

Supplier Name: Texas Instruments Inc. (DUNS# 00-732-1904)
 Contact Info: ti.com/support
 Form/Declaration Type: Distribute - RoHS and IEC 62474 DB
 Created on: 06/04/2022

Details for "OPA2316IDR"

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)*
OPA2316IDR	NIPDAU	Level-2-260C-1 YEAR	TI MALAYSIA A/T	D 8	4.9x3.9x1.75	101.8

***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
Bond Wire							
Other Nonferrous Metals and Alloys	Yttrium	7440-65-5	0.000001	0.001193	12	0.000001	0
Precious Metals	Gold	7440-57-5	0.083839	99.997615	999976	0.082323	823
Precious Metals	Silver	7440-22-4	0.000001	0.001193	12	0.000001	0
Sub-Total			0.083841	100	1000000	0.082325	823
Die Attach Adhesive							
Precious Metals	Silver	7440-22-4	0.103454	70.000203	700002	0.101583	1016
Thermoplastics	Epoxy	85954-11-6	0.044337	29.999797	299998	0.043535	435
Sub-Total			0.147791	100	1000000	0.145118	1451
Lead Frame							
Copper and Its Alloys	Copper	7440-50-8	37.624655	97.701	977010	36.94427	369443
Copper and Its Alloys	Iron	7439-89-6	0.824114	2.14	21400	0.809211	8092
Copper and Its Alloys	Phosphorus	7723-14-0	0.012708	0.032999	330	0.012478	125
Zinc and Its Alloys	Zinc	7440-66-6	0.048523	0.126001	1260	0.047646	476
Sub-Total			38.51	100	1000000	37.813605	378136
Lead Frame Plating							
Nickel and Its Alloys	Nickel	7440-02-0	1.864352	95.12	951200	1.830638	18306
Precious Metals	Gold	7440-57-5	0.015288	0.78	7800	0.015012	150
Precious Metals	Palladium	7440-05-3	0.08036	4.1	41000	0.078907	789
Sub-Total			1.96	100	1000000	1.924556	19246
Mold Compound							
Other Inorganic Materials	Fused Silica	60676-86-0	53.264057	88.000001	880000	52.300857	523009
Other Plastics and Rubber	Carbon Black	1333-86-4	0.181582	0.3	3000	0.178298	1783
Other Plastics and Rubber	Organic Phosphorus	1330-78-5	0.3329	0.549999	5500	0.32688	3269
Thermoplastics	Epoxy	85954-11-6	6.748798	11.15	111500	6.626756	66268
Sub-Total			60.527337	100	1000000	59.432791	594328
Semiconductor Device							
Ceramics / Glass	Doped Silicon	7440-21-3	0.612684	100	1000000	0.601605	6016
Sub-Total			0.612684	100	1000000	0.601605	6016
Total			101.841653			100	1000000

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 IIG-101 list that has been transferred to the IEC 62474 database.

Important Information/Disclaimer

TI bases its material content information on information provided by third-party suppliers and has taken, and continues to take, reasonably diligent steps to provide any required or available information. TI may not have conducted destructive testing or chemical analysis on incoming materials and chemicals. TI and TI suppliers may consider certain information to be proprietary, and thus certain information may not be available for release by TI. The material content information is provided by TI "as is."

[For additional information, please contact TI customer support.](#)

[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
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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 J5709B 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.