



## Device Material Content

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**Package:** 132 ucBGA  
**Total Device Weight** 0.067 Grams

**Package Code:** UMN132  
**Products:** LC4kZE

Assembly: ASEM  
Size (mm): 6 x 6  
Lead pitch (mm): 0.4  
MSL: 3  
Reflow max (°C): 260

	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
<b>Die</b>	3.27%	0.0022	3.27%	0.0022	Silicon chip	7440-21-3	100.00%	Die size: 1.77 x 1.91 mm
<b>Mold Compound</b>	51.45%	0.0345	3.60%	0.0024	Epoxy Resin	-	7.00%	Mold Compound: Sumitomo G750SE
			2.57%	0.0017	Phenol Novolac	9003-35-4	5.00%	
			2.57%	0.0017	Metal Hydroxide	-	5.00%	
			0.26%	0.0002	Carbon Black	1333-86-4	0.50%	
			42.44%	0.0284	Silica Fused	60676-86-0	82.50%	
<b>D/A Epoxy</b>	0.53%	0.0004	0.42%	0.00028	Silver	7440-22-4	80.00%	Die attach epoxy: Henkel (Ablebond) 2100A
			0.11%	0.00007	Esters & resins	-	20.00%	
<b>Wire</b>	1.76%	0.0012	1.74%	0.00116	Copper	7440-50-8	98.50%	0.8 mil diameter; 1 wire per solder ball
			0.03%	0.00002	Palladium	7440-05-3	1.50%	
<b>Solder Balls</b>	12.37%	0.0083	11.94%	0.00800	Tin (Sn)	7440-31-5	96.50%	SAC305
			0.37%	0.00025	Silver (Ag)	7440-22-4	3.00%	
			0.06%	0.00004	Copper (Cu)	7440-50-8	0.50%	
<b>Substrate</b>	19.01%	0.0127	6.08%	0.0041	BT Resins	-	32.00%	BT Resin CCL-HL832NX-A
			12.93%	0.0087	Glass fiber	65997-17-3	68.00%	
<b>Foil</b>	6.39%	0.0043	5.24%	0.00351	Copper	7440-50-8	82.00%	
			0.96%	0.00065	Nickel plating	7440-02-0	15.10%	
			0.19%	0.00012	Gold plating	7440-57-5	2.91%	
<b>Solder Mask</b>	5.22%	0.0035	2.94%	0.00197	Quartz	14808-60-7	56.20%	Solder mask PSR4000 AUS 308
			0.84%	0.00056	3-methoxy-3-methylbutylacetate	103429-90-9	16.00%	
			1.15%	0.00077	Barium Sulfate	7727-43-7	22.00%	
			0.16%	0.00010	Talc	14807-96-6	3.00%	
			0.03%	0.00002	Naphthalene	91-20-3	0.50%	
			0.12%	0.00008	Trade secret ingredients	-	2.30%	

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