

**LTM4636 144LD BGA-PBF 16mm X 16mm X 7.07mm (TABLE OF MATERIAL DECLARATION)**

This Package is RoHS compliant per EU RoHS Directive 2003/95/EC.  
It contains less than 100ppm cadmium (Cd) and less than 1,000ppm of each - lead (Pb), mercury (Hg), hexavalent chromium (Cr+)  
polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE)

No.	Part Name	Material Name	Component Weight (gram)	Materials Analysis (element)	CAS Number	Material Mass (gram)	Materials Analysis (weight %)
1	Substrate	Circuit Board	0.3360	Bismaleimide/TriazineResin/Filler Substances (SilicaCrystalline)	105391-33-1 1156-51-0/9003-36-5/21645-51-2 *non-disclosure	0.07241	21.55
				Continuous Filament Fiber Glass	65997-17-3	0.06421	19.11
				Copper Metal	7440-50-8	0.16868	50.20
				Zinc	7440-66-6	0.00001	0.00
				Chromium(III) oxide	1308-38-9	0.00001	0.00
				Bisphenol A epoxyresin	25068-38-6	0.00003	0.01
				Epoxy Resin	*non-disclosure	0.00023	0.07
				Imidazole system curing reagent	*non-disclosure	0.00003	0.01
				Silica amorphous	7631-86-9	0.00021	0.06
				Acrylic Resin	*non-disclosure	0.01549	4.61
				Copper Compounds	147-14-8	0.00007	0.02
				Barium Compounds	7727-43-7	0.00812	2.42
				Talc;not containing fibers like asbestos	14807-96-6	0.00094	0.28
				Aromatic carbonyl compounds	non-disclosure	0.00088	0.26
				Cyanoguanidine	461-58-5	0.00003	0.01
				Amine compounds	*non-disclosure	0.00011	0.03
				Leveling agent and others	*non-disclosure	0.00036	0.11
				Nickel	7440-02-0	0.00363	1.08
				Phosphorus	7723-14-0	0.00027	0.08
				Gold	7440-57-5	0.00017	0.05
				Palladium	2023568	0.00005	0.02
				**Ecotoxic substances	7440-38-2 7439-92-1	0.00005	0.02
2	Solder Paste I	Alloy	0.0104	Tin (Sn)	7440-31-5	0.00984	95.00
				Antimony (Sb)	7440-36-0	0.00052	5.00
3	Components	Passive/Active	2.0459	Iron Powder (Fe)	7439-89-6	1.61619	79.00
				Copper (Cu)	7440-50-8	0.39137	19.13
				Nickel (Ni)	7440-02-0	0.00482	0.24
				Tin (Sn)	7440-31-5	0.01321	0.65
				Ceramic (Ba) Compounds	12047-27-7	0.02025	0.99
3(i)	FC-DFN		0.0850				
	Active Ics	Silicon		Silicon (Si)	7440-21-3	0.00131	1.54
	Clip & Heatsink	Alloy		Copper (Cu)	7440-50-8	0.02623	30.86
				Iron (Fe)	7439-89-6	0.00065	0.76
				Zinc (Zn)	7440-66-6	0.00004	0.04
	Die & Clip Attach	Alloy		Lead	7439-92-1	0.00325	3.83
				Silver (Ag)	7440-22-4	0.00009	0.10
				Tin (Sn)	7440-31-5	0.00018	0.21
	Encapsulation	Epoxy Resin		Carbon Black	1333-86-4	0.00023	0.27
				Epoxy Resin	85954-11-6	0.00210	2.48

				Phenolic resin	9003-35-4	0.00047	0.55
	Lead frame	Lead frame		Silica (Si)	60676-86-0	0.02055	24.17
				Copper (Cu)	7440-50-8	0.02623	30.86
				Iron (Fe)	7439-89-6	0.00065	0.77
				Silver (Ag)	7440-22-4	0.00030	0.35
				Zinc (Zn)	7440-66-6	0.00004	0.04
	Terminal Finish	Plating		Tin (Sn)	7440-31-5	0.00173	2.03
		Gold		Gold (Au)	7440-57-5	0.00009	0.10
	Wire	Copper		Copper (Cu)	7440-50-8	0.00087	1.03
4	Active lcs	Silicon	0.0039	Silicon (Si)	7440-21-3	0.00392	100.00
5	Wire	Gold	0.0003	Gold (Au)	7440-57-5	0.00030	99.99
6	Cu Frame	Cu	0.2875	Cu	7440-50-8	0.28751	100.00
7	Solder Ball	Alloy	0.2416	Tin (Sn)	7440-31-5	0.23318	96.50
				Silver (Ag)	7440-22-4	0.00725	3.00
				Copper (Cu)	7440-50-8	0.00121	0.50
8	Epoxy	Epoxy Resin	0.0030	Epoxy resin (bis phenol A type)	25068-38-6	0.00144	48.00
				Epoxy resin (bis phenol F type)	9003-36-5	0.00096	32.00
				Filler	67762-90-7	0.00015	5.00
				Hardener	2760-98-7	0.00039	13.00
				Pigment	13463-67-7	0.00006	2.00
9	Solder Paste II	SAC305	0.0386	Tin (Sn)	7440-31-5	0.03722	96.50
				Silver (Ag)	7440-22-4	0.00116	3.00
				Copper (Cu)	7440-50-8	0.00019	0.50
10	Encapsulation	Epoxy Resin	0.8944	Fused Silica	60676-86-0	0.69048	77.20
				Epoxy Resin	*non-disclosure	0.07960	8.90
				Phenol Resin	*non-disclosure	0.07960	8.90
				Crytalline Silica	14808-60-7	0.02683	3.00
				Carbon Black	1333-86-4	0.00447	0.50
				Metal Hydroxide	*non-disclosure	0.01342	1.50
Total Package Weight			3.9466				

Note: Composition derived from MSDS and material C of C from Vendors

Component Weight based on assembly of generic parts