

Product Change Notice

Issue Date: 27 August 2009

Change Type:

MAJOR CHANGE

Please be advised that Avago Technologies is making the following product changes on the effective date noted for the products listed below:

1. Assembly Related Change: New LED Die source.
2. Assembly Related Change: New Phosphor.
3. Mark and Pack Related Change: Encapsulant material.

Parts Affected:

- PLCC 2 LED of InGaN Family. Details in Appendix section
- PLCC 4 LED of InGaN, Bicolor and Tricolor Family. Details in Appendix section

Description and Extent of Change:

1. For part numbers listed in Appendix I, selected new LED dice source shall be replacing current supply while the product encapsulant material will be changed from epoxy to silicone.
2. For part numbers listed in Appendix II, selected new LED dice source shall be replacing current supply.
3. For part numbers listed in Appendix III, selected new LED dice source and new phosphor shall be replacing current supply; while the product encapsulant material will be changed from epoxy to silicone.

Reasons for Change:

1. Ongoing product improvement program.
2. To ensure consistency of supply and on-time delivery to customer.

Effect of Change on Fit, Form, Function, Quality, or Reliability:

There is no change on fit and function. There will be change in form due to the change of new LED dice source, new phosphor and change of encapsulant from epoxy to silicone.

Existing Part	New Part
Existing LED dice source is single wire bonding	New LED dice source will have dual wire bonding
Existing Part is with epoxy encapsulant	New Part is with silicone encapsulant

Customer is advised to review the Handling Precautions to ensure they are meeting Avago recommended application condition (Application note 5288 and Application note 1142). Application Note applicable for existing and new part as below:

Existing Part	New Part
Application Note - AN 5305, Handling Moisture Sensitive Surface Mount LED	Application Note - AN 5305, Handling Moisture Sensitive Surface Mount LED
Application Note - AN 1060: Surface Mounting SMT LED Indicator Components	Application Note - AN 1060: Surface Mounting SMT LED Indicator Components
	Application Note - AN 5288, Silicone Encapsulation for LED, Advantages and Handling Precautions
	Application Note - AN 1142: Premium InGaN LEDs Safety Handling Fundamentals ESD (Electrostatic Discharge)

Effective Date of Change:

Avago Technologies will begin to ship both new and existing part effective 12 October 2009 onwards. There may be mixed shipments between new and existing part until the current inventory is fully depleted.

Parts identification:

(i) New Parts will be indicated by a Black Dot on label indicated below.

(1P)Item: **HSMx-A1xx-xxxxx**
Avago Technologies
Standard Label L80002
RoHS Compliant Halogen Free
e4 Max Temp 260 C MSL 2a

(1T)Lot: **Z96B0001001**
(Q)QTY: **2000**

LPN: **UT9770114**
CAT: **Y1**

(9D)MFG Date: **06-JUL-2009**
BIN: **D** VF: **A**

(P)Customer Item:
(V)Vendor ID:

(9D)Date Code: **0928**

Dept ID: **CMTLED**
Made in: **TAIWAN**

AVAGO
0928-0928-0928-0928
0928-0928-0928-0928
0928-0928-0928-0928
0928-0928-0928-0928

Qualification Data:

Test	Reference	Sample Size	Result
Temperature Cycling -55/100°C 15/5/15min	Avago Req	600	Pass 1000cyc
High Humidity Storage Life 85°C / 85%RH	Avago Req	336	pass 1000hrs
High Humidity Operating Life 85°C / 85%RH, 12mA	JESD22-A101	336	pass 1000hrs
High Temperature Operating Life 55°C , 20mA	JESD22-A108	336	pass 1000hrs
Room Temperature Operating Life 25°C , 30mA	Avago Req	336	pass 1000hrs
Temperature Humidity Power Cycle 25/65°C, 95%RH , 3 6 3 hrs, 8mA, 5 mins on/off	Avago Req	336	pass 100cyc

These changes have been reviewed and approved by Avago Technologies engineers and managers per Avago Technologies procedure: Change Control and Customer Notification, A-5962-6052-80.

Please contact your Avago Technologies field sales engineer or Contact Center (<http://www.avagotech.com/contact/>) for any questions or support requirements. Please return any response as soon as possible, but not to exceed 30 days.

