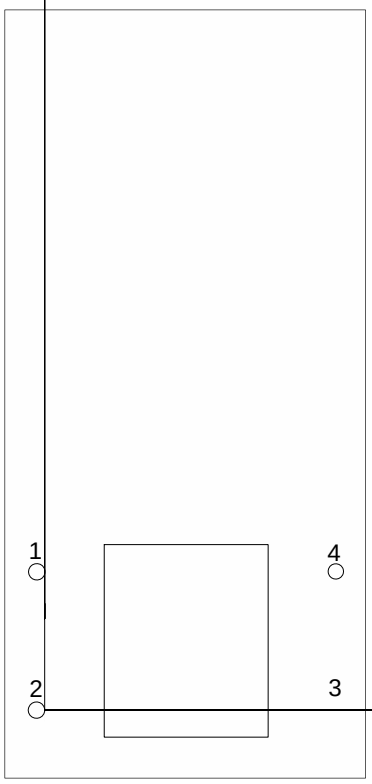
JOCMA74Ck-M4 Series

DESCRIPTION:

The products are 4-pin optical relays. The device consists of an AlGaAs infrared emitting diode input stage optically coupled to a high-voltage output detector circuit in a plastic SOP4 package. The detector consists of a high-speed photovoltaic diode array and driver circuitry. The products are widely used in measuring and testing equipment, security and disaster prevention market, industrial machinery and equipment.



MAIN FEATURES

High isolation 3750 Vrms
Operating temperature range -40°C to 110°C
REACH & RoHS compliance
HBM: H3A; MM: M4; CDM: C3
CQC approved
VDE approved
UL approved

ABSOLUTE MAXIMUM RATINGS (Temperature=25°C)

Parameter		Symbol	Value	Unit
Input	Forward Current	I_F	50	mA
	Peak Forward Current	I_{FP}	1	A
	Reverse Voltage	V_R	6	V
	Input Power Dissipation	P_D	75	mW
Output	Load Voltage	V_O	400	V
	Continuous load current	I_O	0.1	A
	Output Power Dissipation	P_O	300	mW
Total Power Dissipation		P_{tot}	375	mW
Isolation Voltage		V_{iso}	3750	Vrms
Operating Temperature		T_{opr}	-40~110	
Junction Temperature		T_j	125	
Storage Temperature		T_{stg}	-55~125	
Soldering Temperature		T_{sol}	260	

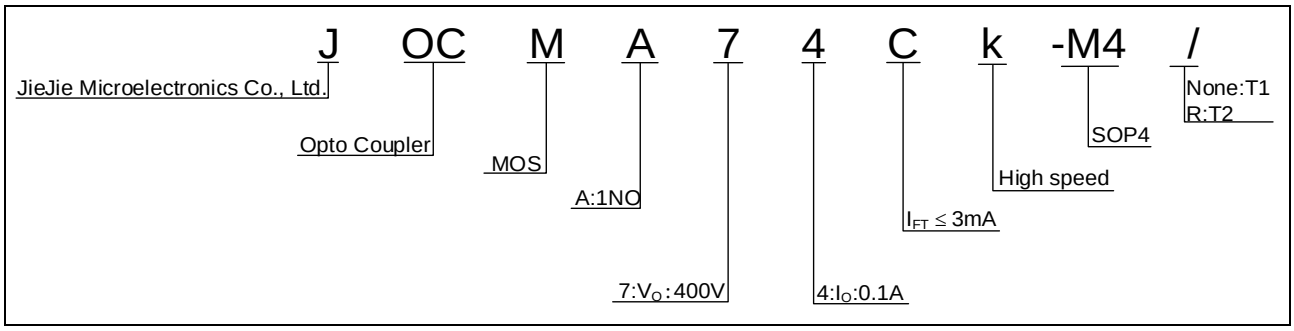
NOTE1:

NOTE2:

ELECTRICAL CHARACTERISTICS (Temperature=25°C)

