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Samsung LED

Product Change Notification summary

Written on : Oct 10, 2009

www.samsungLED.com

PCN - Middle Power LED



PCN information

1. PCN policy

All part number starting with SLS, SLT will be stop produced and changed to SPM(H)- series starting from 2010 Jan(latest date). Final production (SLS/SLT) and initial shipment (SPM) will be overlapped for the time being.

2. Comparison between SLS/SLT vs. SPM- series

P/N		C.I.E
SLS NNWH815TSASSS	SPM WHT5606N2BBA0S0 (narrower)	Different
SLT NWW35066NDAMSSS	SPM WHT5606N2BAC0S0	same

815TS series will be produced for the time being for the customers who needs time to reassess

3. SPM- itself represents detail ranking information (CRI, VF, IV, C.I.E)

18 digits represents CRI, VF, IV, C.I.E rank and sorting range, and detail rank label indicates optical / electrical value

PCN - Middle Power LED

Part cross reference list

OLD					NEW				
P/N	VF (V)	IV(cd)			P/N (Standard)	VF (V)	IV(cd)		
		Min	typ	Max			Min	typ	Max
SLSNNWH815TSASSS	3.0~3.4	4.8	5.2	6.5	SPMWH T5606N2BBA0S0	3.0~3.4	4.8	5.8	6.8
SLSNNWH815TSMALS	3.0~3.4	4.6	5.5	6.5	SPMWH T5606N2BAB0S0	3.0~3.4	5.0	6.0	7.0
SLTNW W 35066NDAMSSS	3.0~3.4	4.6	5.5	6.8	SPMWH T5606N2BAC0S0	3.0~3.4	5.0	6.0	7.0
SLTNW W 35066NDATSSS	3.0~3.4	4.4	5.4	6.4	SPMWH T5606N2BAD0S0	3.0~3.4	5.5	6.5	7.5
SLTNW W 35066NDAUSSS	3.0~3.4	4.2	5.2	6.2	SPMWH T5606N2BAE0S0	3.0~3.4	5.3	6.3	7.3
SLTNW W 35066NDAVSSS	3.0~3.4	4.0	5.0	6.0	SPMWH T5606N2BAF0S0	3.0~3.4	5.0	6.0	7.0
SLTCRI35066NDAPSSS	3.0~3.4	4.5	5.5	6.5	SPMWH T5606N3BAP0S0	3.0~3.4	4.5	5.5	6.5
SLTCRI35066NDAQSSS	3.0~3.4	5.3	6.3	7.3	SPMWH T5606N3BAR0S0	3.0~3.4	5.3	6.3	7.3
SLTCRI35066NDARSSS	3.0~3.4	5.5	6.5	7.5	SPMWH T5606N3BAT0S0	3.0~3.4	5.5	6.5	7.5
SLTCRI35066NDAWSSS	3.0~3.4	5.3	6.3	7.3	SPMWH T5606N3BAU0S0	3.0~3.4	5.3	6.3	7.3
SLTCRI35066NDAXSSS	3.0~3.4	5.0	6.0	7.0	SPMWH T5606N3BAV0S0	3.0~3.4	5.0	6.0	7.0
	3.0~3.4	4.6	5.6	6.6	SPMWH T5606N3BAW0S0	3.0~3.4	4.6	5.6	6.6
SLTNCW 15026NEASSS	3.0~3.5	4.8	5.2	6.5	SPMWH T5206N2BAA0S0	3.0~3.4	5.0	6.0	7.0
SLTNCW 15026NEALSSS	3.0~3.5	4.8	5.5	6.5	SPMWH T5206N2BAB0S0	3.0~3.4	5.3	6.3	7.3
SLTNW W 15026NEAMSSS	3.0~3.5	5.2	6.2	7.2	SPMWH T5206N2BAC0S0	3.0~3.4	5.2	6.2	7.2
SLTNW W 15026NEATSSS	3.0~3.5	5.3	6.3	7.3	SPMWH T5206N2BAD0S0	3.0~3.4	5.3	6.3	7.3
SLTNW W 15026NEAUSSS	3.0~3.5	5.0	6.0	7.0	SPMWH T5206N2BAE0S0	3.0~3.4	5.0	6.0	7.0
SLTNW W 15026NEAVSSS	3.0~3.5	4.5	5.5	6.5	SPMWH T5206N2BAF0S0	3.0~3.4	4.5	5.5	6.5
SLTCRI2502ANEAPSSS	3.0~3.5	4.6	5.5	6.5	SPMWH T5206N5BAP0S0	3.0~3.4	4.9	5.8	6.9
SLTCRI2502ANEAQSSS	3.0~3.5	4.6	5.5	6.5	SPMWH T5206N5BAR0S0	3.0~3.4	5.0	6.0	7.0
SLTCRI2502ANEARSSS	3.0~3.5	4.5	5.3	6.4	SPMWH T5206N5BAT0S0	3.0~3.4	4.9	5.8	6.9
SLTCRI2502ANEAWSSS	3.0~3.5	4.3	5.2	6.2	SPMWH T5206N5BAU0S0	3.0~3.4	4.7	5.5	6.6
SLTCRI2502ANEAXSSS	3.0~3.5	4.0	4.9	5.9	SPMWH T5206N5BAV0S0	3.0~3.4	4.4	5.2	6.3
	3.0~3.5	4.0	4.9	5.9	SPMWH T5206N5BAW0S0	3.0~3.4	4.4	5.2	6.3
SLTNCW 25026NEASSS	3.0~3.5	7.0	8.0	11.0	SPMWH T520AN2BAA0S0	3.0~3.4	7.5	10.0	11.5
SLTNCW 2502ANMALS	3.0~3.5	7.3	8.5	11.4	SPMWH T520AN2BAB0S0	3.0~3.4	8.4	10.2	12.5
SLTNW W 2502ANEAMSSS	3.0~3.5	7.4	8.4	11.4	SPMWH T520AN2BAC0S0	3.0~3.4	9.0	11.0	13.0
SLTNW W 2502ANEATSSS	3.0~3.5	7.2	8.2	10.8	SPMWH T520AN2BAD0S0	3.0~3.4	8.5	10.2	12.0
SLTNW W 2502ANEAUSSS	3.0~3.5	7.0	8.0	10.6	SPMWH T520AN2BAE0S0	3.0~3.4	7.8	9.0	11.4
SLTNW W 2502ANEAVSSS	3.0~3.5	6.5	7.5	10.2	SPMWH T520AN2BAF0S0	3.0~3.4	6.9	8.3	10.6
SLTCRI2502ANEAPSSS	3.0~3.5	6.7	7.6	10.0	SPMWH T520AN5BAP0S0	3.0~3.4	7.7	9.1	11.0
SLTCRI2502ANEAQSSS	3.0~3.5	6.8	7.8	10.0	SPMWH T520AN5BAR0S0	3.0~3.4	7.7	9.1	11.0
SLTCRI2502ANEARSSS	3.0~3.5	6.5	7.6	10.0	SPMWH T520AN5BAT0S0	3.0~3.4	7.5	9.0	11.0
SLTCRI2502ANEAWSSS	3.0~3.5	6.3	7.2	9.5	SPMWH T520AN5BAU0S0	3.0~3.4	7.3	8.6	10.5
SLTCRI2502ANEAXSSS	3.0~3.5	6.0	7.0	9.2	SPMWH T520AN5BAV0S0	3.0~3.4	7.0	8.0	10.2
	3.0~3.5	6.0	7.0	9.2	SPMWH T520AN5BAW0S0	3.0~3.4	7.0	8.0	10.2

