

# Chemicals contained in products

## Package-type

Epson Package name; **PLP061616B-8PI / Halogen free**

JEITA Package name; **P-UPLP008-01.60x01.60-0.50**

Lead frame plating; **Lead(Pb) Free**

Weight; **0.003 [g]** \*Note1

Part	Subpart	Subpart weight [mg]	Substance name	CAS No.	Content *Note2		Application
					[mg]	[ppm]	
IC Die	IC Die	0.40	Silicon	7440-21-3	0.40	999914	Base material
			Boron	7440-42-8	0.0000008	2	Dopant
			Phosphorus	7723-14-0	0.000002	5	Dopant
			Aluminum	7429-90-5	0.000008	20	Metalization
			Arsenic *Note3	7440-38-2	0.000002	5	Dopant
			Fluorine *Note3	7782-41-4	0.0000008	2	Dopant
			Titanium *Note3	7440-32-6	0.000008	20	Metalization
			Tungsten *Note3	7440-33-7	0.00001	30	Metalization
Package	Die Bonding material	0.02	Silver	7440-22-4	0.02	770000	Base material
			Lead Frame	0.36	Gold	7440-57-5	0.001
	Nickel	7440-02-0	0.34		954000	Base material	
	Silver	7440-22-4	0.02		43000	Base material	
	Bonding Wire	0.02	Gold	7440-57-5	0.02	1000000	Base material
	Mold resin	2.61	Epoxy resin	-	0.19	73000	Base material
			Phenol resin	-	0.09	34000	Hardening accelerator
			Silica	60676-86-0	2.21	849000	Filler
			Organic phosphorous compound	-	0.01	5000	Hardening accelerator
			Carbon black	1333-86-4	0.01	5000	Coloring agent
	Metal hydroxide	-	0.09	34000	Flame retardant		

Regarding the information of chemical substances

\*Note1 The weight might be somewhat different depending on an individual built-in IC-chip specification like the size etc.

\*Note2 Content data are estimated values based on supplier information and intended levels of content in product.

Actual measurements may vary from these values somewhat.

\*Note3 Use or not-use of these substances depends on individual built-in IC-chip specification.