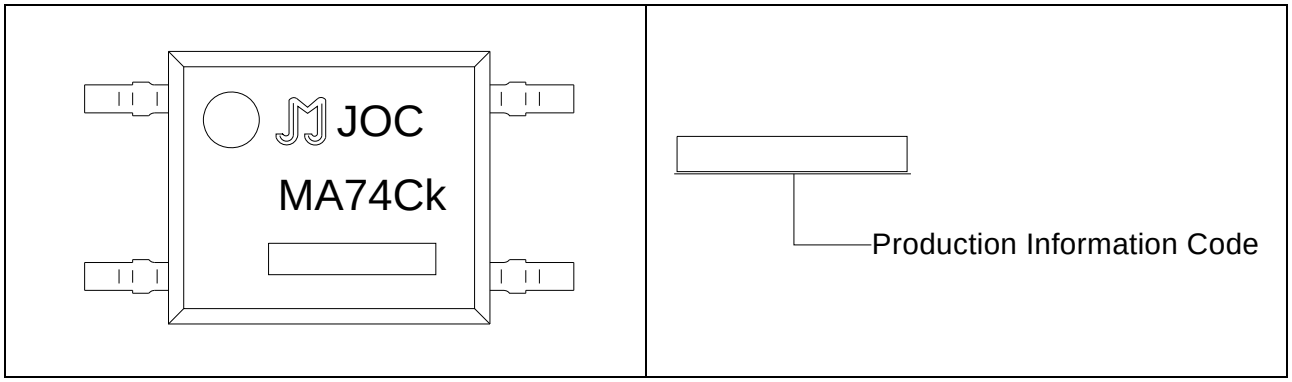
Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Input	Forward Voltage	V_F	I_F=10mA	-	1.35	1.5	V
	Reverse Current	I_R	V_R=6V	-	-	1	μA
	Action Current	$I_{F(ON)}$	I_O=$I_{O(MAX)}$	-	0.9	3	mA
	Reset Current	$I_{F(OFF)}$	I_O=$I_{O(MAX)}$	0.4	0.8	-	mA
Output	On Resistance	R_{on}	I_F=5mA I_O=Max. Within 1s on time	-	-	25	Ω
	Off State Leakage Current	I_{Leak}	I_F=0mA, V_O=Max.	-	-	1	μA
	Output Capacitance	C_{OFF}	V_{OFF}=0V, f_o=1MHz	-	40	-	pF
Switching Characteristics	Isolation Resistance	R_{ISO}	DC500V 40~60%R.H.	10^{12}	-	-	Ω
	Floating Capacitance	C_{IO}	V=0, f=1MHz	-	0.8	-	pF
	Turn On Time	t_{on}	I_F=10mA, I_O=Max.	-	0.1	0.2	ms
	Turn Off Time	t_{off}	I_F=10mA, I_O=Max.	-	0.05	0.1	ms

ORDERING INFORMATION



Packing Quantity			
Option	**Quantity**	**Quantity – Inner box**	**Quantity –Outer box**