New Middle Power LED



New Part number formation

S	P	M	W	H	T	5	6	0	6	N	2	B	A	B	0	S	0
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
			Color			PKG, current				Default, CRI		VF		C.I.E		IV	

1 2 3

: **S**amsung **P**ackage **M**iddle power

4 5 6

: Color (**W**hite)

7 8 9 10

: **5**(5252), **6**(6pin), **0**(version), **6**(60mA)

11 12

: **N**ull (Default), **2**(CRI value : max 70)

13 14

: Total VF range(3.0~3.4), Sorting range(0.1v)

15 16

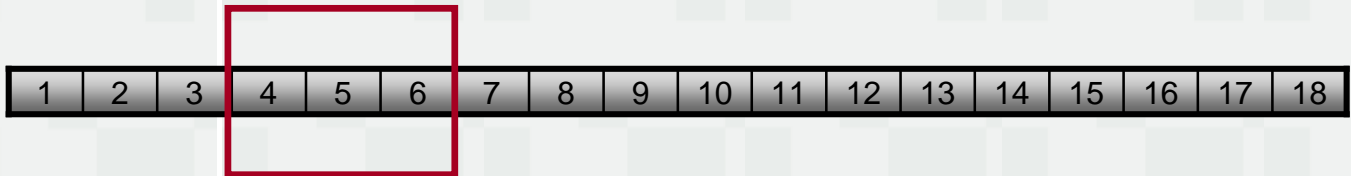
: C.I.E(B rank - 6000~8200K),
Rank detail (0 - whole range)

