# 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 Specification	SD Physical Specification	Ver. 3.01			
	SD speed class	CLASS(0)			
	UHS speed grade				
	Speed mode	Default Speed mode, High Speed mode,			
Backside mark	Control Code				
Read/Write Performance (up to)	Read	22MB/s (High Speed)	22MB/s (High Speed)	$22 \mathrm{MB/s}$ (High Speed)	22MB/s (High Speed)
	Write	$12 \mathrm{MB/s}$ (High Speed)	12MB/s (High Speed)	$12 \mathrm{MB/s}$ (High Speed)	12MB/s (High Speed)
Absolute Maximum 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 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.

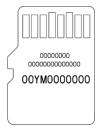
Products comply with EU RoHS directives.

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.