MARKING



Characteristics Curves

FIG.1: LED Dropout Voltage vs. Ambient Temperature

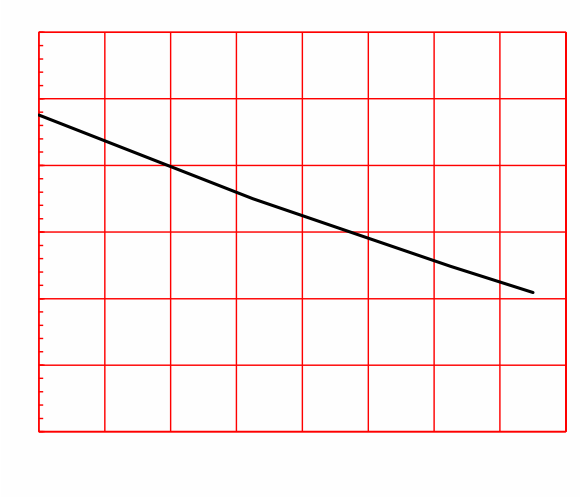


FIG.2: Output Current vs. Output Voltage

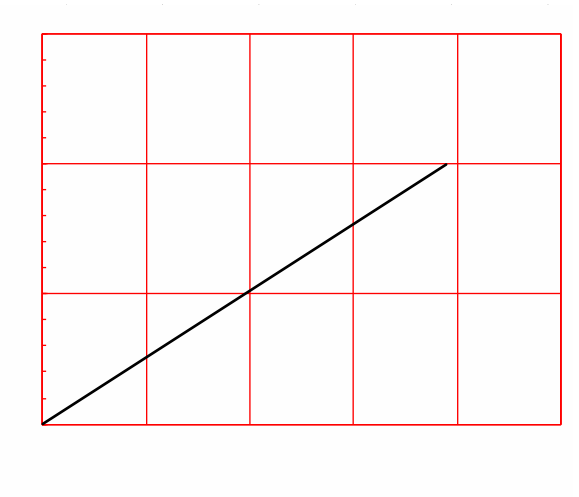


FIG.3: On Resistance vs. Ambient Temperature

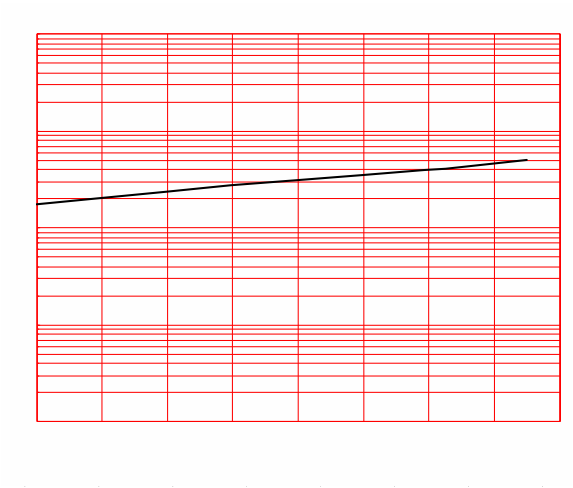


FIG.4: Load Current vs. Ambient Temperature

FIG.7: Turn On Time vs. Ambient Temperature

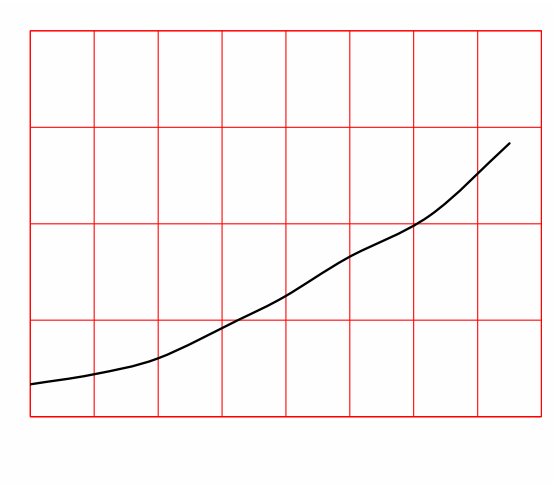


FIG.8: Turn Off Time vs. Ambient Temperature

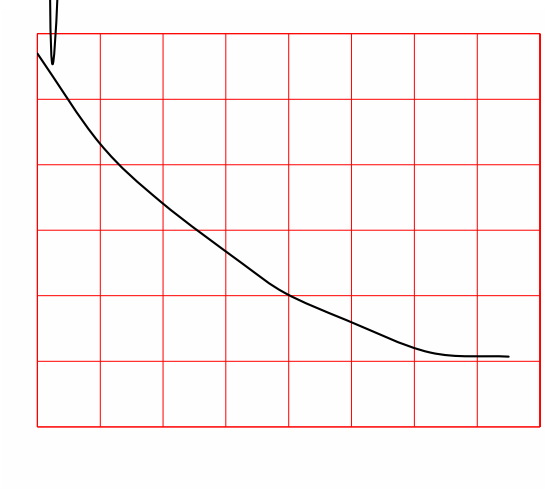


FIG.9: Turn On Time vs. LED Forward Current

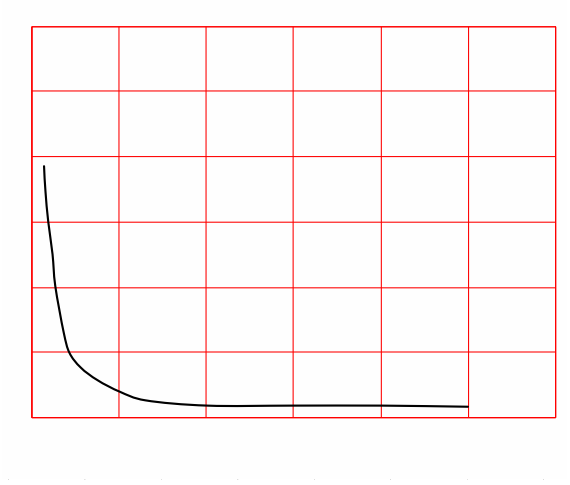
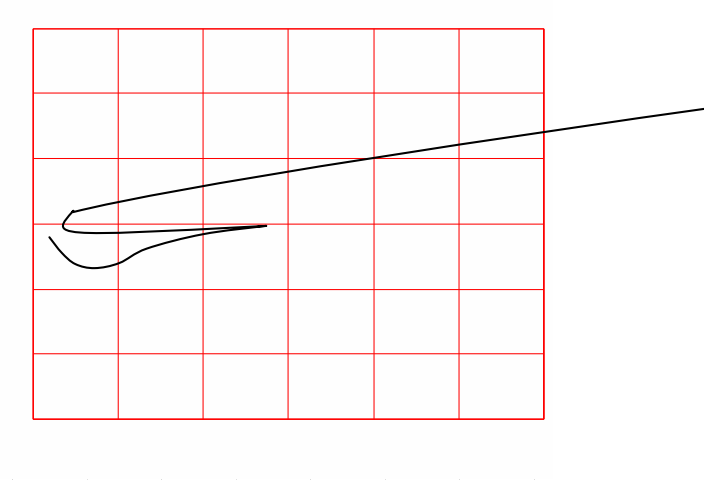
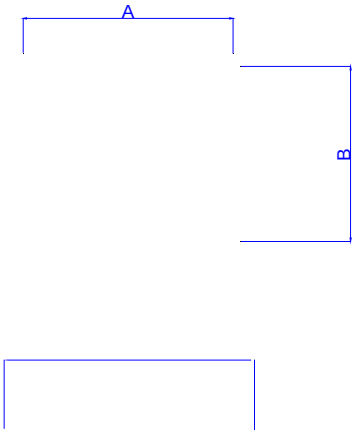