17 18

: IV total range(5.0~7.0cd), sorting range (whole)

New Middle Power LED

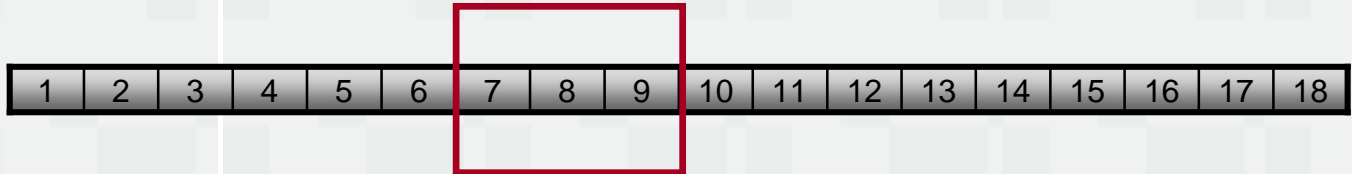
Color information(4,5,6th digit)



Digit			Color	WD	
4 digit	5 digit	6 digit			
W	H	T	White	-	
N	S	R	Super Red	Dominant Wavelength (Wd, λ_D)	627~639 nm
R	E	D	Red		612~632 nm
A	M	B	Amber		580~595 nm
Y	E	L	Yellow		554~574 nm
G	R	N	Green		522~540 nm
B	L	U	Blue		444~474 nm
R	N	B	Red+Blue	-	
R	N	G	Red+Green		
G	N	B	Green+Blue		
R	G	B	Full Color	-	

New Middle Power LED

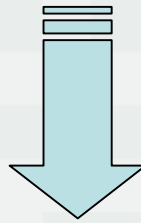
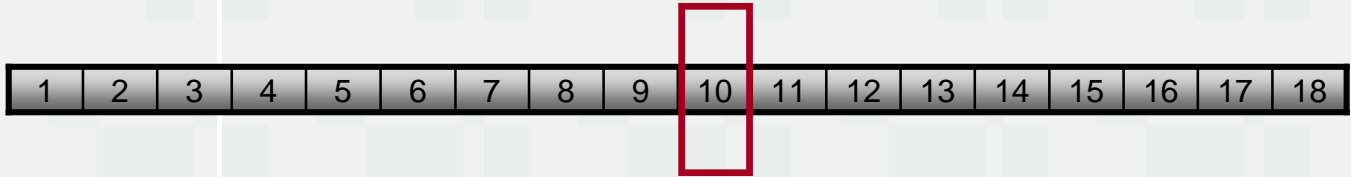
Package information (7,8,9th digit)



Digit			Dimension (L × W × T) unit : mm		
7 digit (Size)	8 digit (Lead)	9 digit (Version)			
3	2	0	3.0 × 3.0 × 0.9T	2	
3	4	0	3.0 × 3.0 × 0.9T	4	
3	2	1	3.2 × 2.8 × 1.9T	2	
3	2	2	3.2 × 2.8 × 1.9T	2	Lens Type
3	4	1	3.2 × 2.8 × 1.9T	4	
3	4	2	3.2 × 2.8 × 1.9T	4	<i>Black Paint</i>
3	6	0	3.2 × 2.8 × 1.4T	6	
3	4	3	3.2 × 2.8 × 1.9T	4	
3	2	3	3.5 × 3.5 × 0.9T	2	Ceramic
3	2	4	3.5 × 3.5 × 0.9T	2	Cluster
3	4	4	3.5 × 3.5 × 0.9T	4	Ceramic
5	2	0	5.2 × 5.2 × 1.3T	2	
5	2	1	5.2 × 5.2 × 1.3T	2	<i>Hanger Type</i>
5	6	0	5.2 × 5.2 × 1.3T	6	
5	6	1	5.2 × 5.2 × 1.3T	6	<i>Black Paint</i>

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Package information(10th digit)

