



Declaration of Conformity to EU RoHS Directive

Pulse Electronics Corporation

No. 99 Huo Ju Road, Suzhou New District Jiangsu Province, Suzhou 215009, P.R. China

Tel: 86-512-69206136

P/N: W3796/W3008G/W3320

This is to certify that the parts products listed above meet the requirements of the **RoHS Directive 2011/65/EU & Directive 2015/863 amending Annex II to RoHS 2011/65/EU** The following table lists the restricted materials and their respective allowable limits:

RoHS Restricted Substance	Allowable Limit
Cadmium and its compounds	100 ppm (0.01 weight %)
Mercury and its compounds	1000 ppm (0.1 weight %)
Hexavalent chromium and its compounds	1000 ppm (0.1 weight %)
Lead and its compounds	1000 ppm (0.1 weight %)
Polybrominated biphenyls (PBB)	1000 ppm (0.1 weight %)
Polybrominated diphenyl ethers (PBDE)	1000 ppm (0.1 weight %)
Bis(2-ethylhexyl) phthalate (DEHP)	1000 ppm (0.1 weight %)
Butyl benzyl phthalate (BBP)	1000 ppm (0.1 weight %)
Dibutyl phthalate (DBP)	1000 ppm (0.1 weight %)
Diisobutyl phthalate(DIBP)	1000 ppm (0.1 weight %)

If parts/products take advantage of any exceptions, please check which exemption(s):

1. Mercury in single capped (compact) fluorescent lamps not exceeding (per burner):

- ☐ (a) For general lighting purposes < 30 Watts: 2.5mg
- ☐ (b) For general lighting purposes ≥ 30 Watts and < 50 Watts: 3.5mg
- ☐ (c) For general lighting purposes ≥ 50 Watts and < 150 Watts: 5mg
- ☐ (d) For general lighting purposes ≥ 150 Watts: 15 mg
- ☐ (e) For general lighting purposes with circular or square structural shape and tube diameter ≤ 17 mm: 7mg
- ☐ (f) For special purposes: 5 mg

2a. Mercury in double-capped linear fluorescent lamps for general lighting purposes not exceeding (per lamp):

- ☐ (1) Tri-band phosphor with normal lifetime and a tube diameter < 9 mm (e.g. T2) :4mg
- ☐ (2) Tri-band phosphor with normal lifetime and a tube diameter ≥ 9 mm and ≤ 17 mm (e.g. T5):3mg
- ☐ (3) Tri-band phosphor with normal lifetime and a tube diameter > 17 mm and ≤ 28 mm (e.g. T8):3.5mg
- ☐ (4) Tri-band phosphor with normal lifetime and a tube diameter > 28 mm (e.g. T12):3.5mg
- ☐ (5) Tri-band phosphor with long lifetime ($\geq 25,000$ h):5mg

2b. Mercury in other fluorescent lamps not exceeding (per lamp):

- ☐ (3) Non-linear tri-band phosphor lamps with tube diameter > 17 mm (e.g. T9):15mg
- ☐ (4) Lamps for other general lighting and special purposes (e.g. induction lamps):15mg

3. Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for special purposes not exceeding (per lamp):

- ☐ (a) Short length (≤ 500 mm) : 3.5mg
- ☐ (b) Medium length (> 500 mm and ≤ 1500 mm): 5mg
- ☐ (c) Long length (> 1500 mm) : 13mg

☐ 4a. Mercury in other low pressure discharge lamps (per lamp):15mg

4b. Mercury in High Pressure Sodium (vapor) lamps for general lighting purposes not exceeding (per burner) in lamps with improved color rendering index $Ra > 60$:

- ☐ (I) $P \leq 155$ W : 30mg
- ☐ (II) $155 < P \leq 405$ W : 40mg
- ☐ (III) $P > 405$ W :40mg

4c. Mercury in other High Pressure Sodium (vapor) lamps for general lighting purposes not exceeding (per burner):

- ☐ (I) $P \leq 155$ W : 25mg
- ☐ (II) $155 < P \leq 405$ W :30mg
- ☐ (III) $P > 405$ W : 40mg

☐ 4e. Mercury in metal halide lamps (MH)

☐ 4f. Mercury in other discharge lamps for special purposes not specifically mentioned in Annex

☐ 5b. Lead in glass of fluorescent tubes not exceeding 0.2% by weight

☐ 6a. Lead as an alloying element in steel for machining purposes and in galvanized steel containing up to 0.35% lead by weight

☐ 6b. Lead as an alloying element in aluminium containing up to 0.4% lead by weight

