



# Photomos / **DUAL FORM A** Solid State Relays

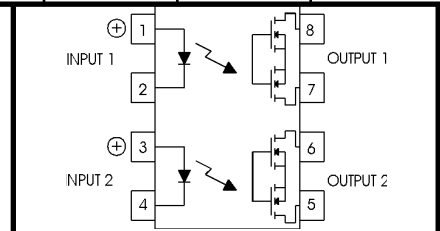
Model Number					PAA110L	LAA110L	PAA110	LAA120L
					Dual Form A	Dual Form A	Dual Form A	Dual Form A
Parameters	Sym.	Test Conditions	Units					
<b>Input Characteristics</b>								
LED Forward Current - Turn on	$I_{Fon}$	$I_L = 100mA, t = 10ms$	mADC	Max Typ	5.0 2.0	5.0 2.0	5.0 2.0	5.0 2.0
LED Forward Current - Turn off	$I_{Foff}$	$I_L = 0.2mA, V_L = (Note 1)$	mADC	Min Typ	0.1 1.8	0.1 1.8	0.1 1.8	0.1 1.8
Recommended Forward Current	$I_F$		mADC	Min Max	10 30	10 30	10 30	10 30
LED Forward Voltage	$V_F$	$I_F = 20mA$	VDC	Min Max	1.1 1.4	1.1 1.4	1.1 1.4	1.1 1.4
<b>Maximum Input Ratings</b>								
LED Forward Current	$I_F$		mADC	Max	50	50	50	50
LED Reverse Voltage Withstand	$V_R$	$I_R = 10mA$	VDC	Max	10	10	10	10
<b>Output Characteristics</b>								
Switching Voltage	$V_L$	$I_L = 50mA$	V PEAK	Max	400	400	400	250
Switching Current	$I_L$	Each Channel	mA	Max	150	120	180	180
		Both Ch's Simultaneously	mA	Max	110	70	125	125
Current Limit	$I_{Lmt}$	$I_F = 5mA, t = 5ms$	mA	Typ	380	380	n/a	380
On Resistance	$R_{on}$	$I_F = 5mA, I_L = 50mA$	$\Omega$	Max	24	35	18	18
Off State Resistance	$R_{off}$	$I_F = 0mA, V_L = 100V$	$G\Omega$	Min Typ	0.5 5000	0.5 5000	0.5 5000	0.5 5000
Off State Leakage	$I_{off}$	$I_F = 0mA, V_L = 100V$	nA	Max Typ	200 0.5	200 0.5	200 0.5	200 0.5
	$I_{off}$	$I_F = 0mA, V_L = Max$	mA	Max	1	1	1	1
Turn On Time	$T_{on}$	$I_F = 5mA, I_L = 50mA$	ms	Max	5.0	5.0	5.0	5.0
Turn Off Time	$T_{off}$	$I_F = 5mA, I_L = 50mA$	ms	Max	1.0	1.0	1.0	1.0
Capacitance - Across Output		$I_F = 0mA, V_L = 1V$	pF	Typ	95	60	95	110
		$I_F = 0mA, V_L = 50V$	pF	Typ	10	7	10	5
Thermal Offset Voltage		$I_F = 5mA$	mV	Typ	0.2	0.2	0.2	0.2
<b>General Characteristics</b>								
Dielectric Strength - Input to Output		$t = 60sec$	VRMS	Min	3750	3750	3750	3750
Capacitance - Input to Output			pF	Typ	1.2	1.2	1.2	1.2
Power Dissipation	$P_{Diss}$		mW	Max	600	600	600	600

**Notes:**

1:  $V_L$  for LED Forward Current - Turn Off is 50 Volts less than "Switching Voltage : Max".

2: Specifications subject to change without notice.

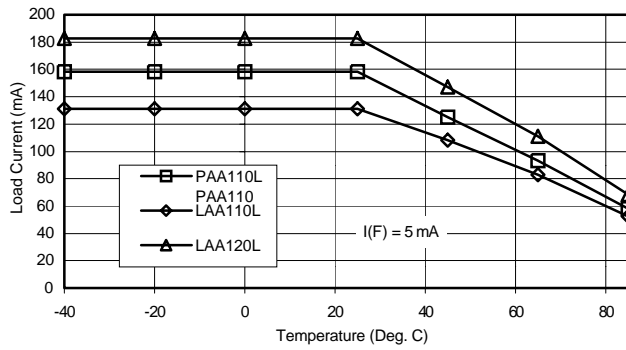
Schematic Top View:  
Mold mark on top of relay indicates Pin #1



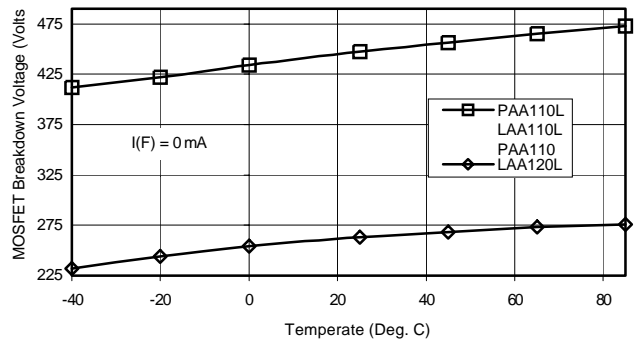
For recommended applications and more information contact:  
**USA: Sales Support (877) 502-5500 Tech Support (877) 702-7700 FAX (619) 710-8540**  
 Crydom Corp, 2320 Paseo de las Americas, Ste. 201, San Diego, CA 92154  
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**UK: +44 (0)1202 365070 • FAX +44 (0)1202 365090** Crydom International Ltd., 7 Cobham Road, Ferndown Industrial Estate, Ferndown, Dorset BH21 7PE, **Email: intsales@crydom.com.**  
**GERMANY: +49 (0)180 3000 506**

