

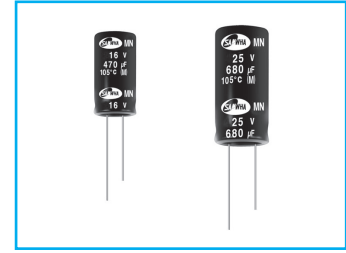
# MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

**MN** High Ripple Current,  
Ultra Low Impedance Series

**IZI** Low Impedance **S** Solvent Proof

- High ripple current compared with MZ series
- Enabled high ripple current by a reduction of impedance at high frequency range
- High reliability withstanding 5000 hours load life at 105°C (3000 hours for smaller case sizes as specified below)
- Complied to the RoHS directive

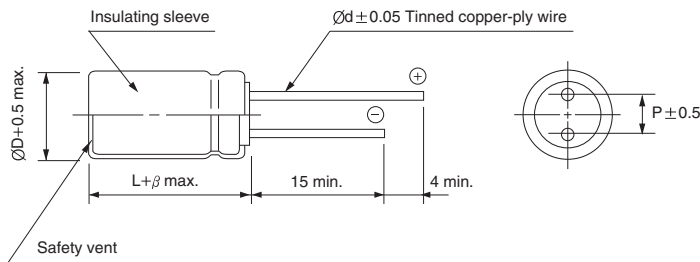
**MZ** → **MN**  
High Ripple



Item	Characteristics													
Operating temperature range	-40 ~ +105°C													
Leakage current max.	I = 0.01CV or 3μA whichever is greater (after 2 minutes) I = 0.03CV or 4μA whichever is greater (after 1 minute)													
Capacitance tolerance	±20% at 120Hz, 20°C													
Dissipation factor max. (at 120Hz, 20°C)	Capacitance > 1000μF : tanδ increases by 0.02 for each 1000μF from below value.													
	<table border="1"> <thead> <tr> <th>WV</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> </tr> </thead> <tbody> <tr> <td>tanδ</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> </tr> </tbody> </table>	WV	6.3	10	16	25	35	50	tanδ	0.22	0.19	0.16	0.14	0.12
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tanδ	0.22	0.19	0.16	0.14	0.12	0.10								
Low temperature characteristics (Impedance ratio at 120Hz)	Z-40°C / Z+20°C													
	3													
Load life (after application of the rated voltage for 5000 hours at 105°C)	Leakage current	Less than specified value												
	Capacitance change	Within ±25% of initial value												
	tanδ	Less than 200% of specified value												
	<table border="1"> <thead> <tr> <th>∅D</th> <th>∅D = 8</th> <th>∅D = 10</th> </tr> </thead> <tbody> <tr> <td>Life time</td> <td>3000 hours</td> <td>5000 hours</td> </tr> </tbody> </table>	∅D	∅D = 8	∅D = 10	Life time	3000 hours	5000 hours							
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Life time	3000 hours	5000 hours												
Shelf life (at 105°C)	After 1000 hours no load test, leakage current, capacitance and tanδ are same as load life value. The measurement shall be performed at 20°C by the KS C IEC 60384 - 4													

## ● DRAWING

Unit : mm



∅D	8	10
P	3.5	5.0
∅d	0.6	0.6
β	1.5	2.0

## ● FREQUENCY COEFFICIENT OF PERMISSIBLE RIPPLE CURRENT

μF \ Frequency	120Hz	1kHz	10kHz	50kHz	100kHz ≤
~ 270	0.50	0.73	0.92	0.96	1.00
330 ~ 680	0.55	0.77	0.94	0.97	1.00
820 ~ 1800	0.60	0.80	0.96	0.98	1.00
2200 ~	0.70	0.85	0.98	0.99	1.00

