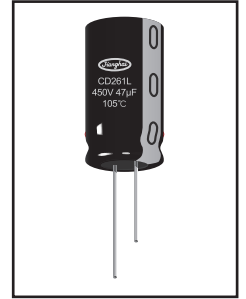
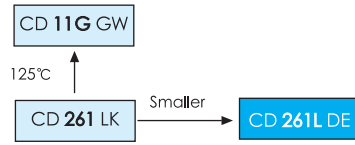


10000-12000h at 105°C

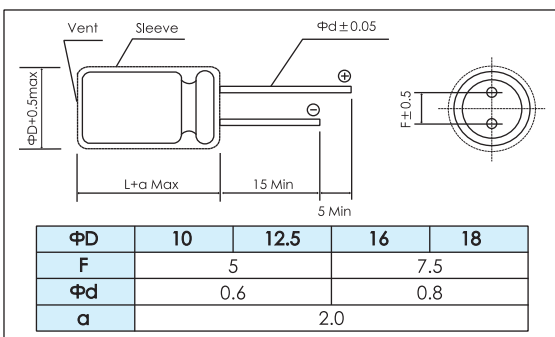
- Rated voltage Range: 160V~450V; High Reliability
- Downsized and larger capacitance from current CD261 series
- For Electronic Lighting Ballast, LED Lighting applications



Items	Characteristics																								
Operating Temperature Range (°C)	-40 ~ +105																								
Voltage Range (V)	160 ~ 450																								
Capacitance Range (µF)	10 ~ 820																								
Capacitance Tolerance (20°C, 120Hz)	± 20%																								
Leakage Current (µA)	After 1 minute at 20°C application of rated voltage, leakage current is not more than 0.04CV+100. C: Nominal Capacitance (µF) V: Rated Voltage (V)																								
Dissipation Factor (20°C, 120Hz)	<table border="1"> <thead> <tr> <th>Rated Voltage (V)</th> <th>160</th> <th>200</th> <th>250</th> <th>350</th> <th>400</th> <th>420</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>Tan δ (max)</td> <td colspan="3">0.15</td> <td colspan="4">0.20</td> </tr> </tbody> </table>	Rated Voltage (V)	160	200	250	350	400	420	450	Tan δ (max)	0.15			0.20											
	Rated Voltage (V)	160	200	250	350	400	420	450																	
Tan δ (max)	0.15			0.20																					
Stability at Low Temperature (Impedance Ratio at 120Hz)	<table border="1"> <thead> <tr> <th>Rated Voltage (V)</th> <th>160</th> <th>200</th> <th>250</th> <th>350</th> <th>400</th> <th>420</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>Z<sub>-25°C</sub> / Z<sub>+20°C</sub></td> <td colspan="2">3</td> <td>4</td> <td colspan="3">6</td> <td></td> </tr> <tr> <td>Z<sub>-40°C</sub> / Z<sub>+20°C</sub></td> <td colspan="3">6</td> <td colspan="4">8</td> </tr> </tbody> </table>	Rated Voltage (V)	160	200	250	350	400	420	450	Z <sub>-25°C</sub> / Z <sub>+20°C</sub>	3		4	6				Z <sub>-40°C</sub> / Z <sub>+20°C</sub>	6			8			
Rated Voltage (V)	160	200	250	350	400	420	450																		
Z <sub>-25°C</sub> / Z <sub>+20°C</sub>	3		4	6																					
Z <sub>-40°C</sub> / Z <sub>+20°C</sub>	6			8																					

