

Product Change Notice

Issue Date: 5th August 2008

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:

1. Assembly Related Change: Change to different contract manufacturer.
2. Assembly Related Change: Lead plating materials.
3. Mark and Pack Related Change: Storage temperature.

Parts Affected:

The affected part number list is attached in addendum.

Description and Extent of Change:

1. Change manufacturing site from Malaysia to Thailand.
2. Products built in Thailand will have Tin (Sn) terminal finish while products built in Malaysia will have SnAgCu terminal finish.
3. For all Lamps with Storage Temperature range from -55°C to 100°C, the Storage Temperature range shall be -40°C to 100°C. Lamps with Storage Temperature Range of -40°C to 120°C likewise will be revised to -40°C to 100°C.

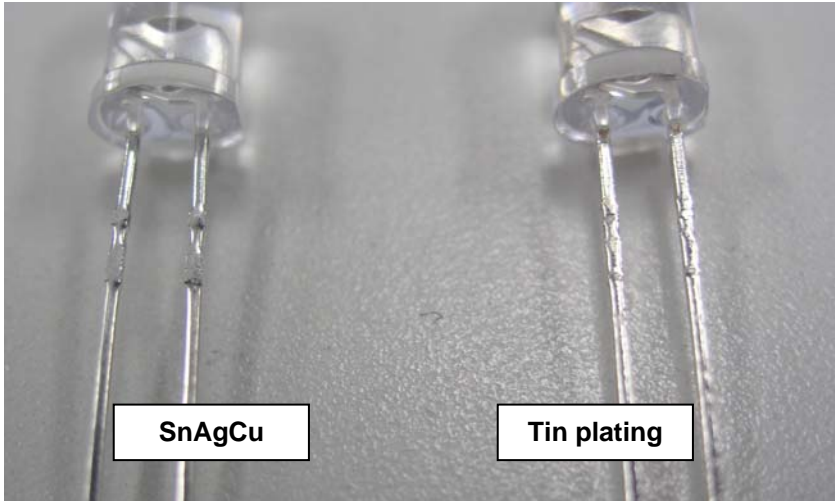
Reasons for Change:

1. To increase flexibility and consistency of supply to customers.
2. To change to industry standard terminal finish.
3. To standardize storage temperature requirement.

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

There is no change on fit and function. There will be a change in form due to the change of terminal finish to Sn plated leads. The surface appearance difference of the Sn plated leads and SnAgCu plated leads are as shown below.

New Sn plated lead terminal finish appearance vs SnAgCu:



Effective Date of Change:

Effective from 1st October 2008, shipments will be from the new manufacturing sites. During this period, Avago will continue to ship lamps from Malaysia site. There may be mixed shipments between current site and new sites.

Parts identification:

The product label for parts manufactured in Thailand will mark as "Made In: Thailand" as illustrated below.



Qualification Data:

HLMP – K150, HLMP – C215, HLMP – NW98, HLMP - J355

Environmental Test	Reference	Stress Profile	Units Tested	Units Failed
Solder Heat +Temperature Cycle	Avago Std.	-40/100°C 15/5min Dwell/Transfer, 100 cyc	500 x 2	0
Temperature Cycle	JESD22A (104)	-40/85°C 15/5min Dwell/Transfer, 100 cyc	500 x 2	0
Solder Heat Resistance	JESD22 (B106)	260°C for 10s, 2x	30 x 2	0
Salt Spray	JESD22 (A107)	35°C, 5% Salt Concentration, 48 hrs	30 x 2	0
Solderability Test	JESD22 (B102D)	8hrs Steam Age, Solder dip at 245°C for 5 sec	30 x 2	0

Note : 2 vehicles picked for solder heat resistance, salt spray and Solderability Tests were HLMP-C215 and HLMP-K150

HLMP-NW98 and HLMP-J355 Temperature Cycle test condition is per JESD22A

HLMP – K150, HLMP – C215, HLMP – NW98, HLMP - J355

Operating Life Test	Reference	Stress Profile	Units Tested	Units Failed
High Humidity High Temperature Storage Life	JESD22 (A101)	85°C, 85% RH, 500 hrs	56 x 4	0
High Humidity High Temperature Operating Life	JESD22 (A101)	85°C, 85% RH, Max derated Current, 500 hrs	56 x 4	0
High Temperature Operating Life	JESD22 (A108)	55°C, Max Rated Current, 500 hrs	56 x 4	0

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 1st of October 2008

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.

Addendum

Part Number List

HLMP-3495	QLMP-K463	QLMP-C235-P0K00
HLMP-3595	QLMP-K464	QLMP-C162-N00DD
HLMP-0103	HLMP-NL06#002	QLMP-C493-M0GDD
HLMP-0301	QLMP-S257	QLMP-1472-EFB02
HLMP-0401	HLMP-D105-M0002	QLMP-K285-G00FA
HLMP-0405	HLMP-D150-C0002	HLMP-C027-P0000
HLMP-0504	HLMP-D155-F0001	QLMP-C099
HLMP-1301	HLMP-D155-F0002	QLMP-NL97
HLMP-1321	HLMP-K101-I0002	QLMP-3128-B0000
HLMP-1340	HLMP-K105-J0002	QLMP-3718-L0000
HLMP-1401	HLMP-K150-CD000	QLMP-3738-FG000
HLMP-1420	HLMP-K155-D0002	QLMP-4748-B0000
HLMP-1421	HLMP-D101-J0001	QLMP-D272-J0000
HLMP-1440	HLMP-D101-J0002	QLMP-G243-L0000
HLMP-1503	HLMP-D101-JK000	QLMP-G343-K0000
HLMP-1520	HLMP-1301-E0002	QLMP-G543-K0000
HLMP-1521	HLMP-3301-D0002	QLMP-J369-HI000
HLMP-1540	HLMP-3301-F0001	QLMP-J387-HI000
HLMP-1600	HLMP-3301-F0002	QLMP-K273-C0000
HLMP-1601	HLMP-3301-F00DD	QLMP-K514-IJB00
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HLMP-1700	HLMP-4700-C0002	QLMP-1642-EFD00
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