### Panasonic INDUSTRY





## CV8581 CV8713

# Molded underfill (MUF) semiconductor encapsulation molding compounds

MUF technology is a process that can fill the narrow gap under the flip-chip without voids and overmold the die in onestep. Panasonic Industry proprietary high filler loading and resin design technologies are the features of this material.

#### **Process comparison**

Fix die Protect bump Curing UF Encapsulation Process flow Feature Conventional Heating Liquid underfill Overmolding 0.000000Flip chip Fewer restrictions `Package substrate 0 0 0 0 0 0 0MUF **Entire molding** Low cost Saving time Without underfill and curing process 00000

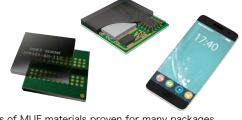
### Excellent fillability for narrow gap and narrow pitch



#### \* Depends on package structure (Die size, gap size, bump pitch, etc.)

### Application

- Flip-chip package - FC-CSP
- FC-CSF
- FC-SiP module Other



With restrictions\*

We have various options of MUF materials proven for many packages. Please contact us.

#### General properties

Item	Unit	<b>LEXCM</b> CE			
		CV8581MUW	CV8713UB	CV8714AHSL	X8770UY
Tg (TMA)	°C	170	145	153	150
CTE 1	/°C	20	9	12	9
CTE 2	ppm/°C	64	38	47	40
Flexural modulus (25°C)	GPa	16	24	23	26
Filler size (Max)	μm	20	20	10	20
Mold shrinkage	%	0.32	0.20	0.21	0.20

Please see our website for Notes before you use.

Panasonic Industry CV8581

The above data are typical values and not guaranteed values.