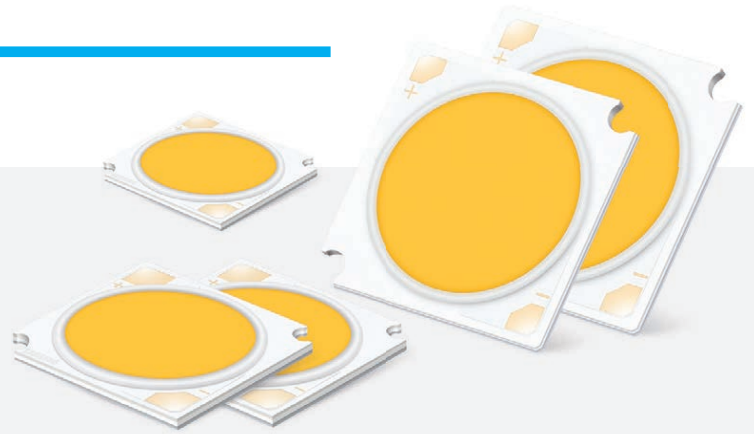
Enhanced whiteness and reddish color by using longer 650nm red phosphors

Vegetable



— Vegetable LED - - - Color Standard by TM 30

Fresh greenish color based on preference survey of 300 persons










R-series Fashion

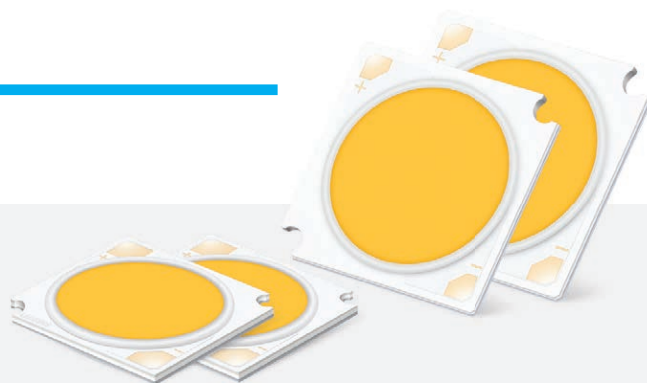
T _j =85°C	LC013R Fashion	LC016R Fashion	LC019R Fashion	LC026R Fashion	LC033R Fashion	LC040R Fashion
LES	9.8mm	14.5mm				22mm
Typical	34.6V					
	12.5W	15.6W	18.7W	24.9W	31.1W	37.4W
Max.	360mA	450mA	540mA	720mA	900mA	1080mA
	34.5W	43.1W	51.8W	69.0W	86.2W	103.5W
Size	920mA	1150mA	1380mA	1840mA	2300mA	2760mA
	13.5mm x 13.5mm	19mm x 19mm				28mm x 28mm

R-series

Specifications

Product	CRI	CCT (K)	Color Rank	Part Number	T _j = 85°C		I _F (mA) V _F (V)
					Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)	
 LC013R Fashion Vivid White	90+	3000 (Below BBL)	MacAdam 3step	SPHWAHDND2VYZVND2	1435	115	360mA 34.6V
		3500 (Below BBL)	MacAdam 3step	SPHWAHDND2VYZUND2	1494	120	
		4000 (Below BBL)	MacAdam 3step	SPHWAHDND2VYZTND2	1541	124	
 LC016R Fashion Vivid White	90+	3000 (Below BBL)	MacAdam 3step	SPHWAHDNE2VYZVND2	1837	118	450mA 34.6V
		3500 (Below BBL)	MacAdam 3step	SPHWAHDNE2VYZUND2	1912	123	
		4000 (Below BBL)	MacAdam 3step	SPHWAHDNE2VYZTND2	1972	127	
 LC019R Fashion Vivid White	90+	3000 (Below BBL)	MacAdam 3step	SPHWAHDNF2VYZVND2	2195	117	540mA 34.6V
		3500 (Below BBL)	MacAdam 3step	SPHWAHDNF2VYZUND2	2284	122	
		4000 (Below BBL)	MacAdam 3step	SPHWAHDNF2VYZTND2	2355	126	
 LC026R Fashion Vivid White	90+	3000 (Below BBL)	MacAdam 3step	SPHWAHDNG2VYZVND2	2917	117	720mA 34.6V
		3500 (Below BBL)	MacAdam 3step	SPHWAHDNG2VYZUND2	3036	122	
		4000 (Below BBL)	MacAdam 3step	SPHWAHDNG2VYZTND2	3131	126	