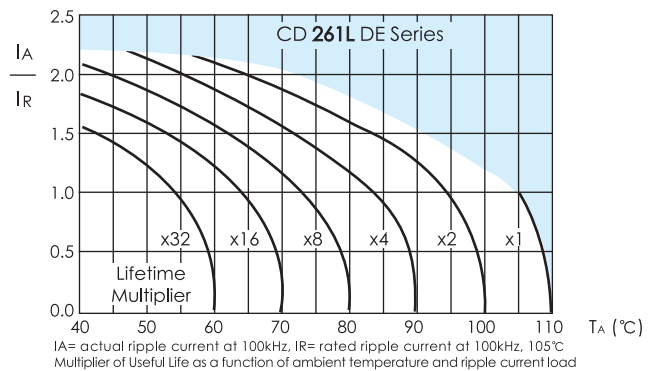
	Useful Life		Load Life	Endurance Test	Shelf Life
Lifetime	L ≤ 20.5 : 12000h L ≥ 25 : 14000h	≥ 100000h	L ≤ 20.5 : 10000h L ≥ 25 : 12000h	L ≤ 20.5 : 10000h L ≥ 25 : 12000h	1000h
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value
Capacitance Change	Within ± 50% of initial value		Within ± 30% of initial value	Within ± 20% of initial value	Within ± 20% of initial value
Dissipation Factor	Not more than 500% of specified value		Not more than 300% of specified value	Not more than 200% of specified value	Not more than 200% of specified value
Condition: Applied Voltage Applied Current Applied Temperature	U <sub>R</sub> I <sub>R</sub> 105°C	U <sub>R</sub> 1.4 × I <sub>R</sub> 60°C	U <sub>R</sub> I <sub>R</sub> 105°C	U <sub>R</sub> I <sub>R</sub> = 0 105°C	U <sub>R</sub> = 0 I <sub>R</sub> = 0 105°C After test: U <sub>R</sub> to be applied for 30min >24h before measurement

## Dimensions



mm

## Lifetime Diagram



## Frequency Coefficient

Frequency Cap (µF)	50/60Hz	120Hz	500Hz	1kHz	10kHz	100kHz
10~82	0.32	0.40	0.52	0.60	0.84	1.00
100~220	0.36	0.44	0.58	0.67	0.93	1.00
270~820	0.40	0.50	0.65	0.75	0.95	1.00