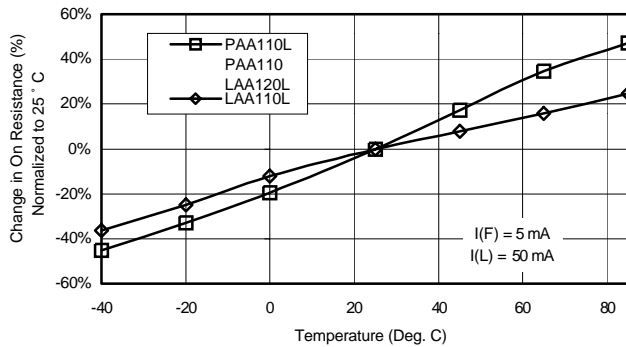
# Photomos / DUAL FORM A



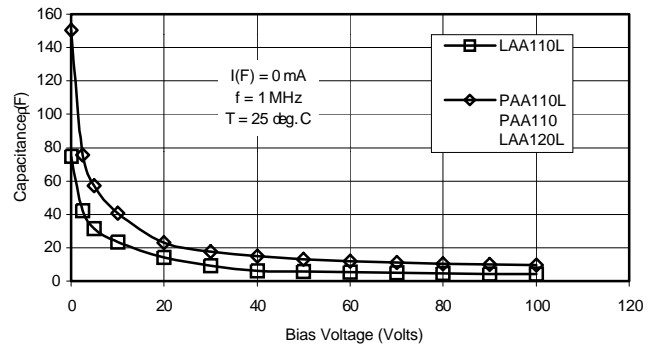
**A. Load Current vs. Ambient Temperature**



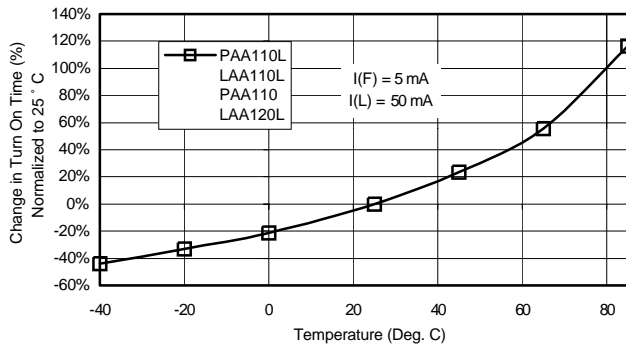
**B. Output MOSFET BV vs. Ambient Temperature**



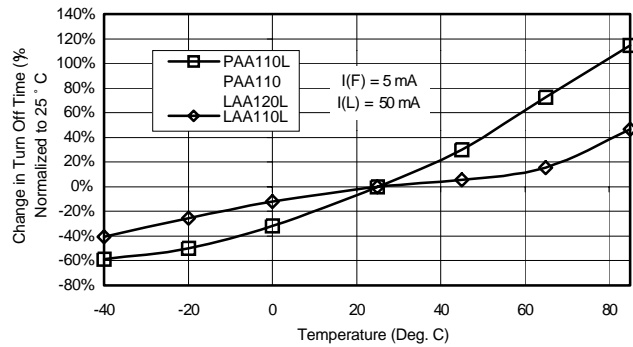
**C. On-Resistance vs. Ambient Temperature**



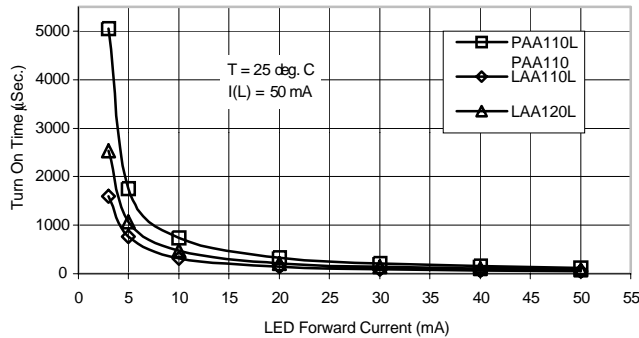
**D. Output Capacitance vs. Applied Voltage**



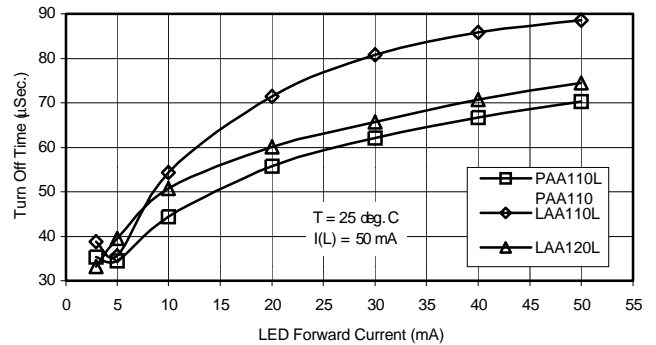
**E. On Time vs. Ambient Temperature**



**F. Turn Off Time vs. Ambient Temperature**



**G. Turn On Time vs. LED Forward Current**



**H. Turn Off Time vs. LED Forward Current**

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