JOCMC35C-M4

Rev.A.1.0

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

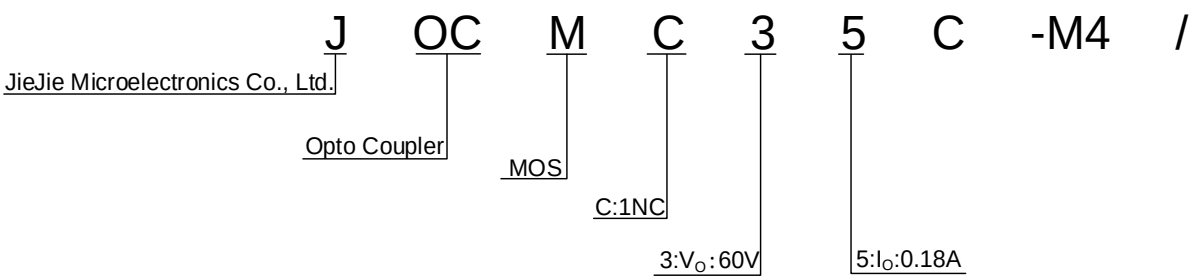
NOTE1:

NOTE2:

ELECTRICAL CHARACTERISTICS (Temperature=25°C)

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Input	Forward Voltage	V_F	I_F=10mA	-	1.2	1.5	V
	Reverse Current	I_R	V_R=6V	-	-	1	μA
	Action Current	$I_{F(OFF)}$	I_O=$I_{O(MAX)}$	-	1.5	3	mA
	Reset Current	$I_{F(ON)}$	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	-	10	15	Ω
	Off State Leakage Current	I_{Leak}	I_F=3mA, V_O=Max.	-	-	10	μA
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=5mA, I_O=Max.	-	0.2	1	ms
	Turn Off Time	t_{off}	I_F=5mA, I_O=Max.	-	0.2	1	ms