## Temperature Coefficient

Temperature(°C)	+65	+85	+105
Coefficient	2.1	1.7	1.0

# CD 261L DE SERIES



## Ratings for CD 261L DE Series

U <sub>r</sub> (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C, 120Hz	Typ ESR 20°C, 120Hz	Rated Ripple Current 105°C, 100kHz	Size ΦD x L	P/N
(V)	(μF)	(Ω)	(Ω)	(mArms)	(mm)	-
160 (200) 2C	47	4.23	1.69	650	10×16	ECR2CDE470M□□100016
	68	2.93	1.17	800	10×20	ECR2CDE680M□□100020
	82	2.43	0.97	1038	10×25	ECR2CDE820M□□100025
	100	1.99	0.80	1193	10×30	ECR2CDE101M□□100030
		1.99	0.80	1350	12.5×20	ECR2CDE101M□□125020
	120	1.66	0.66	1395	10×35	ECR2CDE121M□□100035
		1.33	0.53	1575	10×40	ECR2CDE151M□□100040
	150	1.33	0.53	1643	12.5×25	ECR2CDE151M□□125025
		1.11	0.44	1800	10×50	ECR2CDE181M□□100050
	180	1.11	0.44	1958	12.5×30	ECR2CDE181M□□125030
		1.11	0.44	1800	16×20	ECR2CDE181M□□160020
		0.90	0.36	2250	16×25.5	ECR2CDE221M□□160025
	220	0.90	0.36	2250	12.5×35	ECR2CDE221M□□125035
		0.90	0.36	2228	18×20.5	ECR2CDE221M□□180020
		0.74	0.29	2240	12.5×40	ECR2CDE271M□□125040
	270	0.74	0.29	2420	16×31.5	ECR2CDE271M□□160031
		0.60	0.24	2800	12.5×50	ECR2CDE331M□□125050
	330	0.60	0.24	2700	16×31.5	ECR2CDE331M□□160031
		0.60	0.24	2360	18×25.5	ECR2CDE331M□□180025
		0.51	0.20	2760	16×36	ECR2CDE391M□□160036
	470	0.42	0.17	3100	16×40	ECR2CDE471M□□160040
		0.42	0.17	3100	18×31.5	ECR2CDE471M□□180031
	560	0.36	0.14	3720	16×50	ECR2CDE561M□□160050
		0.36	0.14	3680	18×40	ECR2CDE561M□□180040
680	0.29	0.12	4260	18×45	ECR2CDE681M□□180045	
820	0.24	0.10	4460	18×50	ECR2CDE821M□□180050	
200 (250) 2D	33	6.03	2.41	650	10×16	ECR2DDE330M□□100016
	47	4.23	1.69	800	10×20	ECR2DDE470M□□100020
	56	3.55	1.42	1038	10×25	ECR2DDE560M□□100025
	68	2.93	1.17	1075	10×25	ECR2DDE680M□□100025
		2.93	1.17	1350	12.5×20	ECR2DDE680M□□125020
	82	2.43	0.97	1250	10×30	ECR2DDE820M□□100030
	100	1.99	0.80	1440	10×35	ECR2DDE101M□□100035
		1.66	0.66	1665	10×40	ECR2DDE121M□□100040
	120	1.66	0.66	1631	12.5×30	ECR2DDE121M□□125030
		1.66	0.66	1800	16×20	ECR2DDE121M□□160020
	150	1.33	0.53	1755	10×45	ECR2DDE151M□□100045
		1.33	0.53	1800	12.5×35	ECR2DDE151M□□125035
	180	1.11	0.44	2070	12.5×35	ECR2DDE181M□□125035
		1.11	0.44	2025	16×25.5	ECR2DDE181M□□160025
		1.11	0.44	2250	18×20.5	ECR2DDE181M□□180020
	220	0.90	0.36	2263	12.5×45	ECR2DDE221M□□125045
		0.90	0.36	2430	16×31.5	ECR2DDE221M□□160031
		0.74	0.29	2520	12.5×50	ECR2DDE271M□□125050
	270	0.74	0.29	2360	16×31.5	ECR2DDE271M□□160031
		0.74	0.29	2200	18×25.5	ECR2DDE271M□□180025
	330	0.60	0.24	2860	16×40	ECR2DDE331M□□160040
		0.60	0.24	2600	18×31.5	ECR2DDE331M□□180031
	390	0.51	0.20	3100	16×45	ECR2DDE391M□□160045
		0.51	0.20	2860	18×36	ECR2DDE391M□□180036
470	0.42	0.17	3360	16×50	ECR2DDE471M□□160050	
	0.42	0.17	3240	18×40	ECR2DDE471M□□180040	
560	0.36	0.14	3540	18×45	ECR2DDE561M□□180045	
22	9.04	3.62	650	10×16	ECR2EDE220M□□100016	
33	6.03	2.41	800	10×20	ECR2EDE330M□□100020	
47	4.23	1.69	975	10×25	ECR2EDE470M□□100025	
	4.23	1.69	1100	10×30	ECR2EDE470M□□100030	
56	3.55	1.42	1350	12.5×20	ECR2EDE560M□□125020	
68	2.93	1.17	1250	10×35	ECR2EDE680M□□100035	
82	2.43	0.97	1425	10×40	ECR2EDE820M□□100040	
	2.43	0.97	1425	12.5×25	ECR2EDE820M□□125025	
100	1.99	0.80	1620	10×45	ECR2EDE101M□□100045	
	1.99	0.80	1553	12.5×30	ECR2EDE101M□□125030	
	1.99	0.80	1800	16×20	ECR2EDE101M□□160020	
120	1.66	0.66	1755	10×50	ECR2EDE121M□□100050	
	1.66	0.66	1778	12.5×35	ECR2EDE121M□□125035	
	1.66	0.66	2250	18×20.5	ECR2EDE121M□□180020	
150	1.33	0.53	2070	12.5×40	ECR2EDE151M□□125040	
	1.33	0.53	1958	16×31.5	ECR2EDE151M□□160031	
180	1.11	0.44	2183	12.5×50	ECR2EDE181M□□125050	
	1.11	0.44	2138	16×31.5	ECR2EDE181M□□160031	
	1.11	0.44	2070	18×25.5	ECR2EDE181M□□180025	
220	0.90	0.36	2475	16×36	ECR2EDE221M□□160036	
	0.90	0.36	2475	18×31.5	ECR2EDE221M□□180031	
270	0.74	0.29	2540	16×40	ECR2EDE271M□□160040	
	0.74	0.29	2520	18×36	ECR2EDE271M□□180036	
330	0.60	0.24	2960	16×50	ECR2EDE331M□□160050	
	0.60	0.24	2900	18×40	ECR2EDE331M□□180040	
390	0.51	0.20	3180	18×45	ECR2EDE391M□□180045	
470	0.42	0.17	3660	18×50	ECR2EDE471M□□180050	

