



Features

- SLC-NAND flash technology
- Support SD mode and SPI mode
- 4GB Support UHS-1
- Support S.M.A.R.T. command set and utility
- Capacities from 1GB up to 4GB

Specification

- **Compatibility** SD3.0
- **microSD** 1GB to 2GB: FAT file system
- **microSDHC** 4GB: FAT16 file system
- **Declaration** RoHS & REACH compliant
- **Flash technology** SLC-NAND flash technology
- **Form-factor** Standard microSD
- **Host interface** 8-pin exposed contact
- **Performance**
- **Data transfer rate** Class10
- **Sequential read** microSD: 23.4 MB/sec (Max.)
microSDHC: 67.2 MB/sec (Max.)
- **Sequential write** microSD: 20.7 MB/sec (Max.)
microSDHC: 48.4 MB/sec (Max.)
- **Environmental**
- **Operating temp.** IND. -40°C~+85°C
- **Non-operating temp.** IND. -50°C~+95°C
- **Humidity** 10% ~ 95% non-condensing
- **Vibration** 80 Hz to 2K Hz, 20G, 3axes

- **Shock** 0.5ms, 1,500G, 3 axes
- **Altitude** 70,000 feet
- **Power consumption**
- **Power requirement** +3.3V ± 10%
- **Reading mode** 400 mA (Max.)
- **Writing mode** 400 mA (Max.)
- **Idle (Standby) mode** 1000 uA (Max.)
- **Reliability**
- **Wear-leveling** Static and Dynamic wear-leveling algorithms
- **MTBF** > 3,000,000 hours
- **Erase counts** Up to 60,000 times
- **ECC** BCH ECC
- **Physical specification**
- **Weight (Max.)** 0.3g
- **Dimension (WxLxH)** 11.0 x 15.0 x 1.0 (mm)
- **Warranty**
- **SLC IND. grade** 5 years or within 60,000 erasing counts

Part Number List

Capacity	-40°C~+85°C
1GB	WPMSD001G-PFITI
2GB	WPMSD002G-PFITI
4GB	WPMSD004G-PFITI

Part Number Decoder



Example



X1 Grade

W : Industrial grade operating temp. -40°C~+85°C

X2 The material of casing

P : Plastic casing

X3 X4 X5 Product category

MSD : Micro SD memory card

X6 X7 X8 X9 Capacity

- 001G : 1GB
- 002G : 2GB
- 004G : 4GB

X11 Controller

P : PHANES Series

X12 Controller version

A, B, C, D.....

X13 Controller grade

I : Industrial grade

X14 Flash IC brand

T : Toshiba SLC-NAND flash IC

X15 Flash IC grade

I : Industrial grade

X17 X18 X19 X20 Reserved for specific requirements