Appendix I

Affected Part Number	Part Description	Change Of		
		LED Dice Source	Encapsulant from epoxy to silicone	Phosphor
HSMF-A355-G33J1	PLCC4,Top Mt,Triclr,Red/Grn/Blue	Yes	Yes	Not Applicable
HSMM-A100-S00J1	PLCC2,Top Mt,InGaN,Grn	Yes	Yes	Not Applicable
HSMM-A100-S8PJ1	PLCC2,Top Mt,InGaN,Grn	Yes	Yes	Not Applicable
HSMM-A100-T3YJ1	PLCC2,Top Mt,InGaN,Grn	Yes	Yes	Not Applicable
HSMM-A100-T7YJ1	PLCC2,Top Mt,InGaN,Grn	Yes	Yes	Not Applicable
HSMM-A100-U2YJ1	PLCC2,Top Mt,InGaN,Grn	Yes	Yes	Not Applicable
HSMM-A160-S00J1	PLCC2,Top Mt,Black, InGaN,Grn	Yes	Yes	Not Applicable
HSMM-A400-T8YM2	PLCC4,PWR,T/Mt,120VA,InGaN,Grn	Yes	Yes	Not Applicable
HSMM-A400-U3PM2	PLCC4,PWR,T/Mt,120VA,InGaN,Grn	Yes	Yes	Not Applicable
HSMM-A400-U4PM2	PLCC4,PWR,T/Mt,120VA,InGaN,Grn	Yes	Yes	Not Applicable
HSMM-A400-U4WM2	PLCC4,PWR,T/Mt,120VA,InGaN,Grn	Yes	Yes	Not Applicable
HSMM-A400-U7WM2	PLCC4,PWR,T/Mt,120VA,InGaN,Grn	Yes	Yes	Not Applicable
HSMN-A100-P00J1	PLCC2,Top Mt,InGaN,Blue	Yes	Yes	Not Applicable
HSMN-A100-R00J1	PLCC2,Top Mt,InGaN,Blue	Yes	Yes	Not Applicable
HSMN-A100-R0YJ1	PLCC2,Top Mt,InGaN,Blue	Yes	Yes	Not Applicable
HSMN-A100-R3WJ1	PLCC2,Top Mt,InGaN,Blue	Yes	Yes	Not Applicable
HSMN-A100-S00J1	PLCC2,Top Mt,InGaN,Blue	Yes	Yes	Not Applicable
HSMN-A160-P00J1	PLCC2,Top Mt,Black, InGaN,Blue	Yes	Yes	Not Applicable
HSMN-A400-Q8QM2	PLCC4,PWR,T/Mt,120VA,InGaN,Blue	Yes	Yes	Not Applicable
HSMN-A400-R8PM2	PLCC4,PWR,T/Mt,120VA,InGaN,Blue	Yes	Yes	Not Applicable
HSMN-A400-S8ZM2	PLCC4,PWR,T/Mt,120VA,InGaN,Blue	Yes	Yes	Not Applicable
QSMF-A243-BMBJ1	PLCC4,Top Mt,Biclr,Red/Blue	Yes	Yes	Not Applicable
QSMF-A252-G0MJ1	PLCC4,Top Mt,Biclr,HER/Grn	Yes	Yes	Not Applicable
QSMF-A254-A00J1	PLCC4,Top Mt,Biclr,HER/Grn	Yes	Yes	Not Applicable
QSMF-A365-L99J1	PLCC4,Top Mt,Triclr,Red/Grn/Blue	Yes	Yes	Not Applicable
QSMF-A368-F99J1	PLCC4,Top Mt,Triclr,Red/Grn/Blue	Yes	Yes	Not Applicable
QSMF-A369-FP9J1	PLCC4,Top Mt,Triclr,Red/Grn/Blue	Yes	Yes	Not Applicable
QSMM-A111-T4YJ1	PLCC2,Top Mt,InGaN,Grn	Yes	Yes	Not Applicable
QSMM-A111-T7YJ1	PLCC2,Top Mt,InGaN,Grn	Yes	Yes	Not Applicable
QSMM-A113-T8YJ1	PLCC2,Top Mt,InGaN,Grn	Yes	Yes	Not Applicable
QSMM-A117-U2YJ1	PLCC2,Top Mt,InGaN,Grn	Yes	Yes	Not Applicable
QSMM-A136-T3PJ1	PLCC2,Top Mt,InGaN,Grn	Yes	Yes	Not Applicable
QSMM-A149-S00J1	PLCC2,Top Mt,InGaN Grn	Yes	Yes	Not Applicable
QSMM-A155-S8PJ1	PLCC2,Top Mt,InGaN Grn	Yes	Yes	Not Applicable
QSMM-A413-T8YM2	PLCC4,PWR,T/Mt,120VA,InGaN,Grn	Yes	Yes	Not Applicable
QSMM-A416-U3YM2	PLCC4,PWR,T/Mt,120VA,InGaN,Grn	Yes	Yes	Not Applicable
QSMN-A111-R4YJ1	PLCC2,Top Mt,InGaN,Blue	Yes	Yes	Not Applicable
QSMN-A111-R7YJ1	PLCC2,Top Mt,InGaN,Blue	Yes	Yes	Not Applicable
QSMN-A113-R00J1	PLCC2,Top Mt,InGaN,Blue	Yes	Yes	Not Applicable
QSMN-A125-S00J1	PLCC2,Top Mt,InGaN,Blue	Yes	Yes	Not Applicable
QSMN-A158-R4WJ1	PLCC2,Top Mt,InGaN,Blue	Yes	Yes	Not Applicable
QSMN-A413-Q8QM2	PLCC4,PWR,T/Mt,120VA,InGaN,Blue	Yes	Yes	Not Applicable

