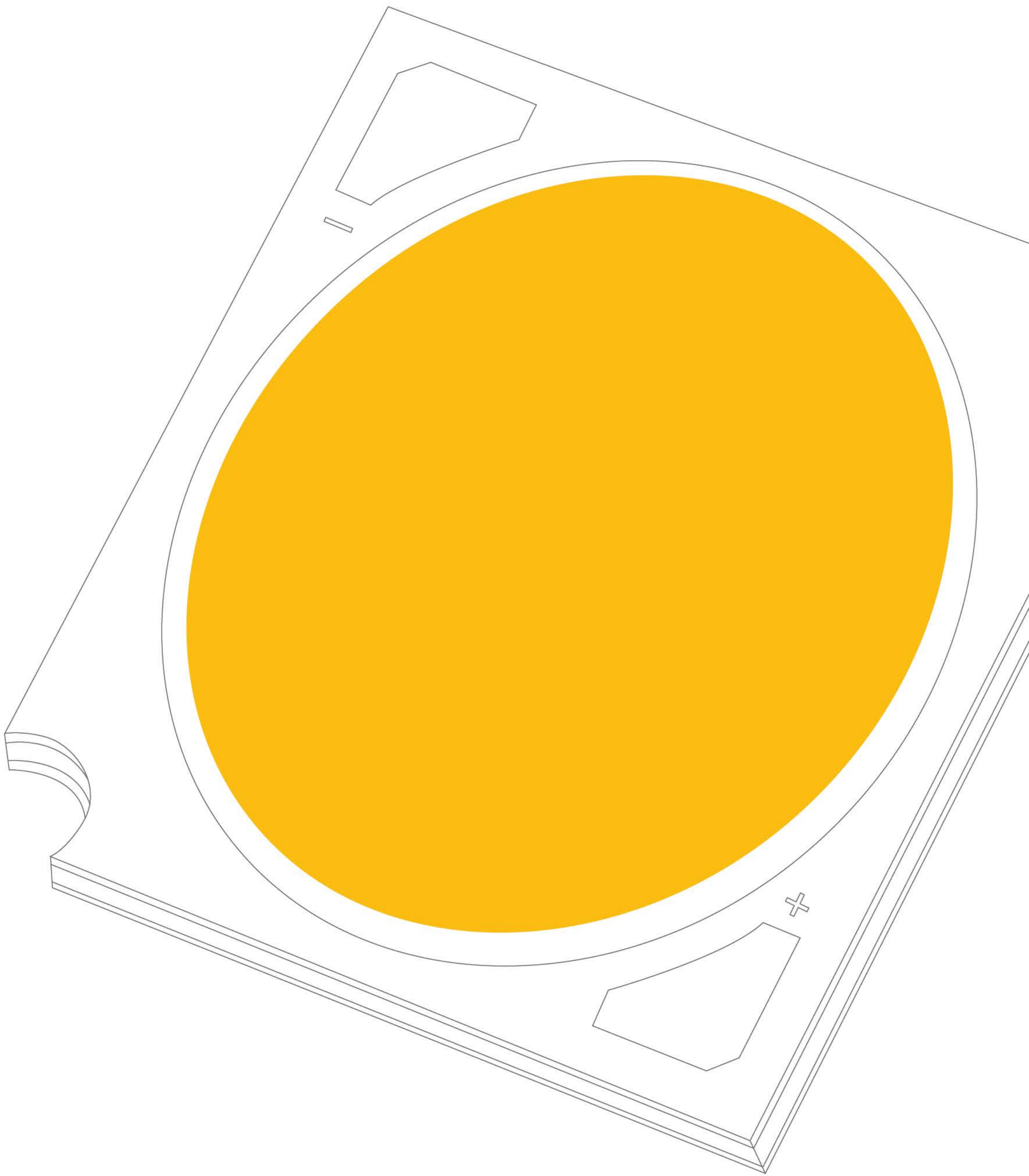


General Lighting | Package

COB LEDs

R Series


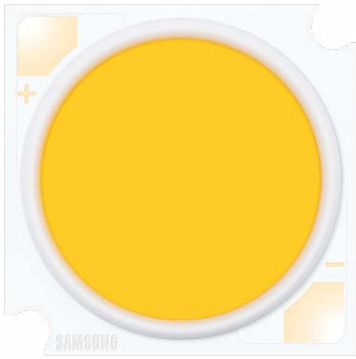
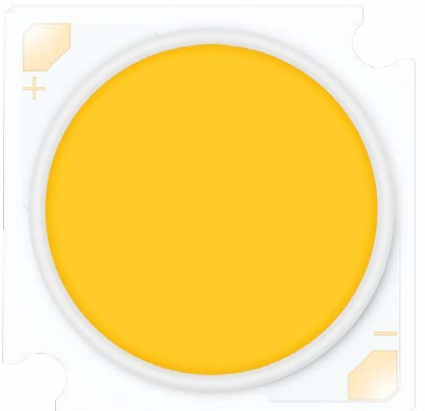
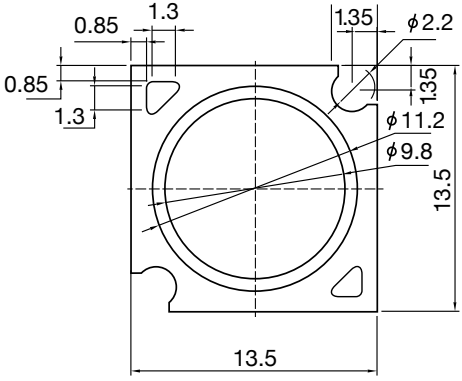
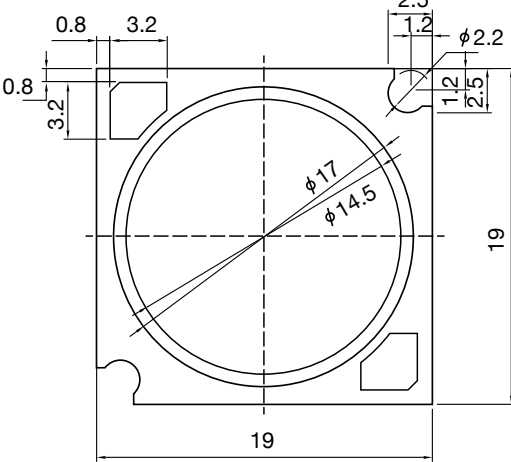
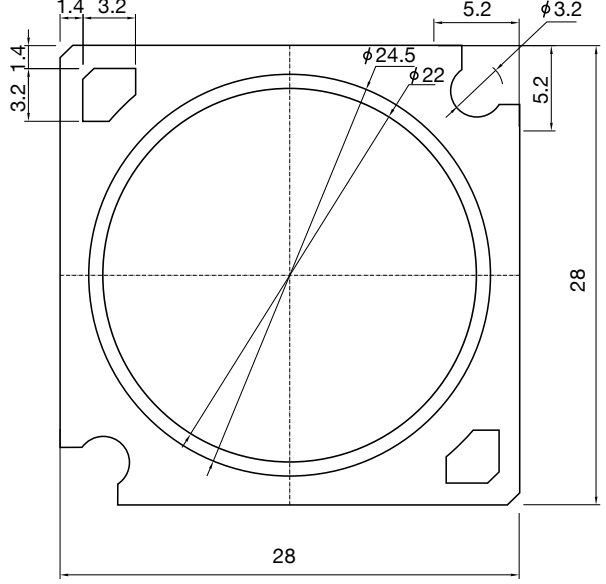


R-series Fashion



Enhanced color appearance based on color gamut and preference survey

- Fashion Vivid White: Emphasizing whiteness by adjusting color point below blackbody locus
- Fashion Vivid Color: Enhanced whiteness and vividness by diminishing of yellowish

$T_J=85^\circ\text{C}$	LC013R Fashion	LC016R Fashion	LC019R Fashion	LC026R Fashion	LC033R Fashion	LC040R Fashion
						
LES	9.8mm	14.5mm			22mm	
Typ.	12.5W	15.6W	18.7W	24.9W	31.1W	37.4W
	360mA	450mA	540mA	720mA	900mA	1080mA
Max.	34.5W	43.1W	51.8W	69.0W	86.2W	103.5W
	920mA	1150mA	1380mA	1840mA	2300mA	2760mA
Dimension						
Size	13.5mm x 13.5mm	19mm x 19mm			28mm x 28mm	