Product	CCT (K)	Color Rank	Part Number	T _j = 85°C		I _F (mA) V _F (V)
				Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)	
 LC013R Fashion Vivid Color	3000 (Below BBL)	MacAdam 2step	SPHWAHDND2VYZV2D2	1334	107	360mA 34.6V
		MacAdam 3step	SPHWAHDND2VYZVVD2			
	3300 (Below BBL)	MacAdam 2step	SPHWAHDND2VYZA2D2	1394	112	
		MacAdam 3step	SPHWAHDND2VYZAVD2			
	3500 (Below BBL)	MacAdam 2step	SPHWAHDND2VYZU2D2	1433	115	
		MacAdam 3step	SPHWAHDND2VYZUVD2			
	4000 (Below BBL)	MacAdam 2step	SPHWAHDND2VYZT2D2	1533	123	
		MacAdam 3step	SPHWAHDND2VYZTVD2			
 LC016R Fashion Vivid Color	3000 (Below BBL)	MacAdam 2step	SPHWAHDNE2VYZ2VD2	1745	112	450mA 34.6V
		MacAdam 3step	SPHWAHDNE2VYZVVD2			
	3300 (Below BBL)	MacAdam 2step	SPHWAHDNE2VYZA2D2	1823	117	
		MacAdam 3step	SPHWAHDNE2VYZAVD2			
	3500 (Below BBL)	MacAdam 2step	SPHWAHDNE2VYZU2D2	1875	120	
		MacAdam 3step	SPHWAHDNE2VYZUVD2			
	4000 (Below BBL)	MacAdam 2step	SPHWAHDNE2VYZT2D2	2005	129	
		MacAdam 3step	SPHWAHDNE2VYZTVD2			
 LC019R Fashion Vivid Color	3000 (Below BBL)	MacAdam 2step	SPHWAHDNF2VYZV2D2	2068	111	540mA 34.6V
		MacAdam 3step	SPHWAHDNF2VYZVVD2			
	3300 (Below BBL)	MacAdam 2step	SPHWAHDNF2VYZA2D2	2160	116	
		MacAdam 3step	SPHWAHDNF2VYZAVD2			
	3500 (Below BBL)	MacAdam 2step	SPHWAHDNF2VYZU2D2	2222	119	
		MacAdam 3step	SPHWAHDNF2VYZUVD2			
	4000 (Below BBL)	MacAdam 2step	SPHWAHDNF2VYZT2D2	2376	127	
		MacAdam 3step	SPHWAHDNF2VYZTVD2			
 LC026R Fashion Vivid Color	3000 (Below BBL)	MacAdam 2step	SPHWAHDNG2VYZV2D2	2706	109	720mA 34.6V
		MacAdam 3step	SPHWAHDNG2VYZVVD2			
	3300 (Below BBL)	MacAdam 2step	SPHWAHDNG2VYZA2D2	2827	113	
		MacAdam 3step	SPHWAHDNG2VYZAVD2			
	3500 (Below BBL)	MacAdam 2step	SPHWAHDNG2VYZU2D2	2907	117	
		MacAdam 3step	SPHWAHDNG2VYZUVD2			
	4000 (Below BBL)	MacAdam 2step	SPHWAHDNG2VYZT2D2	3108	125	
		MacAdam 3step	SPHWAHDNG2VYZTVD2			
 LC033R Fashion Vivid Color	3000 (Below BBL)	MacAdam 2step	SPHWAHDNH2VYZV2D2	3339	107	900mA 34.6V
		MacAdam 3step	SPHWAHDNH2VYZVVD2			
	3300 (Below BBL)	MacAdam 2step	SPHWAHDNH2VYZA2D2	3488	112	
		MacAdam 3step	SPHWAHDNH2VYZAVD2			
	3500 (Below BBL)	MacAdam 2step	SPHWAHDNH2VYZU2D2	3588	115	
		MacAdam 3step	SPHWAHDNH2VYZUVD2			
	4000 (Below BBL)	MacAdam 2step	SPHWAHDNH2VYZT2D2	3836	123	
		MacAdam 3step	SPHWAHDNH2VYZTVD2			
 LC040R Fashion Vivid Color	3000 (Below BBL)	MacAdam 2step	SPHWAHDNK2VYZV2D2	4150	111	1080mA 34.6V
		MacAdam 3step	SPHWAHDNK2VYZVVD2			
	3300 (Below BBL)	MacAdam 2step	SPHWAHDNK2VYZA2D2	4335	116	
		MacAdam 3step	SPHWAHDNK2VYZAVD2			
	3500 (Below BBL)	MacAdam 2step	SPHWAHDNK2VYZU2D2	4459	119	
		MacAdam 3step	SPHWAHDNK2VYZUVD2			
	4000 (Below BBL)	MacAdam 2step	SPHWAHDNK2VYZT2D2	4768	128	
		MacAdam 3step	SPHWAHDNK2VYZTVD2			

