



*(Green) L/eLQFP Package RELIABILITY QUALIFICATION REPORT SUMMARY*

<b>Technology Description</b>	Green (Lead and Halide Free) Low Profile Quad Flat Pack, Gull-wing lead shape, 64 and 80 pin counts
<b>Qualification Vehicle</b>	80eLQFP (ASE, Chung Li – RQ 2147) (ASE, Malaysia – RQ 2189)

<b>eLQFP Package Information</b>	
<i>(ASE, Chung Li - ASECL)</i>	
<b>UL flammability class</b>	UL 94 V-0 & $\geq 28\%$
<b>Lead Frame Material</b>	Copper
<b>Die Attach</b>	Hitachi EN4900F and Hysol QMI-536
<b>Mold compound</b>	Sumitomo EME-G700LY
<b>Bond Wire</b>	Gold
<b>Lead Finish</b>	Matte Tin (Sn)
<i>(ASE, Malaysia - ASEM)</i>	
<b>UL flammability class</b>	UL 94 V-0 & $\geq 28\%$
<b>Lead Frame Material</b>	Copper
<b>Die Attach</b>	Sumitomo CRM 1076DS
<b>Mold compound</b>	Hitachi CEL 9220HFA
<b>Bond Wire</b>	Gold
<b>Lead Finish</b>	Matte Tin (Sn)

<b>Factory Locations</b>	
<b>Wafer Fabrications</b>	UMCTW
<b>Assembly</b>	ASE, Chung Li ASE, Malaysia
<b>Final Test</b>	ASE, Malaysia

<b>Availability</b>	
<b>Samples:</b>	Yes
<b>Production:</b>	Yes



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<b>Green Package Qualification Stress Tests</b>	<b>#fails/#samples</b>
<b>Preconditioning Jedec Moisture Sensitivity Level 3 with IR reflow at 260 +/- 5°C</b>  (Prior to Temperature Cycle)	0/50 (ASECL) 0/25 (ASEM)
<b>Temperature Cycle (-65°C/+150°C)</b>	0/50 for 100 cycles (ASECL) 0/25 for 500 cycles (ASEM)
<b>High Temperature Storage</b>	0/50 @ 125°C (ASECL)
<b>Autoclave (100 %R.H./2 ATM, 121°C, 96 hrs)</b>	0/50 (ASECL) 0/10 (ASEM)
<b>Solderability</b>	0/5 (ASECL) 0/20 (ASEM)
<b>Assembly Yield</b>	<b>Equivalent to Standard Material set.</b>
<b>Construction Analysis</b>	<b>Complete / Pass</b>

**Qualification Date: August 12, 2004**

**For information on Tin Whiskers, visit the Legerity Green web page at:**

<http://www.legerity.com/public.php?p=green>

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