R-series Fashion Vivid White (in Gen2)

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	SPHWHHAHDND27YZVND2	1435	115	360mA 34.6V
		3500 (Below BBL)	MacAdam 3step	SPHWHHAHDND27YZUND2	1494	120	
		4000 (Below BBL)	MacAdam 3step	SPHWHHAHDND27YZTND2	1541	124	
LC016R Fashion Vivid White	90+	3000 (Below BBL)	MacAdam 3step	SPHWHHAHDNE27YZVND2	1837	118	450mA 34.6V
		3500 (Below BBL)	MacAdam 3step	SPHWHHAHDNE27YZUND2	1912	123	
		4000 (Below BBL)	MacAdam 3step	SPHWHHAHDNE27YZTND2	1972	127	
LC019R Fashion Vivid White	90+	3000 (Below BBL)	MacAdam 3step	SPHWHHAHDNF27YZVND2	2195	117	540mA 34.6V
		3500 (Below BBL)	MacAdam 3step	SPHWHHAHDNF27YZUND2	2284	122	
		4000 (Below BBL)	MacAdam 3step	SPHWHHAHDNF27YZTND2	2355	126	
LC026R Fashion Vivid White	90+	3000 (Below BBL)	MacAdam 3step	SPHWHHAHDNG27YZVND2	2917	117	720mA 34.6V
		3500 (Below BBL)	MacAdam 3step	SPHWHHAHDNG27YZUND2	3036	122	
		4000 (Below BBL)	MacAdam 3step	SPHWHHAHDNG27YZTND2	3131	126	
LC033R Fashion Vivid White	90+	3000 (Below BBL)	MacAdam 3step	SPHWHHAHDNH27YZVND2	3589	115	900mA 34.6V
		3500 (Below BBL)	MacAdam 3step	SPHWHHAHDNH27YZUND2	3735	120	
		4000 (Below BBL)	MacAdam 3step	SPHWHHAHDNH27YZTND2	3852	124	
LC040R Fashion Vivid White	90+	3000 (Below BBL)	MacAdam 3step	SPHWHHAHDNK27YZVND2	4428	118	1080mA 34.6V
		3500 (Below BBL)	MacAdam 3step	SPHWHHAHDNK27YZUND2	4591	123	
		4000 (Below BBL)	MacAdam 3step	SPHWHHAHDNK27YZTND2	4745	127	

R-series Fashion Vivid White (in Gen2+)



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	SPHWHHAHDND27YZVNDB	1511	123	360mA 34V
		3500 (Below BBL)	MacAdam 3step	SPHWHHAHDND27YZUNDB	1526	125	
		4000 (Below BBL)	MacAdam 3step	SPHWHHAHDND27YZTNDB	1622	133	
LC016R Fashion Vivid White	90+	3000 (Below BBL)	MacAdam 3step	SPHWHHAHDNE27YZVNDB	1934	126	450mA 34V
		3500 (Below BBL)	MacAdam 3step	SPHWHHAHDNE27YZUNDB	1953	128	
		4000 (Below BBL)	MacAdam 3step	SPHWHHAHDNE27YZTNDB	2078	136	
LC019R Fashion Vivid White	90+	3000 (Below BBL)	MacAdam 3step	SPHWHHAHDNF27YZVNDB	2310	126	540mA 34V
		3500 (Below BBL)	MacAdam 3step	SPHWHHAHDNF27YZUNDB	2333	127	
		4000 (Below BBL)	MacAdam 3step	SPHWHHAHDNF27YZTNDB	2479	135	
LC026R Fashion Vivid White	90+	3000 (Below BBL)	MacAdam 3step	SPHWHHAHDNG27YZVNDB	3071	125	720mA 34V
		3500 (Below BBL)	MacAdam 3step	SPHWHHAHDNG27YZUNDB	3102	127	
		4000 (Below BBL)	MacAdam 3step	SPHWHHAHDNG27YZTNDB	3296	135	
LC033R Fashion Vivid White	90+	3000 (Below BBL)	MacAdam 3step	SPHWHHAHDNH27YZVNDB	3778	123	900mA 34V
		3500 (Below BBL)	MacAdam 3step	SPHWHHAHDNH27YZUNDB	3816	125	
		4000 (Below BBL)	MacAdam 3step	SPHWHHAHDNH27YZTNDB	4055	133	
LC040R Fashion Vivid White	90+	3000 (Below BBL)	MacAdam 3step	SPHWHHAHDNK27YZVNDB	4590	125	1080mA 34V
		3500 (Below BBL)	MacAdam 3step	SPHWHHAHDNK27YZUNDB	4536	124	
		4000 (Below BBL)	MacAdam 3step	SPHWHHAHDNK27YZTNDB	4926	134	

