

4 Leads - TO39
Package Material Declaration



Date	29-Jun-2020	Product name	Integrated Circuit
Package Code	SF	RoHS Compliant	Y
Package Name	TO-39	Halogen Free	N
Product Total Mass (g)	1.873	Plating	N/A

Product Number	MLX90640
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Material Declaration

Part Name	Material Name	Component Weight (g)	Material Component (Element)	CAS #	Element ratio (%)	Material Weight (g)	Ratio total Wt (ppm)	
Header	Steel Undoped CRS1010	0.5838	Base (75%)	Carbon (C)	7440-44-0	0.08	0.0004	187
				Silicon (Si)	7440-21-3	0.1	0.0004	234
				Manganese (Mn)	7439-96-5	0.4	0.0018	935
				Phosphorus (P)	7723-14-0	0.025	0.0001	58
				Sulphur (S)	7704-34-9	0.025	0.0001	58
				Nitrogen (N)	17778-88-0	0.007	0.00003	16
				Iron (Fe)	7439-89-6	99.363	0.4351	232222
			Glass (5%)	Glass	Propriety Information	100	0.0292	15581
			Isolated Pin (15%)	Carbon (C)	7440-44-0	0.05	0.00004	23
				Silicon (Si)	7440-21-3	0.3	0.0003	140
				Manganese (Mn)	7439-96-5	0.5	0.0004	234
				Phosphorus (P)	7723-14-0	0.03	0.00003	14
				Sulphur (S)	7704-34-9	0.03	0.00003	14
				Cobalt (Co)	7440-48-4	18	0.0158	8414
				Nickel (Ni)	7440-02-0	30	0.0263	14023
			Ni Plating (4%)	Iron (Fe)	7439-89-6	51.09	0.0447	23881
				Nickel (Ni)	7440-02-0	90	0.0210	11218
Au Plating (1%)	Phosphorus (P)	7723-14-0	10	0.00234	1246			
	Gold (Au)	7440-57-5	100	0.0058	3116			
Die Attach	Silicone adhesive Semicosil 988/1K	0.0038	Aluminium Oxide	1344-28-1	80	0.0030	1601	
			Siloxanes	68083-19-2	20	0.00075	400	
Die Attach Material (Sensor)	Epoxy Adhesive E3517	0.0021	Phenol, formaldehyd, (chloromethyl)oxiranpolymer	9003-36-5	35	0.0007	392	
			Bisphenol A, Epichlorhydrin polymer	25068-38-6	20	0.0004	224	
			gamma-Butyrolactone	96-48-0	20	0.0004	224	
			2,3-Epoxypropylneodecanoate	26761-45-5	5	0.0001	56	
			4,4'-Isopropylidenediphenol	80-05-7	5	0.0001	56	
			Phenol, Polymer mit Formaldehyd, Glycidylether	28064-14-4	1	0.0000	11	
			Diuron	330-54-1	1	0.0000	11	
			Graphite	7782-42-5	13	0.0003	146	
Die	Silicon	0.0042	Silicon (Si)	7440-21-3	98	0.0041	2171	
			Others	-	2	0.00008	44	
Aluminum Wire	1.25 mil Aluminum (ALW295)	0.0002	Aluminum (Al)	7429-90-5	99	0.0002	88	
			Silicon (Si)	7440-21-3	1	0.000002	1	
Cap	Nickel	0.2710	Nickel (Ni)	7440-02-0	99.947	0.2709	144575	
			Copper (Cu)	7440-50-8	0.0011	0.000003	2	
			Iron (Fe)	7439-89-6	0.0011	0.000003	2	
			Manganese (Mn)	7439-96-5	0.05	0.00014	72	
			Silicon (Si)	7440-21-3	0.0008	0.000002	1	
Filter Wafer	IR Filter F5.5	0.0085	Silicon (Si)	7440-21-3	98	0.0083	4446	
			Others	-	2	0.0002	91	
Aperture	Aluminum	1.0000	Aluminum (Al)	7429-90-5	99.5	0.9950	531101	
			others	-	1	0.0050	2669	

Total package weight (g) 1.873

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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