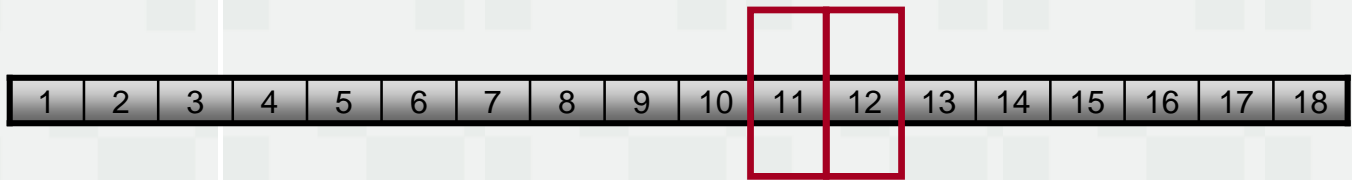


#	Current
1	10 mA
2	20 mA
3	30 mA
4	40 mA
5	50 mA
6	60 mA
7	70 mA
8	80 mA
9	90 mA

#	Current
A	100 mA
B	110 mA
C	120 mA
D	130 mA
E	140 mA
F	150 mA
G	160 mA
H	170 mA
J	180 mA
K	190 mA
L	200 mA
M	Customized spec

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CRI value for white color (11th null box, 12th digit)

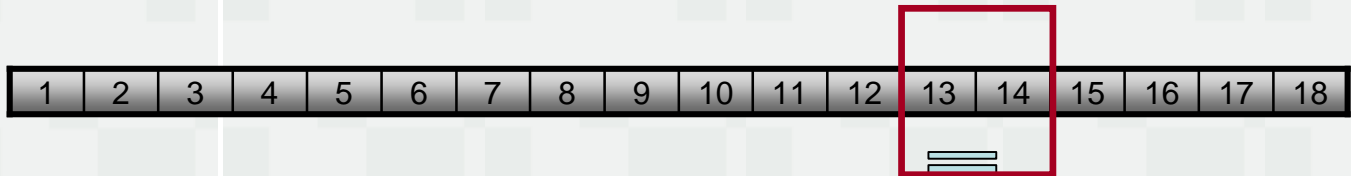


#	Meaning
N	Default
A	Automotive

12 digit	
#	CRI value
0	Default (Discrete color)
2	CRI Max. 70
3	CRI Min. 70
4	CRI Min. 75
5	CRI Min. 80
6	CRI Min. 85
7	CRI Min. 90
8	CRI Min. 95

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Forward voltage and sorting range(13th, 14th digit)



■ 13th digit (WHITE, BLUE, GREEN)

13 digit	Voltage Total Range	13 digit	Voltage Total Range	13 digit	Voltage Total Range	13 digit	Voltage Total Range
S	Total range (2.9V~3.6V)	A	3.0~3.3 V	K	3.2~3.3 V	V	3.5~3.6 V
2	2.9~3.0 V	B	3.0~3.4 V	L	3.2~3.4 V		
3	2.9~3.1 V	C	3.0~3.5 V	M	3.2~3.5 V		
4	2.9~3.2 V	D	3.0~3.6 V	N	3.2~3.6 V		
5	2.9~3.3 V	E	3.1~3.2 V	P	3.3~3.4 V		
6	2.9~3.4 V	F	3.1~3.3 V	Q	3.3~3.5 V		
7	2.9~3.5 V	G	3.1~3.4 V	R	3.3~3.6 V		
8	3.0~3.1 V	H	3.1~3.5 V	T	3.4~3.5 V		
9	3.0~3.2 V	J	3.1~3.6 V	U	3.4~3.6 V		

■ 13th digit (RED, AMBER)

13 digit	Voltage Total Range
S	Total range (1.7V~2.6V)
A	1.7~2.0 V
B	1.7~2.3 V
C	2.0~2.3 V
D	2.0~2.6 V
E	2.3~2.6 V

■ 14th digit

14 digit	Voltage Sorting Range
0	Normal Spec.
A	0.1 V
B	0.2 V
C	0.3 V
D	0.4 V
E	0.15 V

Voltage Sorting

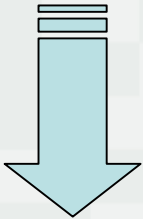
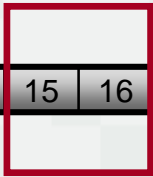


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C.I.E rank and rank detail(15, 16th digit) / wavelength rank