R-series Fashion Vivid White (in Gen3+)



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	SPHWAHDND27YZVNDC	1541	127	360mA 33.7V
		3500 (Below BBL)	MacAdam 3step	SPHWAHDND27YZUNDC	1557	128	
		4000 (Below BBL)	MacAdam 3step	SPHWAHDND27YZTNDC	1654	136	
LC016R Fashion Vivid White	90+	3000 (Below BBL)	MacAdam 3step	SPHWAHDNE27YZVNDC	1973	130	450mA 33.7V
		3500 (Below BBL)	MacAdam 3step	SPHWAHDNE27YZUNDC	1992	131	
		4000 (Below BBL)	MacAdam 3step	SPHWAHDNE27YZTNDC	2117	140	
LC019R Fashion Vivid White	90+	3000 (Below BBL)	MacAdam 3step	SPHWAHDNF27YZVNDC	2356	129	540mA 33.7V
		3500 (Below BBL)	MacAdam 3step	SPHWAHDNF27YZUNDC	2380	131	
		4000 (Below BBL)	MacAdam 3step	SPHWAHDNF27YZTNDC	2529	139	
LC026R Fashion Vivid White	90+	3000 (Below BBL)	MacAdam 3step	SPHWAHDNG27YZVNDC	3132	129	720mA 33.7V
		3500 (Below BBL)	MacAdam 3step	SPHWAHDNG27YZUNDC	3164	130	
		4000 (Below BBL)	MacAdam 3step	SPHWAHDNG27YZTNDC	3362	139	
LC033R Fashion Vivid White	90+	3000 (Below BBL)	MacAdam 3step	SPHWAHDNH27YZVNDC	3800	125	900mA 33.7V
		3500 (Below BBL)	MacAdam 3step	SPHWAHDNH27YZUNDC	3838	127	
		4000 (Below BBL)	MacAdam 3step	SPHWAHDNH27YZTNDC	4078	134	
LC040R Fashion Vivid White	90+	3000 (Below BBL)	MacAdam 3step	SPHWAHDNK27YZVNDC	4755	131	1080mA 33.7V
		3500 (Below BBL)	MacAdam 3step	SPHWAHDNK27YZUNDC	4803	132	
		4000 (Below BBL)	MacAdam 3step	SPHWAHDNK27YZTNDC	5103	140	

