



Product Change Notice

Issue Date: 20th February 2004

Type of Change(s):

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

- A) Introduction of Lead Free (Pb-Free) products.
- B) Pb-Free product identification.

Agilent Part Numbers Affected:

All Through Hole Lamps (except those listed in the Appendix), Subminiature Lamps (Polyled) and Smart Alphanumeric Displays.

Description and Extent of Changes:

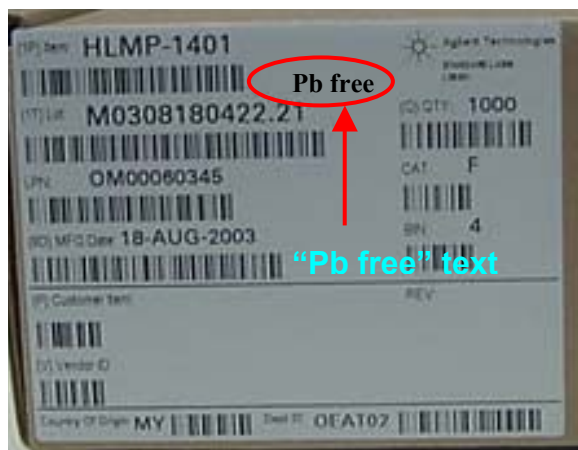
A) Introduction of Lead-Free (Pb-Free) products

Agilent Technologies will make available Lead-Free (Pb-free) products starting from 24th May 2004. The extent of change will cover most of the Agilent Technologies semiconductor products whereby the terminal finishing will be manufactured using lead-free solder material and system. The Pb free products are compatible to Agilent recommended soldering system and profile as stated below.

For further information, kindly contact Agilent Sales personnel or distributor.

B) Pb-free Product Identification

"Pb free" text will be added onto the mother label to indicate Pb-free products. A sample label is shown below.



Reasons for Change:

Pb-free products are introduced in response to the EU Directive on the Restriction on the use of certain Hazardous Substances in Electrical & Electronic Equipment (RoHS).

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

This change affects Fit, Form and Function of the product in the following manner:

1) Soldering system

Pb-free products may compatible with the following systems and conditions:

Product Family	Part Number	Product Terminal Finish	Compatible Soldering system	Recommended Soldering Profile
Through Hole Lamp	All (except those listed in Appendix)	96.5%Sn-3.0%Ag-0.5%Cu	63%Sn-37%Pb, 96.5%Sn-3.5%Ag	Refer to wave soldering profile (figure 1)
Smart Alphanumeric Display	HDSP-076x HDSP-077x HDSP-078x HDSP-079x HDSP-086x HDSP-088x HDSP-096x HDSP-098x HDSP-200x HDSP-2012 HDSP-2245 HDSP-23xx HCMS-2353 HDSP-213x HDSP-2179 QCMS-23xx	96.5%Sn-3.0%Ag-0.5%Cu	63%Sn-37%Pb, 96.5%Sn-3.5%Ag	Refer to wave soldering profile (figure 1)
	HCMS-29xx HCMS-39xx HDLx-1414 HDLx-2416 HDLx-3416 HDSP-21xx HDSP-2203 HDSP-25xx HPDL-1414 HPDL-2416 QCMS-29xx QDSP-21xx QDSP-22xx QDSP-2535 QDSP-2Yxx QDSP-66xx	98%Sn-2%Cu	63%Sn-37%Pb, 96.5%Sn-3.5%Ag	Refer to wave soldering profile (figure 1)
Through Hole Subminiature Lamp (PolyLED)	All	Pure Sn	63%Sn-37%Pb, 96.5%Sn-3.5%Ag	Refer to wave soldering profile (figure 1)
Surface Mount Subminiature Lamp (PolyLED)	All	Pure Sn	63%Sn-37%Pb 96.5%Sn-3.5%Ag	Refer to SnPb IR reflow profile (figure 2) Refer to Pb-free IR reflow profile (figure 3)

