

## Product Change Notice

Issue Date: 25 September 2009

**Change Type:**

MAJOR CHANGE

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

Fab Related Change: New die source

**Parts Affected:**

The list of part numbers affected by the change are:

HLMP-KA45-J0000	HLMP-KB45-A0000	HLMP-NS30-J0000	HLMP-DM25-J0000
QLMP-NW98-JP000	HLMP-KB45-A0002	HLMP-NS30-J00DD	HLMP-NM31-R0000
QLMP-NW98-JP003	HLMP-KB45-A00DD	HLMP-NS30-KM000	QLMP-KB50-B0000
QLMP-NW98-JP0CD	HLMP-NS30-KM0DD	HLMP-NS30-LN000	
QLMP-NW98-JPK00	HLMP-NS31-KM0DD	QLMP-NS33-J0000	
QLMP-NW98-JPK02	HLMP-NS30-LNG00	HLMP-KA45-E00A1	
QLMP-NW98-JPP00	HLMP-NS31-LNG00	HLMP-DS25-F00DD	
HLMP-DB25-B0000	HLMP-DS25-F0000	QLMP-DS49-E0000	
HLMP-DB25-B0002	HLMP-KA45-E0000	HLMP-NS30-MN0DD	
HLMP-DB25-B00DD	HLMP-NS30-H0000	QLMP-NS98-QT0DD	

**Description and Extent of Change:**

The selected die shall be the new die source used in both InGaN Blue and Green LEDs above.

**Reasons for Change:**

This is to ensure consistency of supply for InGaN Blue and Green LEDs.

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

Qualification and characterization have been conducted using the new die to ensure similar performance as existing products. With the new die source there will be changes on below parameters.

## 1. $V_F$ and $V_R$

Parameter (Blue and Green)	Min.	Typ.	Max.
$V_F @ 20mA$	2.8V	3.2V	3.8V
$V_R$	Not recommended for reverse bias		

## 2. Luminous Intensity

Typical luminous intensity for products with new die source on the average will be one Iv bin higher.

### Effective Date of Change:

The shipment of products with new die source will begin from 26<sup>th</sup> October 2009. From this date onwards, shipments may contain products with existing die or products with new die source. Products with new die source will be identified with a black triangle on the packaging label until Avago depletes the old inventory.

Products with new die source identification:

<p>(1P) Item: <b>Part Number</b></p> 		<p><b>Avago</b> TECHNOLOGIES</p> <p>STANDARD LABEL LS0002 RoHS Compliant e3 max temp 250C</p>	
<p>(1T) Lot: <b>Lot Number</b></p> 		<p>(Q) QTY: <b>Quantity</b></p> 	
<p>LPN:</p> 		<p>CAT: <b>Intensity Bin</b></p> 	
<p>(9D)MFG Date: <b>Manufacturing Date</b></p> 		<p>BIN: <b>Refer to below information</b></p>	
<hr/>			
<p>(P) Customer Item:</p> 			
<p>(V) Vendor ID:</p> 		<p>(9D) Date Code: <b>Date Code</b></p> 	
<p>DeptID:</p> 		<p>Made In: <b>Country of Origin</b></p> 	



**Qualification Data:**

<b>Test</b>	<b>Sample Size (Units)</b>	<b>Result</b>
Temperature Cycling (-40/85°C 15/5/15min)	468	Pass 100cyc
High Humidity High Temperature Storage Life (85°C/85%RH)	168	Pass 500hrs
High Humidity High Temperature Operating Life (85°C/85%RH, 10mA)	84	Pass 500hrs
High Temperature Operating Life (55°C, 21mA)	168	Pass 500hrs
Low Temperature Operating Life (-40°C, 30mA)	84	Pass 500hrs
Solder Heat Resistance (260°C, 5sec)	30	Pass

Summary: All the qualification vehicles submitted to reliability tests passed Avago's stringent reliability tests requirements. There were no functional defects observed in the tests run above.

Product technical datasheet and reliability datasheet will be updated by 26<sup>th</sup> October 2009.

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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.