R-series Fashion Vivid Color

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	SPHWAHADND2VYZV2D2	1334	107	360mA 34.6V
		MacAdam 3step	SPHWAHADND2VYZVVD2			
	3300 (Below BBL)	MacAdam 2step	SPHWAHADND2VYZA2D2	1394	112	
		MacAdam 3step	SPHWAHADND2VYZAVD2			
	3500 (Below BBL)	MacAdam 2step	SPHWAHADND2VYZU2D2	1433	115	
		MacAdam 3step	SPHWAHADND2VYZUVD2			
	4000 (Below BBL)	MacAdam 2step	SPHWAHADND2VYZT2D2	1533	123	
		MacAdam 3step	SPHWAHADND2VYZTVD2			
LC016R Fashion Vivid Color	3000 (Below BBL)	MacAdam 2step	SPHWAHADNE2VYZ2VD2	1745	112	450mA 34.6V
		MacAdam 3step	SPHWAHADNE2VYZVVD2			
	3300 (Below BBL)	MacAdam 2step	SPHWAHADNE2VYZA2D2	1823	117	
		MacAdam 3step	SPHWAHADNE2VYZAVD2			
	3500 (Below BBL)	MacAdam 2step	SPHWAHADNE2VYZU2D2	1875	120	
		MacAdam 3step	SPHWAHADNE2VYZUVD2			
	4000 (Below BBL)	MacAdam 2step	SPHWAHADNE2VYZT2D2	2005	129	
		MacAdam 3step	SPHWAHADNE2VYZTVD2			
LC019R Fashion Vivid Color	3000 (Below BBL)	MacAdam 2step	SPHWAHADNF2VYZV2D2	2068	111	540mA 34.6V
		MacAdam 3step	SPHWAHADNF2VYZVVD2			
	3300 (Below BBL)	MacAdam 2step	SPHWAHADNF2VYZA2D2	2160	116	
		MacAdam 3step	SPHWAHADNF2VYZAVD2			
	3500 (Below BBL)	MacAdam 2step	SPHWAHADNF2VYZU2D2	2222	119	
		MacAdam 3step	SPHWAHADNF2VYZUVD2			
	4000 (Below BBL)	MacAdam 2step	SPHWAHADNF2VYZT2D2	2376	127	
		MacAdam 3step	SPHWAHADNF2VYZTVD2			

R-series Fashion Vivid Color


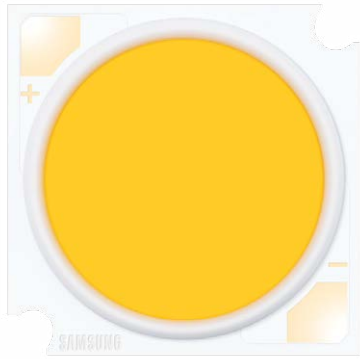
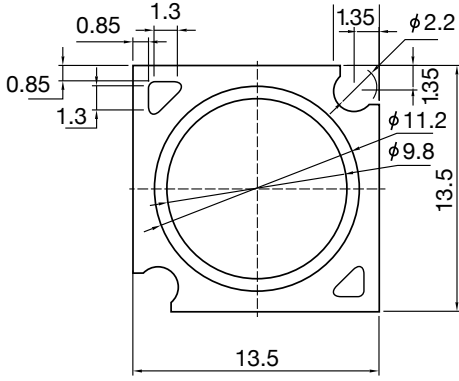
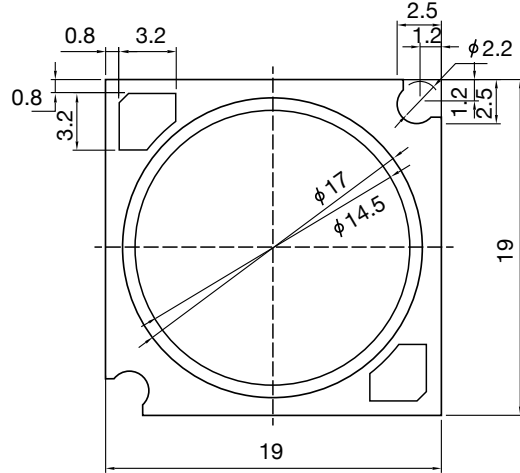
Product	CCT (K)	Color Rank	Part Number	T _j = 85°C		I _F (mA) V _F (V)
				Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)	
LC026R Fashion Vivid Color	3000 (Below BBL)	MacAdam 2step	SPHWAHDNG2VYZV2D2	2706	109	720mA 34.6V
		MacAdam 3step	SPHWAHDNG2VYZVVD2			
	3300 (Below BBL)	MacAdam 2step	SPHWAHDNG2VYZA2D2	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



Enhanced color appearance based on color gamut and preference survey

- Highlighting whiteness and reddish color by using longer 650nm red phosphors

$T_j=85^\circ\text{C}$	LC013R Meat	LC016R Meat	LC019R Meat	LC026R Meat	LC033R Meat
					
LES	9.8mm	14.5mm			
Typ.	12.5W	15.6W	18.7W	24.9W	31.1W
	360mA	450mA	540mA	720mA	900mA
Max.	34.5W	43.1W	51.8W	69.0W	86.2W
	920mA	1150mA	1380mA	1840mA	2300mA
Dimension					
Size	13.5mm x 13.5mm	19mm x 19mm			