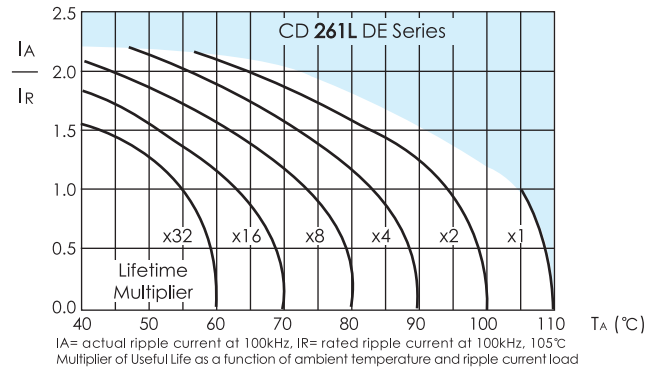
U <sub>r</sub> (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C, 120Hz	Typ ESR 20°C, 120Hz	Rated Ripple Current 105°C, 100kHz	Size ΦD x L	P/N
(V)	(μF)	(Ω)	(Ω)	(mArms)	(mm)	-
350 (400) 2V	12	22.10	6.63	338	10×16	ECR2VDE120M□□100016
	22	12.06	3.62	500	10×20	ECR2VDE220M□□100020
	27	9.82	2.95	775	10×25	ECR2VDE270M□□100025
	33	8.04	2.41	825	10×30	ECR2VDE330M□□100030
		8.04	2.41	850	12.5×20	ECR2VDE330M□□125020
	39	6.80	2.04	975	10×35	ECR2VDE390M□□100035
		5.64	1.69	1125	10×40	ECR2VDE470M□□100040
	47	5.64	1.69	1125	12.5×25	ECR2VDE470M□□125025
		4.74	1.42	1300	10×45	ECR2VDE560M□□100045
	56	4.74	1.42	1375	12.5×30	ECR2VDE560M□□125030
		4.74	1.42	1200	16×20	ECR2VDE560M□□160020
		3.90	1.17	1500	10×50	ECR2VDE680M□□100050
	68	3.90	1.17	1525	12.5×35	ECR2VDE680M□□125035
		3.23	0.97	1775	12.5×40	ECR2VDE820M□□125040
	82	3.23	0.97	1625	16×25.5	ECR2VDE820M□□160025
		2.65	0.80	1778	12.5×45	ECR2VDE101M□□125045
	100	2.65	0.80	1733	16×31.5	ECR2VDE101M□□160031
		2.65	0.80	1710	18×25.5	ECR2VDE101M□□180025
	120	2.21	0.66	1913	12.5×50	ECR2VDE121M□□125050
		2.21	0.66	2003	16×36	ECR2VDE121M□□160036
	150	1.77	0.53	2250	16×40	ECR2VDE151M□□160040
		1.77	0.53	2025	18×31.5	ECR2VDE151M□□180031
	180	1.47	0.44	2520	16×50	ECR2VDE181M□□160050
		1.47	0.44	2340	18×40	ECR2VDE181M□□180040
220	1.21	0.36	2700	18×45	ECR2VDE221M□□180045	
270	0.98	0.29	2800	18×50	ECR2VDE271M□□180050	
10	26.53	7.96	313	10×16	ECR2GDE100M□□100016	
18	14.74	4.42	550	10×20	ECR2GDE180M□□100020	
22	12.06	3.62	600	10×25	ECR2GDE220M□□100025	
27	9.82	2.95	725	10×30	ECR2GDE270M□□100030	
	9.82	2.95	850	12.5×20	ECR2GDE270M□□125020	
33	8.04	2.41	850	10×35	ECR2GDE330M□□100035	
39	6.80	2.04	975	10×40	ECR2GDE390M□□100040	
	6.80	2.04	975	12.5×25	ECR2GDE390M□□125025	
47	5.64	1.69	1100	10×45	ECR2GDE470M□□100045	
	5.64	1.69	1138	12.5×30	ECR2GDE470M□□125030	
56	5.64	1.69	1175	16×20	ECR2GDE470M□□160020	
	4.74	1.42	1250	10×50	ECR2GDE560M□□100050	
68	4.74	1.42	1313	12.5×35	ECR2GDE560M□□125035	
	4.74	1.42	1300	18×20.5	ECR2GDE560M□□180020	
82	3.90	1.17	1500	12.5×40	ECR2GDE680M□□125040	
	3.90	1.17	1425	16×25.5	ECR2GDE680M□□160025	
100	3.23	0.97	1700	12.5×45	ECR2GDE820M□□125045	
	3.23	0.97	1675	16×31.5	ECR2GDE820M□□160031	
120	3.23	0.97	1600	18×25.5	ECR2GDE820M□□180025	
	2.65	0.80	1710	12.5×50	ECR2GDE101M□□125050	
150	2.65	0.80	1710	16×36	ECR2GDE101M□□160036	
	2.65	0.80	1598	18×31.5	ECR2GDE101M□□180031	
180	2.21	0.66	1935	16×40	ECR2GDE121M□□160040	
	2.21	0.66	1890	18×31.5	ECR2GDE121M□□180031	
220	2.21	0.66	1958	18×36	ECR2GDE121M□□180036	
	1.77	0.53	2239	16×50	ECR2GDE151M□□160050	
270	1.77	0.53	2216	18×40	ECR2GDE151M□□180040	
15	17.68	5.31	475	10×20	ECR2xDE150M□□100020	
18	14.74	4.42	575	10×25	ECR2xDE180M□□100025	
22	12.06	3.62	625	10×25	ECR2xDE220M□□100025	
27	9.82	2.95	725	10×30	ECR2xDE270M□□100030	
	9.82	2.95	750	12.5×20	ECR2xDE270M□□125020	
33	8.04	2.41	850	10×35	ECR2xDE330M□□100035	
	8.04	2.41	875	12.5×25	ECR2xDE330M□□125025	
39	6.80	2.04	1000	12.5×30	ECR2xDE330M□□125030	
	6.80	2.04	975	10×40	ECR2xDE390M□□100040	
47	5.64	1.69	1100	10×45	ECR2xDE470M□□100045	
	5.64	1.69	1100	12.5×30	ECR2xDE470M□□125030	
56	5.64	1.69	1263	12.5×35	ECR2xDE470M□□125035	
	5.64	1.69	1100	16×25.5	ECR2xDE470M□□160025	
68	4.74	1.42	1275	12.5×35	ECR2xDE560M□□125035	
	4.74	1.42	1425	12.5×40	ECR2xDE560M□□125040	
82	4.74	1.42	1275	16×25.5	ECR2xDE560M□□160025	
	4.74	1.42	1200	18×20.5	ECR2xDE560M□□180020	
100	3.90	1.17	1500	12.5×45	ECR2xDE680M□□125045	
	3.90	1.17	1675	12.5×50	ECR2xDE680M□□125050	
120	3.90	1.17	1400	16×31.5	ECR2xDE680M□□160031	
	3.90	1.17	1538	18×25.5	ECR2xDE680M□□180025	