FIG.10: Turn Off Time vs. LED Forward Current

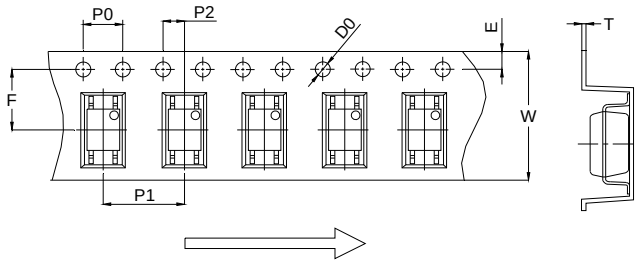


Package Dimension (Unit: mm)



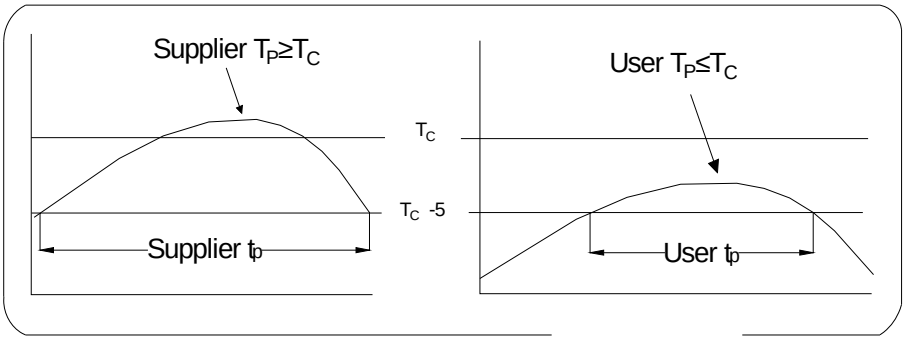
CARRIER TAPE SPECIFICATIONS (Dimensions in mm unless otherwise stated)

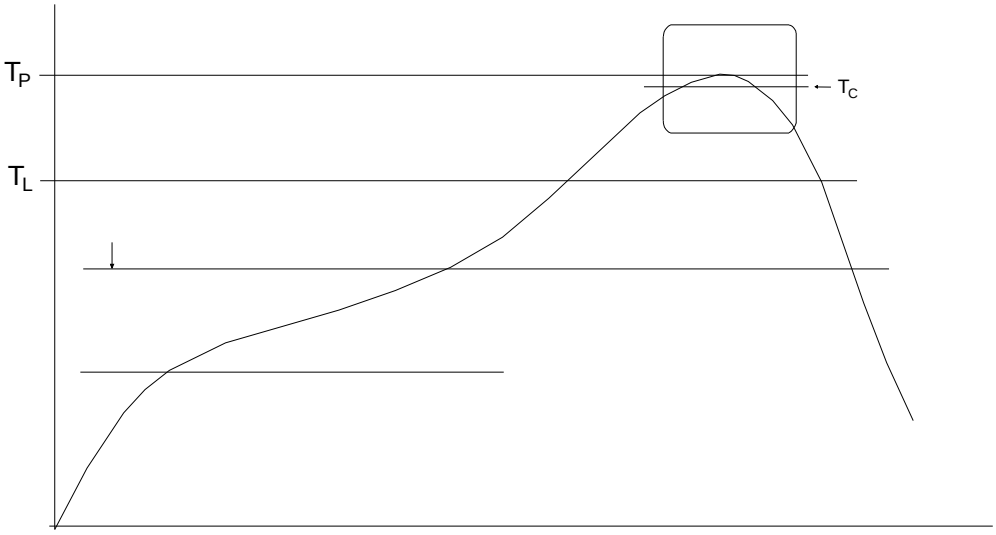
Option None



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
D0		1.50	1.60		0.059	0.063
P0	3.90	4.00	4.10	0.154	0.157	0.161
P1	7.90	8.00	8.10	0.311	0.315	0.319
P2	1.90	2.00	2.10	0.075	0.079	0.083
E	1.65	1.75	1.85	0.065	0.069	0.073
F	4.40	4.50	4.60	0.173	0.177	0.181
T	0.25	0.30	0.35	0.010	0.012	0.014
W	11.90	12.00	12.30	0.469	0.472	0.484

REFLOW INFORMATION





JOCMA74Ck