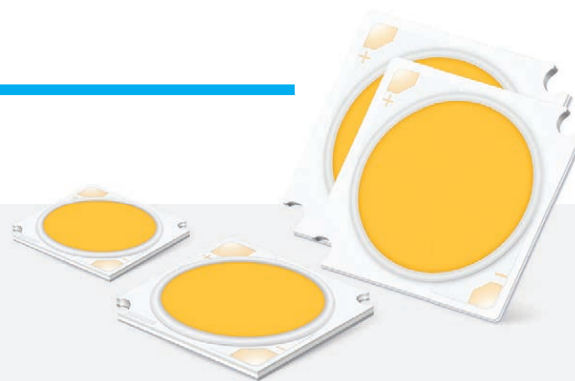


R-series Meat

T _J =85°C	LC013R Meat	LC016R Meat	LC019R Meat	LC026R Meat	LC033R Meat
LES	9.8mm	14.5mm			
Typical	34.6V				
	12.5W	15.6W	18.7W	24.9W	31.1W
Max.	360mA	450mA	540mA	720mA	900mA
	34.5W	43.1W	51.8W	69.0W	86.2W
Size	920mA	1150mA	1380mA	1840mA	2300mA
	13.5mm x 13.5mm	19mm x 19mm			

Specifications






Product	Color Rank	Part Number	T _J = 85°C		I _F (mA) V _F (V)
			Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)	
 LC013R Meat	MacAdam 2step	SPHWAHDND2VYZTSD2	914	73	360mA 34.6V
 LC016R Meat	MacAdam 2step	SPHWAHDNE2VYZTSD2	1188	76	450mA 34.6V
 LC019R Meat	MacAdam 2step	SPHWAHDNF2VYZTSD2	1412	76	540mA 34.6V
 LC026R Meat	MacAdam 2step	SPHWAHDNG2VYZTSD2	1845	74	720mA 34.6V
 LC033R Meat	MacAdam 2step	SPHWAHDNH2VYZTSD2	2284	73	900mA 34.6V



R-series Vegetable

T _j =85°C	LC013R Vegetable	LC016R Vegetable	LC019R Vegetable	LC026R Vegetable	LC033R Vegetable
LES	9.8mm	14.5mm			
Typical	34.6V				
	12.5W	15.6W	18.7W	24.9W	31.1W
Max.	360mA	450mA	540mA	720mA	900mA
	34.5W	43.1W	51.8W	69.0W	86.2W
Size	920mA	1150mA	1380mA	1840mA	2300mA
	13.5mm x 13.5mm	19mm x 19mm			

Specifications

Product	Color Rank	Part Number	T _j = 85°C		I _F (mA) V _F (V)
			Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)	
 LC013R Vegetable	MacAdam 2step	SPHWHAHND2VYZRSD2	1188	95	360mA 34.6V
 LC016R Vegetable	MacAdam 2step	SPHWHAHND2VYZRSD2	1544	99	450mA 34.6V
 LC019R Vegetable	MacAdam 2step	SPHWHAHDNF2VYZRSD2	1835	98	540mA 34.6V
 LC026R Vegetable	MacAdam 2step	SPHWHAHDNG2VYZRSD2	2399	96	720mA 34.6V
 LC033R Vegetable	MacAdam 2step	SPHWHAHDNH2VYZRSD2	2969	95	900mA 34.6V



