

**4 Leads - DMPS
Package Material Declaration**



Date	31-Mar-20	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)	0.25827	Plating	Pure Matte Sn
Product Number		MLX90378	

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	428575			
			Chromium (Cr)	7440-47-3	0.20	0.00022	859			
			Silicon (Si)	7440-21-3	0.03	0.00003	129			
			Titanium (Ti)	7440-32-6	0.02	0.00002	86			
Frame plating	Silver	0.00120	Silver (Ag)	7440-22-4	100	0.00120	4646			
Die	Silicon	0.00351	Silicon (Si)	7440-21-3	99.99	0.00351	13589			
			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	9			
			Molybdenum (Mo) (0.0 ~ 80%)	7439-98-7	40	0.0000024	9			
			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	2931			
			Epoxy Resin A	9003-36-5	15	0.00014	550			
			Misc.	-	5	0.00005	183			
Capacitor (4x)	Ceramic element (ZB)	Ceramics	0.01744	Barium oxide, obtained by calcining witherite	1304-28-5	60	0.01046	40507		
				Titanium dioxide	13463-67-7	30	0.00523	20254		
				Misc.	-	10	0.00174	6751		
	Inner electrode	Nickel/Other Nickel alloy	0.002744	Nickel (Ni)	7440-02-0	100	0.00274	10625		
				Silver (Ag)	7440-22-4	70	0.00177	6852		
	Outer electrode (ZF)	Silver/Silver alloy	0.002528	Palladium (Pd)	7440-05-3	30	0.00076	2937		
				Glass	0.00028	Glass w/o declarable substances	7631-86-9	99	0.00028	1073
						Misc.	-	1	0.00000	11
	Outer electrode (ZG)	Copper	0.001992	Copper (Cu)	7440-50-8	100	0.00199	7713		
				Glass	0.000220	Glass w/o declarable substances	7631-86-9	99	0.00022	843
Misc.						-	1	0.000002	9	
Capacitor attach materials	Silver / Epoxy Adhesive 84-1LMI	0.00031	Silver (Ag)	7440-22-4	80	0.00025	957			
			Epoxy Resin	-	15	0.00005	179			
			Misc.	-	5	0.00002	60			
Wire	Pd doped Gold	0.00028	Gold (Au)	7440-57-5	99	0.00028	1089			
			Palladium (Pd)	7440-05-3	1	0.000003	11			
Lead Finish	Tin	0.01266	Tin (Sn)	7440-31-5	99.99	0.01266	49014			
			Misc.	-	0.01	0.000001	5			
Encapsulation	Silica EP G600	0.10319	Silica Fused	60676-86-0	87.7	0.09049	350395			
			Phenol Resin	-	5	0.00516	19977			
			Epoxy Resin	-	5	0.00516	19977			
			Epoxy, Cresol Novolac	29690-82-2	2	0.00206	7991			
			Carbon Black	1333-86-4	0.3	0.00031	1199			

Total package weight (g) 0.25827

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

Disclaimer

"MELEXIS has taken every effort to ensure that the information provided in this document is correct, accurate and up-to-date.

MELEXIS, however, shall not be held liable for any improper or incorrect use of the information described and/or contained herein and assumes no responsibility whatsoever for recipient's or a third party's use of this information. In no event MELEXIS shall be held liable for any direct, indirect, incidental, special, exemplary, or consequential damages (including, but not limited to: procurement of substitute goods or services; loss of use, data, or profits; or business interruption) however caused and on any theory of liability, whether in contract, strict liability, tort (including negligence or otherwise), or any other theory arising in any way out of the use of this system, even if advised of the possibility of such damage.

This disclaimer of liability applies to any damages or injury, whether based on alleged breach of contract, tortious behavior, negligence or any other cause of action".

The content of this document is CONFIDENTIAL & PROPRIETARY. ALL Rights Reserved.