# LE Series

# microSDHC Memory Card, Consumer Plus MLC Model

## ■ Product Outline

LE series are microSDHC memory cards adopting built-in consumer type MLC NAND flash memory. They are formatted complying with SD card specification.

■ **Product Specification** (specifications and appearances may be changed without notice.)

|                                      |                                       | 4GB                                   | 8GB                                   | 16GB                                | 32GB                                  |
|--------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|
| Appearance                           |                                       | Panasonic Micro 10 4GB Made in Taiwan | Panasonic  Micro  BGB  Made in Taiwan | Panasonic Micro 16GB Made in Taiwan | Panasonic Micro D 32GB Made in Taiwan |
| Part Number                          |                                       | RP-SMLE04DA1                          | RP-SMLE08DA1                          | RP-SMLE16DA1                        | RP-SMLE32DA1                          |
| Capacity                             | Available user data area capacity *1) | 3,971,973,120 byte                    | 7,960,756,224 byte                    | 16,001,236,992 byte                 | 32,073,809,920 byte                   |
| Compliant<br>Specification           | SD Physical<br>Specification          | Ver. 3.01                             |                                       |                                     |                                       |
|                                      | SD speed class                        | CLASS(0)                              |                                       |                                     |                                       |
|                                      | UHS speed grade                       |                                       |                                       |                                     |                                       |
|                                      | Speed mode                            | Default Speed mode, High Speed mode,  |                                       |                                     |                                       |
| Backside<br>mark                     | Control Code                          |                                       |                                       |                                     |                                       |
| Read/Write<br>Performance<br>(up to) | Read                                  | 22MB/s<br>(High Speed)                | 22MB/s<br>(High Speed)                | $22 \mathrm{MB/s}$ (High Speed)     | 22MB/s<br>(High Speed)                |
|                                      | Write                                 | $12 \mathrm{MB/s}$ (High Speed)       | 12MB/s<br>(High Speed)                | $12 \mathrm{MB/s}$ (High Speed)     | 12MB/s<br>(High Speed)                |
| Absolute<br>Maximum<br>Ratings       | Supply Voltage                        | Min: -0.3 V; Max: +4.6 V              |                                       |                                     |                                       |
|                                      | Input Voltage                         | Min: -0.3 V; Max: VDD +0.3 V          |                                       |                                     |                                       |
|                                      | Output Voltage                        | Min: -0.3 V; Max: VDD +0.3 V          |                                       |                                     |                                       |
|                                      | Output Current                        | Min:-24 mA; Max:+24 mA                |                                       |                                     |                                       |
| Environmental<br>Specification       | Operating Temperature                 | -25 degree C to +85 degree C          |                                       |                                     |                                       |
|                                      | Storage Temperature                   | -40 degree C to +85 degree C          |                                       |                                     |                                       |
|                                      | Humidity                              | 5 % RH to 95 % RH                     |                                       |                                     |                                       |
|                                      | Vibration                             | 15 Gp-p                               |                                       |                                     |                                       |
|                                      | Shock                                 | 1,000 G                               |                                       |                                     |                                       |
|                                      | Mating Cycles                         | 10,000 cycles                         |                                       |                                     |                                       |

<sup>\*1)</sup> Free user area capacity after formatted.

Absolute Maximum Ratings are the values of limitation, which do not damage the card. So those values do not define the operational range.

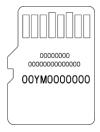
Products comply with EU RoHS directives.

Panasonic RP-SMLExxDA1

## ■Marking Specification (example; 4GB)



"4GB" Card Capacity
"MADE IN TAIWAN" Country of origin



"00YM000000" Serial Number
Y Last digit of Manufacture year
M Manufacture month
(January->A, February->B, )
"000000000", Internal control code
"000000000000" Internal control code

## ■ System Reliability

- a. Error detect and corrective function
- b. Static wear leveling
- c. Bad block management

### ■ Notice and Caution

If you think about the usage for which special quality or reliability of the products is needed and failure or malfunction of the products may directly threaten life or injury for the special usage (aeronautic or cosmic usage, military usage, combustion machine, life support applications or safety applications), please counsel with our contacts in advance.

Write frequency and storage temperature will affect data retention time. Please make a backup for important data.

### **■** Warranty

If the product cannot be used because of failure which is determined as defect in design or in production of the product, it is replaced by same product or equivalent one within 12 months from the delivery date of product.