T-Series

Perfect Ambience Created by Light

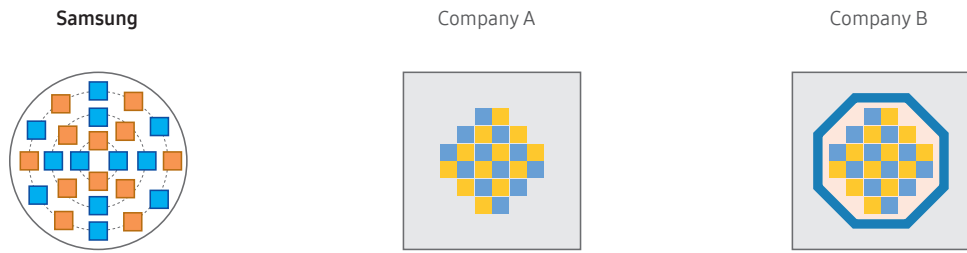
Tunable lighting enriches your life more than ever
through superb optimizations

T-series with White Color Tunability

Provides a wide CCT tunable range

High Color Quality

Excellent color mixing with optimized chip arrangements

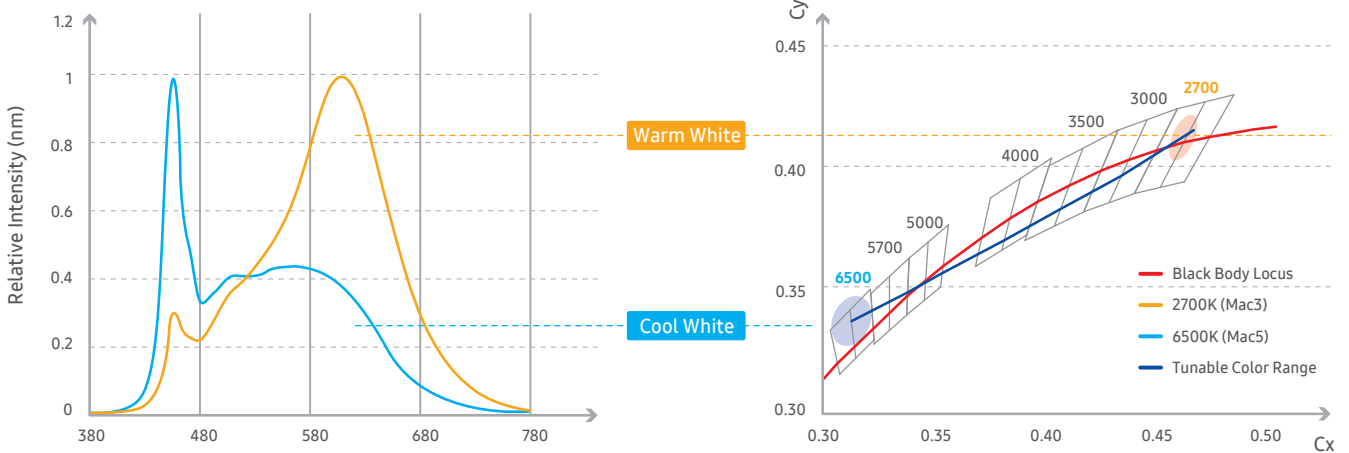


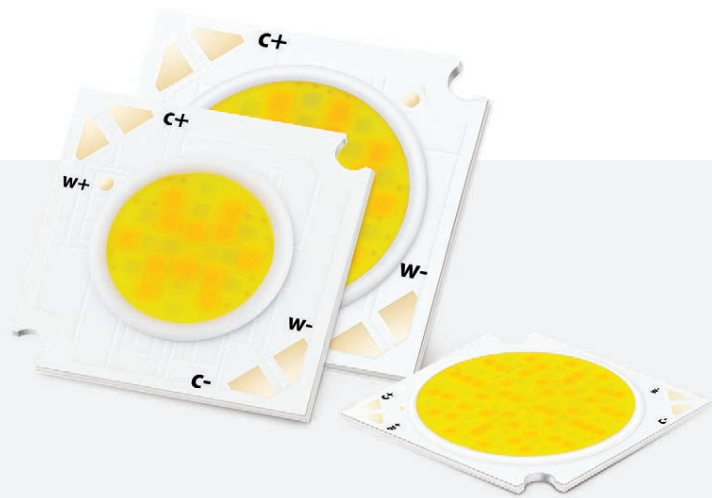
Chip layout type	Concentric Circle Round Dam	Lattice arrangement Octagonal Dam	Lattice arrangement No Dam
CCT distribution (Simulation)			