R-series Meat


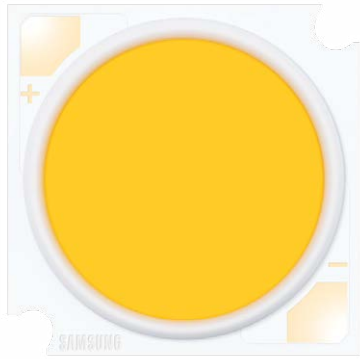
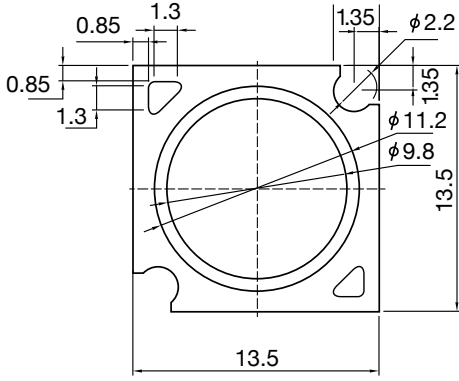
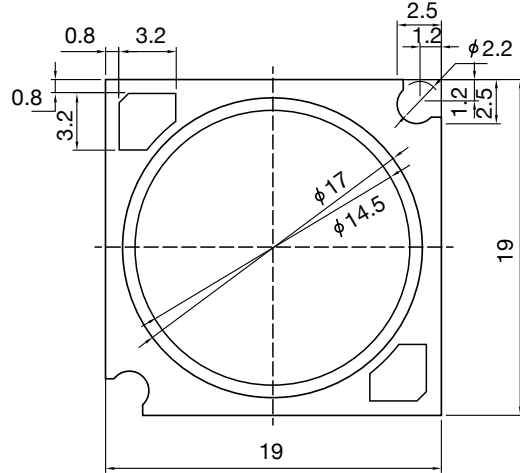
Product	Color Rank	Part Number	T _j =85°C		I _F (mA) V _F (V)
			Luminous Flux Typ. (lm)	Luminous Efficacy Typ. (lm/W)	
LC013R Meat	MacAdam 2step	SPHWHAHDND2VYZTSD2	914	73	360mA 34.6V
LC016R Meat	MacAdam 2step	SPHWHAHDNE2VYZTSD2	1188	76	450mA 34.6V
LC019R Meat	MacAdam 2step	SPHWHAHDNF2VYZTSD2	1412	76	540mA 34.6V
LC026R Meat	MacAdam 2step	SPHWHAHDNG2VYZTSD2	1845	74	720mA 34.6V
LC033R Meat	MacAdam 2step	SPHWHAHDNH2VYZTSD2	2284	73	900mA 34.6V

R-series Vegetable



Enhanced color appearance based on color gamut and preference survey

- Fresh greenish color based on preference survey of 300 persons

$T_j=85^\circ\text{C}$	LC013R Meat	LC016R Meat	LC019R Meat	LC026R Meat	LC033R Meat
					
LES	9.8mm	14.5mm			
Typ.	12.5W	15.6W	18.7W	24.9W	31.1W
	360mA	450mA	540mA	720mA	900mA
Max.	34.5W	43.1W	51.8W	69.0W	86.2W
	920mA	1150mA	1380mA	1840mA	2300mA
Dimension					
Size	13.5mm x 13.5mm	19mm x 19mm			

R-series Vegetable

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	SPHWHHAHDND2VYZRSD2	1188	95	360mA 34.6V
LC016 Vegetable	MacAdam 2step	SPHWHHAHDNE2VYZRSD2	1544	99	450mA 34.6V
LC019R Vegetable	MacAdam 2step	SPHWHHAHDNF2VYZRSD2	1835	98	540mA 34.6V
LC026R Vegetable	MacAdam 2step	SPHWHHAHDNG2VYZRSD2	2399	96	720mA 34.6V
LC033R Vegetable	MacAdam 2step	SPHWHHAHDNH2VYZRSD2	2969	95	900mA 34.6V