

Supplier Name: Texas Instruments Inc. (DUNS# 00-732-1904)  
 Contact Info: [ti.com/support](http://ti.com/support)  
 Form/Declaration Type: Distribute - RoHS and IEC 62474 DB  
 Created on: 05/06/2022

Details for "TLC27M4IDR"

**Current Product Information**

TI part number	Lead finish/Ball material	MSL rating/peak reflow	Assembly site	Package   Pins	Package body size (mm)	Total device mass (mg)*
TLC27M4IDR	NIPDAU	Level-1-260C-UNLIM	TI TAIWAN A/T	D   14	3.91X8.65X1.58	149.8

\*Total Device Mass  
 The summary mass is a rounded value and will be within approximately +/- 10% of the detailed mass value.

**Environmental Ratings Information**

RoHS	REACH	Green	IEC 62474 DB
Yes	Yes	Yes	Yes

**Component Information**

Component	Substance	CAS Number	Amount (mg)	Homogeneous Material Level		Component Level	
				Percentage %	ppm	Percentage %	ppm
<b>Bond Wire</b>							
Copper and Its Alloys	Copper	7440-50-8	0.07981	99.998747	999987	0.053275	533
Precious Metals	Silver	7440-22-4	0.000001	0.001253	13	0.000001	0
Sub-Total			<b>0.079811</b>	<b>100</b>	<b>1000000</b>	<b>0.053275</b>	<b>533</b>
<b>Die Attach Adhesive</b>							
Precious Metals	Silver	7440-22-4	0.737542	80.000043	800000	0.492324	4923
Thermoplastics	Epoxy	85954-11-6	0.184385	19.999957	200000	0.123081	1231
Sub-Total			<b>0.921927</b>	<b>100</b>	<b>1000000</b>	<b>0.615405</b>	<b>6154</b>
<b>Lead Frame</b>							
Copper and Its Alloys	Copper	7440-50-8	42.645846	97.424999	974250	28.466979	284670
Copper and Its Alloys	Iron	7439-89-6	1.050552	2.4	24000	0.701265	7013
Copper and Its Alloys	Phosphorus	7723-14-0	0.006566	0.015	150	0.004383	44
Copper and Its Alloys	Tin	7440-31-5	0.013132	0.03	300	0.008766	88
Copper and Its Alloys	Zinc	7440-66-6	0.043773	0.1	1000	0.029219	292
Other Nonferrous Metals and Alloys	Lead	7439-92-1	0.013132	0.03	300	0.008766	88
Sub-Total			<b>43.773001</b>	<b>100</b>	<b>1000000</b>	<b>29.219378</b>	<b>292194</b>
<b>Lead Frame Plating</b>							
Nickel and Its Alloys	Nickel	7440-02-0	0.120802	95.119685	951197	0.080638	806
Precious Metals	Gold	7440-57-5	0.000991	0.780315	7803	0.000662	7
Precious Metals	Palladium	7440-05-3	0.005207	4.1	41000	0.003476	35
Sub-Total			<b>0.127</b>	<b>100</b>	<b>1000000</b>	<b>0.084775</b>	<b>848</b>
<b>Mold Compound</b>							
Other Inorganic Materials	Fused Silica	60676-86-0	89.665342	88.000001	880000	59.85346	598535
Other Plastics and Rubber	Carbon Black	1333-86-4	0.305677	0.3	3000	0.204046	2040
Other Plastics and Rubber	Organic Phosphorus	1330-78-5	0.560408	0.55	5500	0.374084	3741
Thermoplastics	Epoxy	85954-11-6	11.361006	11.15	111500	7.583705	75837
Sub-Total			<b>101.892433</b>	<b>100</b>	<b>1000000</b>	<b>68.015295</b>	<b>680153</b>
<b>Semiconductor Device</b>							
Ceramics / Glass	Doped Silicon	7440-21-3	3.013946	100	1000000	2.011871	20119
Sub-Total			<b>3.013946</b>	<b>100</b>	<b>1000000</b>	<b>2.011871</b>	<b>20119</b>
<b>Total</b>			<b>149.808118</b>			<b>100</b>	<b>1000000</b>

**Important Note**  
 The ppm calculations are at the **homogeneous material** level and are maximum concentration values. The ppm displayed represents the **homogeneous material** with the highest ppm for that substance. The amount (mg) calculations represent the maximum total amount of each substance within the component.  
 The ppm calculations are at the **component** level and are average concentration values. The amount (mg) calculations represent the average total amount of each substance within the **component**.  
[See Glossary of Terms for more details.](#)

**Important Part Information**  
 There is a remote possibility the Customer Part Number (CPN) your company uses could reference more than one TI part number. This is due to two or more users (EMSi or subcontractors) using the same CPN for different TI part numbers. If this occurs, please check your Customer Part Number and cross reference it with the TI part number seen on this page.

**Product Content Methodology**  
[For an explanation of the methods used to determine material weights, See Product Content Methodology.](#)

**Material Declaration Certificate for Semiconductor IC Packaged Products**

TI certifies that the material content information provided by TI is representative and accurate to the best of their knowledge based on material information provided by its suppliers and their combination into finished IC packaged products. TI semiconductor products designated to be "Pb-free", "Green" or "RoHS Exempt" fully meets the latest EU RoHS Directive requirements along with other legislation as seen in the former JIG-101 list that has been transferred to the IEC 62474 database.

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Signature: [\(click here for a fuller statement with a signed certificate\)](#)

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 For further environmental statements, please go to [www.ti.com/ecoinfo](http://www.ti.com/ecoinfo)  
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**RoHS:** Means TI semiconductor products that are compliant with the current RoHS requirement that the maximum concentration values of the ten substances listed in RoHS Annex II do not exceed 0.1 % by weight in homogeneous materials. Where designed to be soldered at high temperatures, TI semiconductor products labeled as "RoHS Compliant" are suitable for use in specified lead-free processes. TI may also reference these types of semiconductor products as "Pb-Free." These TI semiconductor products are also fully compliant with GADSL and the IEC 62474 database for electronic requirements.

**RoHS Exempt:** Means TI semiconductor products that contain lead (Pb) above the RoHS Annex II threshold, but that fall within one of the specific RoHS exemptions noted above or documented in <http://www.ti.com/lit/pdf/szzq088>

**Green:** Means the content of Chlorine (Cl) and Bromine (Br)-based flame retardants meet JS709B low halogen requirements of <=1 000ppm threshold; Antimony trioxide (Sb2O3) contained in halogen based flame retardant materials meets the <=1 000ppm threshold requirement; and Beryllium Oxide (BeO) is <=1000ppm.