Appendix II

Affected Part Number	Part Description	Change Of		
		LED Dice Source	Encapsulant from epoxy to silicone	Phosphor
ASMT-SWBM-NU803	PLCC4,PWR,T/Mt,120VA,Ingan,LLWhite	Yes	No	No
ASMT-SWBM-NU8C3	PLCC4,PWR,T/Mt,120VA,Ingan,LLWhite	Yes	No	No
ASMT-SWBM-NU8M3	PLCC4,PWR,T/Mt,120VA,Ingan,LLWhite	Yes	No	No
ASMT-SWBM-NU8P3	PLCC4,PWR,T/Mt,120VA,Ingan,LLWhite	Yes	No	No
HSMW-A430-W90M2	PLCC4,PWR,T/Mt,30VA,InGaN,Grn	Yes	No	Not Applicable
HSMW-A430-W9PM2	PLCC4,PWR,T/Mt,30VA,InGaN,Grn	Yes	No	Not Applicable
HSMW-A430-X4PM2	PLCC4,PWR,T/Mt,30VA,InGaN,Grn	Yes	No	Not Applicable
HSMN-A430-T8WM2	PLCC4,PWR,T/Mt,30VA,InGaN,Blue	Yes	No	Not Applicable
HSMN-A430-U4PM2	PLCC4,PWR,T/Mt,30VA,InGaN,Blue	Yes	No	Not Applicable
HSMN-A430-U50M2	PLCC4,PWR,T/Mt,30VA,InGaN,Blue	Yes	No	Not Applicable
QSMW-A436-X3PM2	PLCC4,PWR,T/Mt,30VA,InGaN,Grn	Yes	No	Not Applicable
QSMN-A436-U4PM2	PLCC4,PWR,T/Mt,30VA,InGaN,Blue	Yes	No	Not Applicable
QSMT-SWST-NU7P3	PLCC4,PWR,T/Mt,120VA,Ingan,LLWhite	Yes	No	No

Appendix III

Affected Part Number	Part Description	Change Of		
		LED Dice Source	Encapsulant from epoxy to silicone	Phosphor
HSMW-A100-T50J1	PLCC2,Top Mt,White	Yes	Yes	Yes
HSMW-A100-T5PJ1	PLCC2,Top Mt,White	Yes	Yes	Yes
HSMW-A100-T5YJ1	PLCC2,Top Mt,White	Yes	Yes	Yes
HSMW-A100-U40H1	PLCC2,Top Mt,White	Yes	Yes	Yes
HSMW-A100-U40J1	PLCC2,Top Mt,White	Yes	Yes	Yes
HSMW-A100-U4MH1	PLCC2,Top R/Mt,White	Yes	Yes	Yes
HSMW-A100-U4UH1	PLCC2,Top R/Mt,White	Yes	Yes	Yes
QSMW-A121-T5PJ1	PLCC2,Top Mt,White	Yes	Yes	Yes
QSMW-A139-T74J1	PLCC2,Top Mt,White	Yes	Yes	Yes
QSMW-A151-T7MJ1	PLCC2,Top Mt,White	Yes	Yes	Yes
QSMW-A152-T0YJ1	PLCC2,Top Mt,White	Yes	Yes	Yes
QSMW-A174-T50J1	PLCC2,Top Mt,White	Yes	Yes	Yes
HSMW-A400-U00M2	PLCC4,PWR,T/Mt,120VA,InGaN,White	Yes	Yes	Yes
HSMW-A400-U30M2	PLCC4,PWR,T/Mt,120VA,InGaN,White	Yes	Yes	Yes
HSMW-A400-U40M2	PLCC4,PWR,T/Mt,120VA,InGaN,White	Yes	Yes	Yes
HSMW-A400-U70M2	PLCC4,PWR,T/Mt,120VA,InGaN,White	Yes	Yes	Yes
HSMW-A400-U71M2	PLCC4,PWR,T/Mt,120VA,InGaN,White	Yes	Yes	Yes