

4 Leads - DMPS
Package Material Declaration

Date	22-Mar-21	Product name	Integrated Circuit
Package Code	VS	RoHS Compliant	Y
Package Name	Dual Mold package with straight leads	Halogen Free	Y
Product Total Mass (g)	0.25197	Plating	Pure Matte Sn
Product Number		MLX90422	

Material Declaration

Part Name	Material Name	Component Weight (g)	Material Component (Element)	CAS #	Element ratio (%)	Material Weight (g)	Ratio total Wt (ppm)		
Leadframe	Copper Alloy K75 (C18070)	0.11096	Copper (Cu)	7440-50-8	99.75	0.11069	439291		
			Chromium (Cr)	7440-47-3	0.20	0.00022	881		
			Silicon (Si)	7440-21-3	0.03	0.00003	132		
			Titanium (Ti)	7440-32-6	0.02	0.00002	88		
Frame plating	Silver	0.00120	Silver (Ag)	7440-22-4	100	0.00120	4763		
Die	Silicon	0.00351	Silicon (Si)	7440-21-3	99.99	0.00351	13929		
			Misc.	-	0.01	0.0000004	1		
IMC	S-FeNi-8	0.000006	Iron (Fe)	7439-89-6	19.75	0.0000012	5		
			Nickel (Ni) (0.0 ~ 80%)	7440-02-0	40	0.0000024	10		
			Molybdenum (Mo) (0.0 ~ 80%)	7439-98-7	40	0.0000024	10		
			others (max. 0.5%)	-	0.25	0.00000002	0.1		
Die attach materials	Silver / Epoxy Adhesive CRM1076WB	0.00095	Silver (Ag)	7440-22-4	80	0.00076	3004		
			Epoxy Resin	9003-36-5	15	0.00014	563		
			Misc.	-	5	0.00005	188		
Capacitor (3x)	Ceramic element (ZB)	Ceramics	0.01308	Barium oxide, obtained by calcining witherite	1304-28-5	60	0.00785	31140	
				Titanium dioxide	13463-67-7	30	0.00392	15570	
				Misc.	-	10	0.00131	5190	
	Inner electrode (ZD)	Nickel/Other Nickel alloy	0.002058	Nickel (Ni)	7440-02-0	100	0.00206	8168	
				Outer electrode (ZF)	Silver/Silver alloy	0.001896	Silver (Ag)	7440-22-4	70
	Outer electrode (ZG)	Glass	0.00021	Palladium (Pd)			7440-05-3	30	0.00057
				Glass w/o declarable substances	7631-86-9	99	0.00021	825	
				Misc.	-	1	0.00000	8	
	Outer electrode (ZG)	Copper	0.001494	Copper (Cu)	7440-50-8	100	0.00149	5929	
				Glass	0.000165	Glass w/o declarable substances	7631-86-9	99	0.00016
Misc.						-	1	0.000002	7
Capacitor attach materials	Silver / Epoxy Adhesive 84-1LMI	0.00031	Silver (Ag)	7440-22-4	80	0.00025	981		
			Epoxy Resin	-	15	0.00005	184		
			Misc.	-	5	0.00002	61		
Wire	Pd doped Gold	0.00028	Gold (Au)	7440-57-5	99	0.00028	1116		
			Palladium (Pd)	7440-05-3	1	0.000003	11		
Lead Finish	Tin	0.01266	Tin (Sn)	7440-31-5	99.99	0.01266	50240		
			Misc.	-	0.01	0.000001	5		
Encapsulation	Silica EP G600	0.10319	Silica fused	60676-86-0	86.5	0.08926	354242		
			Epoxy Resin	-	7	0.00722	28667		
			Phenol Resin	-	6	0.00619	24572		
			Carbon Black	1333-86-4	0.5	0.00052	2048		

Total package weight (g) 0.25197

Comments

- Composition derived from MSDS and material CoC from vendors
- Component weight based on assembly of generic parts
- Reliability qualification reports are available upon request through the appropriate sales or marketing contact
- Third party testing for RoHS substances are available upon request to environment@melexis.com

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