Cool White Warm White

Wide Range of Color Temperature

From 2700K thru 6500K white color tunable

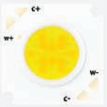
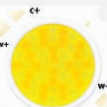





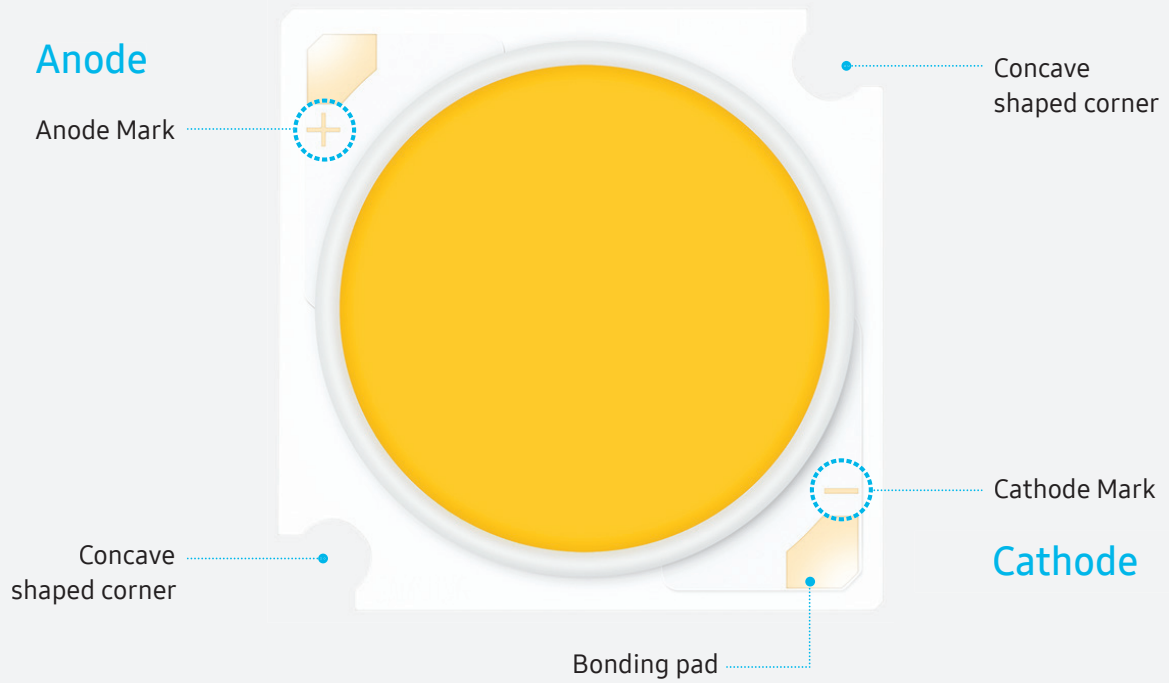
T-series

T _j =85°C	LC010T	LC020T	LC035T
LES	9.8mm	13mm	22mm
Typical		35.0V	
	9.8W	19.6W	34.3W
Max.	280mA	560mA	980mA
	15W	30W	45W
Size	19mm x 19mm		28mm x 28mm
	400mA	800mA	1250mA

Specifications

Product	CRI	CCT (K)	Color Rank	Part Number	T _j = 85°C		I _F (mA) V _F (V)
					Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)	
 LC010T	80+	2700	MacAdam 3step	SPHWAHDNC25YZWPT1	1011	103	280mA 35V
		6500	MacAdam 5step		1313	134	
 LC020T	80+	2700	MacAdam 3step	SPHWAHDNF25YZWPT1	2022	103	560mA 35V
		6500	MacAdam 5step		2626	134	
 LC035T	80+	2700	MacAdam 3step	SPHWAHDNH25YZWPT1	3698	108	980mA 35V
		6500	MacAdam 5step		4802	140	

