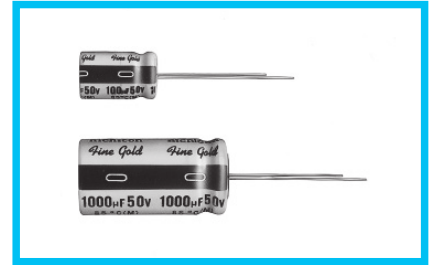


# UFG

High Grade Standard Type, For Audio Equipment



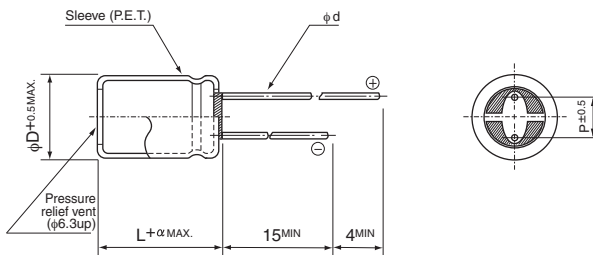
- "Fine Gold" MUSE acoustic series suited for high grade audio equipment, using state of the art etching techniques.
- Rich sound in the bass register and clearer high end, most suited for AV equipment like DVD.
- Compliant to the RoHS directive (2011/65/EU).



## Specifications

Item	Performance Characteristics																															
Category Temperature Range	-40 to +85°C																															
Rated Voltage Range	6.3 to 100V																															
Rated Capacitance Range	0.1 to 10000µF																															
Capacitance Tolerance	±20% at 120Hz, 20°C																															
Leakage Current	After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.01CV or 3 (µA) , whichever is greater.																															
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C																															
	<table border="1"> <tr> <td>Rated voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>80</td> <td>100</td> </tr> <tr> <td>tan δ (MAX.)</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.09</td> <td>0.09</td> <td>0.08</td> </tr> </table> <p>For capacitance of more than 1000µF add 0.02 for every increase of 1000µF.</p>	Rated voltage (V)	6.3	10	16	25	35	50	63	80	100	tan δ (MAX.)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.09	0.08											
Rated voltage (V)	6.3	10	16	25	35	50	63	80	100																							
tan δ (MAX.)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.09	0.08																							
Stability at Low Temperature	Measurement frequency : 120Hz																															
	<table border="1"> <tr> <td colspan="2">Rated voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>80</td> <td>100</td> </tr> <tr> <td rowspan="2">Impedance ratio ZT / Z20 (MAX.)</td> <td>Z-25°C / Z+20°C</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z-40°C / Z+20°C</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> </table>	Rated voltage (V)		6.3	10	16	25	35	50	63	80	100	Impedance ratio ZT / Z20 (MAX.)	Z-25°C / Z+20°C	4	3	2	2	2	2	2	2	2	Z-40°C / Z+20°C	8	6	4	4	3	3	3	3
Rated voltage (V)		6.3	10	16	25	35	50	63	80	100																						
Impedance ratio ZT / Z20 (MAX.)	Z-25°C / Z+20°C	4	3	2	2	2	2	2	2	2																						
	Z-40°C / Z+20°C	8	6	4	4	3	3	3	3	3																						
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 1000 hours at 85°C.																															
	<table border="1"> <tr> <td>Capacitance change</td> <td>Within ±20% of the initial measurement for units of not more than 16V or φ6.3 Within ±15% of the initial measurement for units of not less than 25V or above φ6.3</td> </tr> <tr> <td>tan δ</td> <td>150% or less than the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>Less than or equal to the initial specified value</td> </tr> </table>	Capacitance change	Within ±20% of the initial measurement for units of not more than 16V or φ6.3 Within ±15% of the initial measurement for units of not less than 25V or above φ6.3	tan δ	150% or less than the initial specified value	Leakage current	Less than or equal to the initial specified value																									
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tan δ	150% or less than the initial specified value																															
Leakage current	Less than or equal to the initial specified value																															
Shelf Life	After storing the capacitors under no load at 85°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.																															
Marking	Printed with black color letter on gold sleeve.																															