MINIATURE

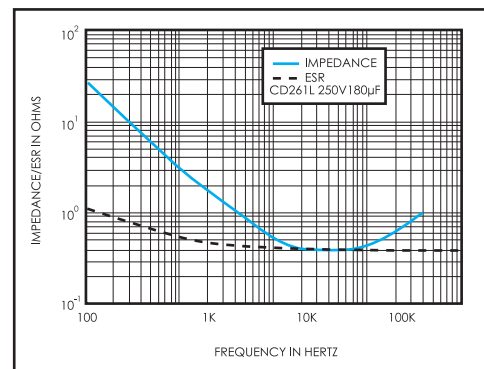
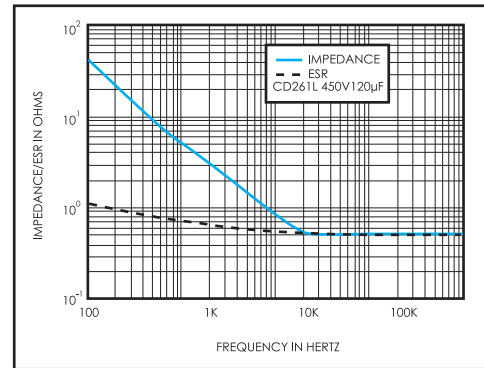
## Ratings for CD 261L DE Series