Product Details



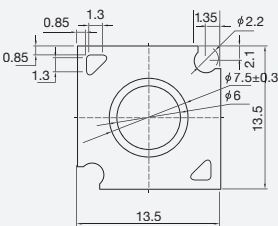
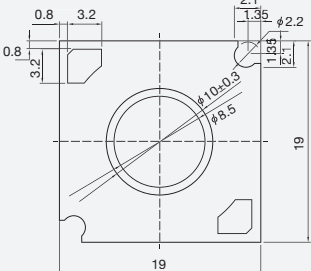
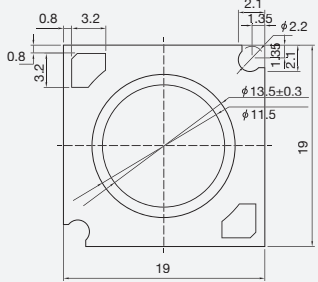
Product Dimensions

D-series

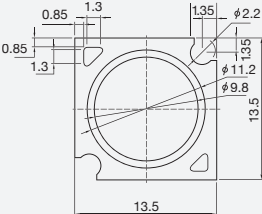
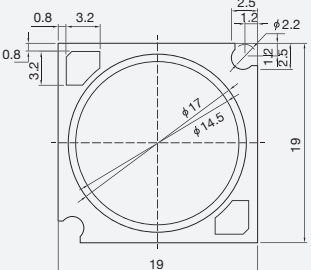
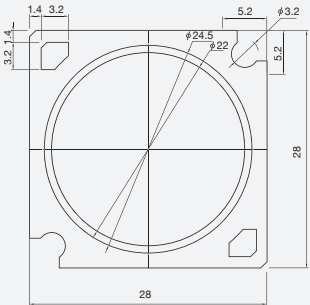
LC003D / LC006D / LC009D / LC013D	LC016D / LC019D / LC026D / LC033D	LC040D / LC060D / LC080D
<p>Technical drawing showing dimensions for the LC003D / LC006D / LC009D / LC013D series. The component is square with a side length of 13.5. It features a central circular area with diameters of 9.8, 11.2, and 13.5. A small circular feature has a diameter of 2.2. Other dimensions include 0.85, 1.3, and 1.35.</p>	<p>Technical drawing showing dimensions for the LC016D / LC019D / LC026D / LC033D series. The component is square with a side length of 19. It features a central circular area with diameters of 14.5 and 17. Other dimensions include 0.8, 3.2, 2.5, 1.2, 1.8, and 2.2.</p>	<p>Technical drawing showing dimensions for the LC040D / LC060D / LC080D series. The component is square with a side length of 28. It features a central circular area with diameters of 24.5 and 22. Other dimensions include 1.4, 3.2, 5.2, 3.2, 1.4, and 5.2.</p>

Product Dimensions

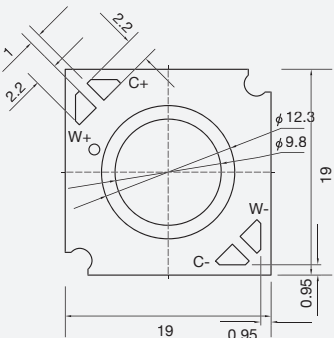
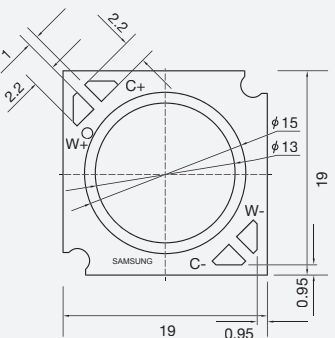
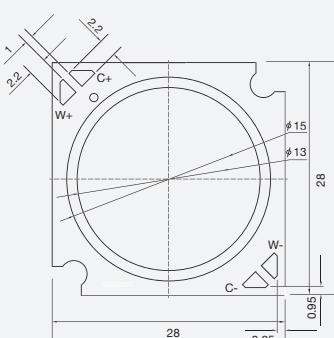
C-series

LC010C Gen 2	LC020C Gen 2	LC030C Gen 2 / LC040C Gen 2
		

R-series

LC003R / LC006R / LC009R / LC013R	LC016R / LC019R / LC026R / LC033R	LC040R / LC060R / LC080R
		

T-series

LC010T	LC020T	LC035T
		



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