## Radial Lead Type



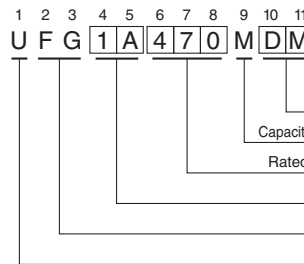
(mm)

φD	5	6.3	8	10	12.5	16	18
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
φd	0.6	0.6	0.6	0.6	0.8	0.8	0.8

α	(L < 20)	1.5
	(L ≥ 20)	2.0

• Please refer to page 20 about the end seal configuration.

## Type numbering system (Example : 10V 47µF)



Configuration

φD	Code
5	DM
6.3	EM
8 - 10	PM
12.5 to 18	HM

Please refer to page 20, 21, 22 about the formed or taped product spec.  
Please refer to page 4 for the minimum order quantity.

● Dimension table in next page.

## UFG

### ■ Dimensions

Cap.(μF)	Code	V		6.3		10		16		25		35		50	
		Code		0J		1A		1C		1E		1V		1H	
0.1	0R1													5 × 11	1.1
0.22	R22													5 × 11	2.4
0.33	R33													5 × 11	3.6
0.47	R47													5 × 11	5.0
1	010													5 × 11	9.0
2.2	2R2													5 × 11	18
3.3	3R3													5 × 11	22
4.7	4R7													5 × 11	27
10	100													5 × 11	39
22	220														
33	330							5 × 11	57	6.3 × 11	70	6.3 × 11	75	8 × 11.5	93
47	470					5 × 11	60	6.3 × 11	74	6.3 × 11	85	8 × 11.5	101	8 × 11.5	111
100	101					6.3 × 11	99	8 × 11.5	128	8 × 11.5	140	10 × 12.5	176	10 × 16	215
220	221					8 × 11.5	170	10 × 12.5	226	10 × 16	260	10 × 20	320	12.5 × 20	390
330	331					10 × 12.5	247	10 × 16	309	10 × 20	351	12.5 × 20	446	12.5 × 20	488
470	471	10 × 12.5	270	10 × 16	330	10 × 20	406	12.5 × 20	476	12.5 × 25	590	16 × 25	650		
1000	102	10 × 20	485	12.5 × 20	601	12.5 × 25	723	16 × 25	854	16 × 25	1060	16 × 31.5	1143		
2200	222	12.5 × 25	867	16 × 25	1047	16 × 25	1290	16 × 35.5	1570	18 × 35.5	1840				
3300	332	16 × 25	1135	16 × 31.5	1520	16 × 35.5	1720	18 × 40	1794						
4700	472	16 × 31.5	1431	16 × 35.5	1840	18 × 35.5	2140								
6800	682	18 × 35.5	1810	18 × 40	2049										
10000	103	18 × 40	2100												

Cap.(μF)	Code	V		63		80		100	
		Code		1J		1K		2A	
0.1	0R1							5 × 11	2.3
0.22	R22							5 × 11	5.5
0.33	R33							5 × 11	8.0
0.47	R47							5 × 11	10
1	010							5 × 11	15
2.2	2R2							5 × 11	22
3.3	3R3							5 × 11	27
4.7	4R7							5 × 11	36
10	100	6.3 × 11	50	6.3 × 11	55	8 × 11.5	65		
22	220	8 × 11.5	85	8 × 11.5	100	10 × 12.5	110		
33	330	8 × 11.5	105	10 × 12.5	130	10 × 16	150		
47	470	10 × 12.5	140	10 × 16	170	10 × 20	190		
100	101	10 × 20	255	12.5 × 20	270	12.5 × 20	300		
220	221	12.5 × 20	420	12.5 × 25	490	16 × 25	549		
330	331	12.5 × 25	541	16 × 31.5	650	16 × 31.5	734		
470	471	16 × 25	840	16 × 35.5	920	18 × 35.5	980		
1000	102	18 × 35.5	1400					Case size φD × L (mm)	Rated ripple

Rated ripple current (mArms) at 85°C 120Hz

### ● Frequency coefficient of rated ripple current

Cap.(μF)	Frequency	50Hz	120Hz	300Hz	1kHz	10kHz or more
0.1 to 47		0.75	1.00	1.35	1.57	2.00
100 to 470		0.80	1.00	1.23	1.34	1.50
1000 to 10000		0.85	1.00	1.10	1.13	1.15