$U_r$ (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C, 120Hz	Typ ESR 20°C, 120Hz	Rated Ripple Current 105°C, 100kHz	Size $\Phi D \times L$	P/N	
(V)	( $\mu F$ )	( $\Omega$ )	( $\Omega$ )	(mA <sub>RMS</sub> )	(mm)	-	
420 (470) 2X	82	3.23	0.97	1725	12.5 × 50	ECR2 × DE820M □ □ 125050	
		3.23	0.97	1600	16 × 31.5	ECR2 × DE820M □ □ 160031	
		3.23	0.97	1725	16 × 36	ECR2 × DE820M □ □ 160036	
		3.23	0.97	1600	18 × 25.5	ECR2 × DE820M □ □ 180025	
		3.23	0.97	1825	18 × 31.5	ECR2 × DE820M □ □ 180031	
	100	2.65	0.80	1800	16 × 40	ECR2 × DE101M □ □ 160040	
		2.65	0.80	1755	18 × 31.5	ECR2 × DE101M □ □ 180031	
		2.65	0.80	1879	18 × 36	ECR2 × DE101M □ □ 180036	
		2.21	0.66	2070	16 × 45	ECR2 × DE121M □ □ 160045	
	120	2.21	0.66	1913	18 × 36	ECR2 × DE121M □ □ 180036	
		2.21	0.66	2093	18 × 40	ECR2 × DE121M □ □ 180040	
		1.77	0.53	2115	16 × 50	ECR2 × DE151M □ □ 160050	
	150	1.77	0.53	2385	18 × 45	ECR2 × DE151M □ □ 180045	
		1.47	0.44	2475	18 × 50	ECR2 × DE181M □ □ 180050	
	450 (500) 2W	10	26.53	7.96	325	10 × 16	ECR2WDE100M □ □ 100016
		15	17.68	5.31	475	10 × 20	ECR2WDE150M □ □ 100020
17.68			5.31	525	10 × 25	ECR2WDE150M □ □ 100025	
18		14.74	4.42	575	10 × 25	ECR2WDE180M □ □ 100025	
22		12.06	3.62	675	10 × 30	ECR2WDE220M □ □ 100030	
		12.06	3.62	700	12.5 × 20	ECR2WDE220M □ □ 125020	
27		9.82	2.95	800	10 × 35	ECR2WDE270M □ □ 100035	
		9.82	2.95	850	12.5 × 25	ECR2WDE270M □ □ 125025	
33		8.04	2.41	900	10 × 40	ECR2WDE330M □ □ 100040	
		8.04	2.41	900	16 × 20	ECR2WDE330M □ □ 160020	
		8.04	2.41	1000	12.5 × 30	ECR2WDE330M □ □ 125030	
39		6.80	2.04	1025	10 × 50	ECR2WDE390M □ □ 100050	
		6.80	2.04	1075	12.5 × 30	ECR2WDE390M □ □ 125030	
		6.80	2.04	1150	12.5 × 35	ECR2WDE390M □ □ 125035	
		6.80	2.04	1000	16 × 25.5	ECR2WDE390M □ □ 160025	
47		5.64	1.69	1200	12.5 × 35	ECR2WDE470M □ □ 125035	
		5.64	1.69	1313	12.5 × 40	ECR2WDE470M □ □ 125040	
		5.64	1.69	1250	16 × 25.5	ECR2WDE470M □ □ 160025	
		5.64	1.69	1150	18 × 20.5	ECR2WDE470M □ □ 180020	
56		4.74	1.42	1350	12.5 × 40	ECR2WDE560M □ □ 125040	
		4.74	1.42	1475	12.5 × 45	ECR2WDE560M □ □ 125045	
		4.74	1.42	1463	16 × 31.5	ECR2WDE560M □ □ 160031	
		4.74	1.42	1400	18 × 25.5	ECR2WDE560M □ □ 180025	
68		3.90	1.17	1675	12.5 × 50	ECR2WDE680M □ □ 125050	
		3.90	1.17	1525	16 × 31.5	ECR2WDE680M □ □ 160031	
		3.90	1.17	1650	16 × 36	ECR2WDE680M □ □ 160036	
		3.90	1.17	1525	18 × 25.5	ECR2WDE680M □ □ 180025	
82		3.23	0.97	1875	16 × 40	ECR2WDE820M □ □ 160040	
		3.23	0.97	1825	18 × 31.5	ECR2WDE820M □ □ 180031	
100		2.65	0.80	1890	16 × 45	ECR2WDE101M □ □ 160045	
		2.65	0.80	1879	18 × 36	ECR2WDE101M □ □ 180036	
120		2.21	0.66	2093	18 × 40	ECR2WDE121M □ □ 180040	
	2.21	0.66	2126	18 × 45	ECR2WDE121M □ □ 180045		
150	1.77	0.53	2385	18 × 50	ECR2WDE151M □ □ 180050		

## Lifetime Diagram



## Typical Curves



Customer products are available on request.