☐ 6c. Copper alloy containing up to 4% lead by weight

☐ 7a. Lead in high melting temperature type solders (i.e. lead-based alloys containing 85% by weight or more lead)

☐ 7c-I. Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound

☐ 7c-II. Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher

☐ 7c-IV. Lead in PZT based dielectric ceramic materials for capacitors which are part of integrated circuits or discrete semiconductors

☐ 8b. Cadmium and its compounds in electrical contacts

☐ 9. Hexavalent chromium as an anticorrosion agent of the carbon steel cooling system in absorption refrigerators up to 0.75% by weight in the cooling solution

- ☐ 9b. Lead in bearing shells and bushes for refrigerant-containing compressors for heating, ventilation, air conditioning and refrigeration (HVACR) applications
- ☐ 13a. Lead in white glasses used for optical applications
- ☐ 13b. Cadmium and lead in filter glasses and glasses used for reflectance standards
- ☐ 15. Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages
- ☐ 17. Lead halide as radiant agent in High Intensity Discharge (HID) lamps used for professional reprography applications
- ☐ 18b. Lead as activator in the fluorescent powder (1% lead by weight or less) of discharge lamps when used as sun tanning lamps containing phosphors such as BSP ($\text{BaSi}_2\text{O}_5\text{:Pb}$)
- ☐ 21. Lead and cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses
- ☐ 24. Lead in solders for the soldering to machined through hole discoidal and planar array ceramic multilayer capacitors
- ☐ 25. Lead oxide in surface conduction electron emitter displays (SED) used in structural elements, notably in the seal frit and frit ring
- ☐ 29. Lead bound in crystal glass as defined in Annex I (Categories 1, 2, 3 and 4) of Council Directive 69/493/EEC
- ☐ 30. Cadmium alloys as electrical/mechanical solder joints to electrical conductors located directly on the voice coil in transducers used in high-powered loudspeakers with sound pressure levels of 100 dB (A) and more
- ☐ 31. Lead in soldering materials in mercury free flat fluorescent lamps (which e.g. are used for liquid crystal displays, design or industrial lighting)
- ☐ 32. Lead oxide in seal frit used for making window assemblies for Argon and Krypton laser tubes
- ☐ 33. Lead in solders for the soldering of thin copper wires of 100 μm diameters and less in power transformers
- ☐ 34. Lead in cermet-based trimmer potentiometer elements
- ☐ 37. Lead in the plating layer of high voltage diodes on the basis of a zinc borate glass body
- ☐ 38. Cadmium and cadmium oxide in thick film pastes used on aluminium bonded beryllium oxide
- ☐ 41. Lead in solders and termination finishes of electrical and electronic components and finishes of printed circuit boards used in ignition modules and other electrical and electronic engine control systems, which for technical reasons must be mounted directly on or in the crankcase or cylinder of hand-held combustion engines

☐ 42. Lead in bearings and bushes of diesel or gaseous fuel powered internal combustion engines applied in non-road professional use equipment;

43. Bis(2-ethylhexyl) phthalate in rubber components in engine systems, designed for use in equipment that is not intended solely for consumer use and provided that no plasticised material comes into contact with human mucous membranes or into prolonged contact with human skin and the concentration value of bis(2-ethylhexyl) phthalate does not exceed:

☐ a) 30 % by weight of the rubber for:

- (i) gasket coatings;
- (ii) solid-rubber gaskets; or
- (iii) rubber components included in assemblies of at least three components using electrical, mechanical or hydraulic energy to do work, and attached to the engine.

☐ b) 10 % by weight of the rubber for rubber-containing components not referred to in point (a).

☐ 44. Lead in solder of sensors, actuators, and engine control units of combustion engines within the scope of Regulation (EU) 2016/1628 of the European Parliament and of the Council, installed in equipment used at fixed positions while in operation which is designed for professionals, but also used by non-professional users

☐ 45. Cadmium and lead in rigid plastic profiles containing mixtures produced from polyvinyl chloride waste (hereinafter referred to as 'recovered rigid PVC'), used for electrical and electronic windows and doors, where the concentration in the recovered rigid PVC material does not exceed 0,1 % cadmium by weight (expressed as Cd metal) and/or 2 % lead by weight (expressed as Pb metal), provided that the components concerned are visibly, legibly and indelibly marked with the statement 'Contains recovered PVC'

Signature:



Date: 12/03/2020

Name: Jack Ma

Phone: 86-512-69206099

Title: QA Manager

Email: JackMa2@pulseelectronics.com