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
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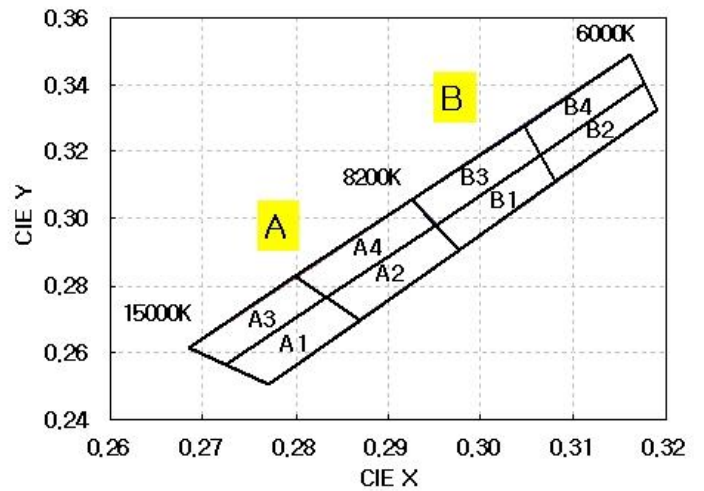


■ WHITE color only

15 digit		CCT	
Rank	Normal White	A	8200K ~ 15000K
		B	6000K ~ 8200K
		C	4600K ~ 6000K
		D	3800K ~ 4600K
		E	3200K ~ 3800K
		F	2800K ~ 3200K
	CRI	P	7040K ~ 5310K
		R	5665K ~ 4500K
		T	4500K ~ 3710K
		U	3710K ~ 3220K
		V	3220K ~ 2870K
		W	2870K ~ 2550K

■ Example of 15, 16 digit

Detail Rank (e.g.)	Digit	
	15 digit	16 digit
A1	A	1
A2	A	2
A3	A	3
A4	A	4
A1+A2+A3+A4	A	0



New Middle Power LED

Luminosity range and detail(17, 18th digit)



17 digit	Total range or Luminous Intensity
S	Whole range

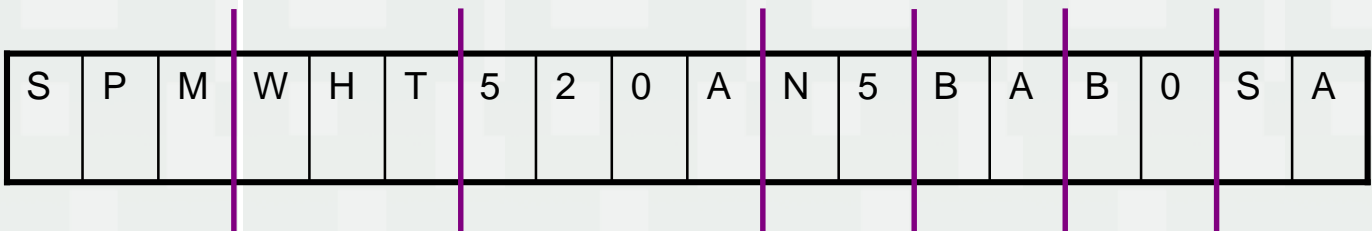
18 digit		# of combined bin
Standard	0	whole range
Detail rank	A	2 bin out of whole range
	B	3 bin out of whole range
	C	4 bin out of whole range

New Middle Power LED

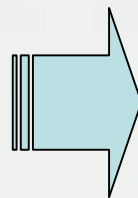
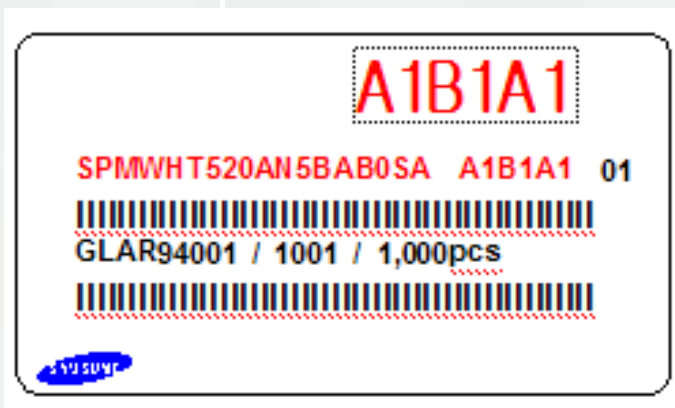
Example

If customer is looking for following spec,,,,,??

PKG size	I	VF		CIE		IV	
		Total	Sorting	Total	Sorting	Total	#of IV bin
5252 (2pin) CRI min 80	100mA	3.0~3.4V	0.1V	6000~ 8200K	B1+B2+ B3+B4	Whole range	2 bin sorting
520	A	B	A	B	0	S	A



Ranking



A1: VF 3.0~3.1V

B1: C.I.E B1

A1: 8.4~10.2cd