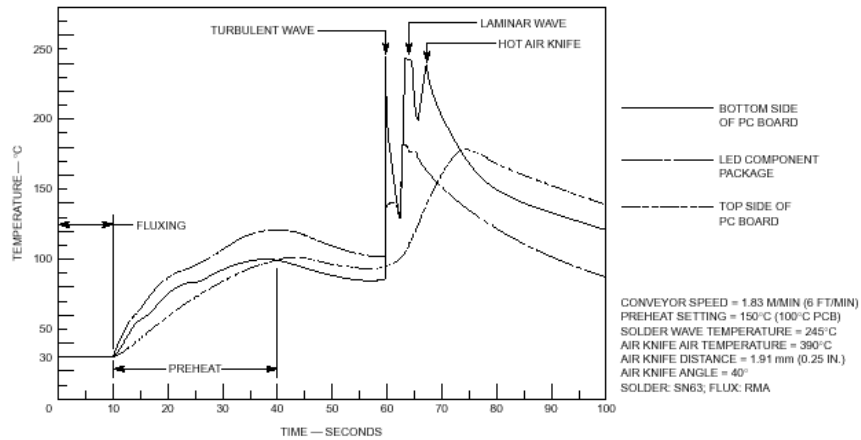
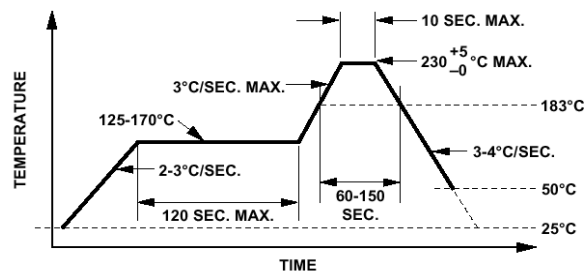


Figure 16. Sample Temperature Profile of a Wave Solder Process

Figure 1 : Wave Soldering Profile



Recommended Reflow Soldering Profile.
Wait until device has cooled to room temperature before handling.

Figure 2 : SnPb IR Reflow Profile

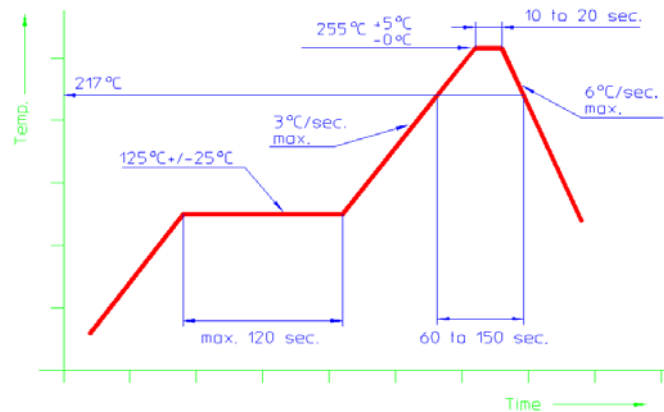


Figure 3 : Pb-Free IR Reflow Profile

2) Quality & Reliability Performance

Please refer to the respective attachments below on the selected product performance.

Through Hole LED



Lamps.doc

Smart Alphanumeric Display



"Smart Display.doc"

SMT PolyLED



"SMT PolyLED.doc"

Through Hole PolyLED



"TH PolyLED.doc"

Effective Date of Change:

1) 24th May 2004 :

- Agilent will start the manufacturing conversion to Pb-free products.
- Shipment may contain mixture of both leaded and lead-free versions with proper labels.

2) Transition period (24th May 2004 – 24th Nov. 2004)

- All 100% Pb-free products will be identified with a “Pb-free” text/markings , which will be indicated on the mother label. (See page-1[B]).
- Agilent shipment to Distributors and Direct Customers will be fully leadfree after 24th Nov 2004.
- Shipment from Agilent Distributors may still contain mixture of leaded and lead-free parts until all the leaded inventory are fully depleted.

Appendix:

Listed below through hole lamps' part numbers that are excluded from Pb free conversion.

HLMP-CB18-XXXXX	HLMP-CE18-XXXXX	HLMP-CM18-XXXXX	HLMP-CW18-XXXXX	HLMP-HB59-XXXXX
HLMP-CB19-XXXXX	HLMP-CE19-XXXXX	HLMP-CM19-XXXXX	HLMP-CW19-XXXXX	HLMP-HM59-XXXXX
HLMP-CB28-XXXXX	HLMP-CE28-XXXXX	HLMP-CM28-XXXXX	HLMP-CW28-XXXXX	
HLMP-CB29-XXXXX	HLMP-CE29-XXXXX	HLMP-CM29-XXXXX	HLMP-CW29-XXXXX	
HLMP-CB38-XXXXX		HLMP-CM38-XXXXX	HLMP-CW38-XXXXX	
HLMP-CB39-XXXXX		HLMP-CM39-XXXXX	HLMP-CW39-XXXXX	
			HLMP-CW78-XXXXX	
			HLMP-CW79-XXXXX	

Please contact your Agilent field sales engineer for further details or support requirements.
Return any response as soon as possible within 90 days.

Thank you for your continuous attention to these changes.

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

Please contact your Agilent field sales engineer or Contact Center (<http://www.agilent.com/view/contactus>) for any questions or support requirements.