ORDERING INFORMATION



Characteristics Curves

FIG.1: LED Dropout Voltage vs. Ambient Temperature

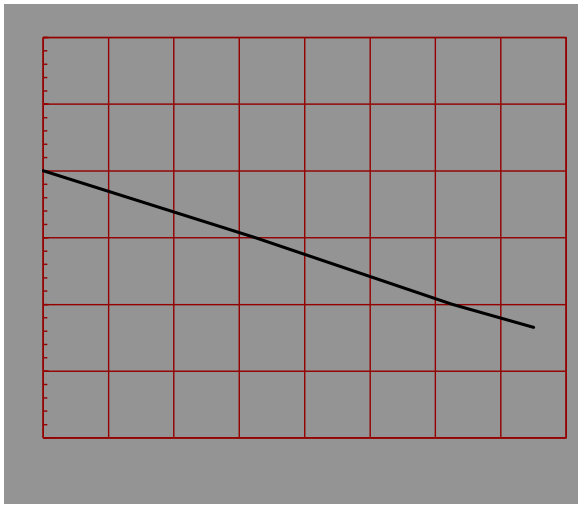


FIG.2: Output Current vs. Output Voltage

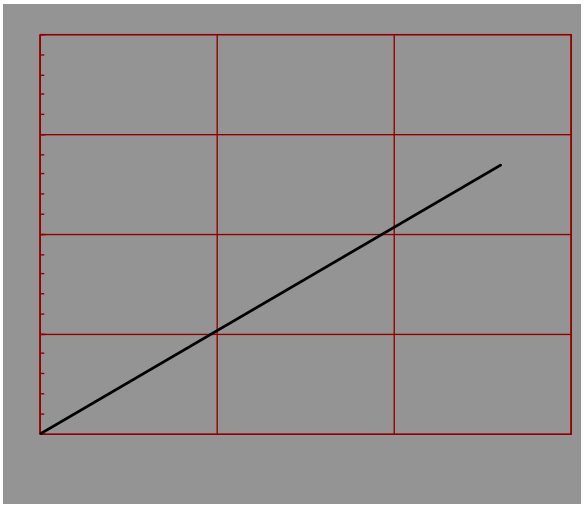


FIG.3: On Resistance vs. Ambient Temperature

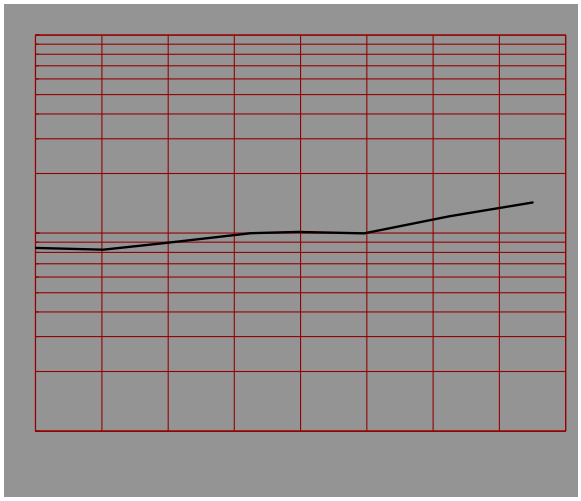


FIG.4: Load Current vs. Ambient Temperature

FIG.7: Turn On Time vs. Ambient Temperature

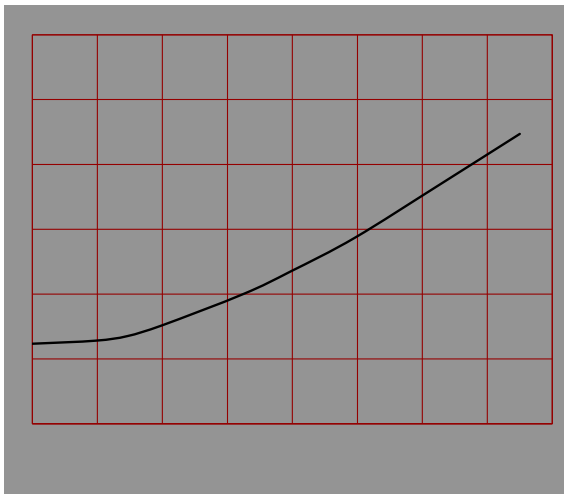


FIG.8: Turn Off Time vs. Ambient Temperature

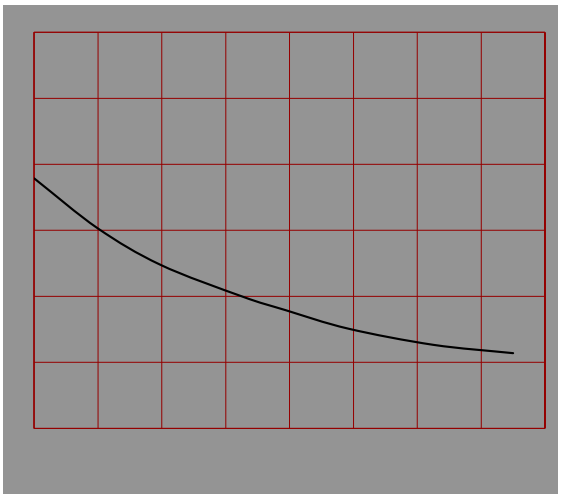


FIG.9: Turn On Time vs. LED Forward Current

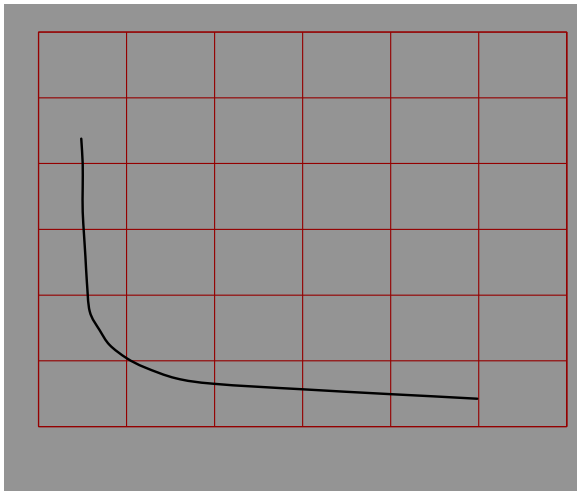


FIG.10: Turn Off Time vs. LED Forward Current

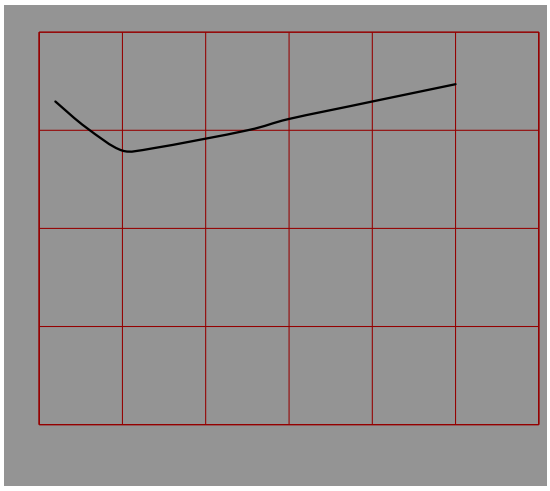


FIG.11: Off State Leakage Current vs. Load Voltage

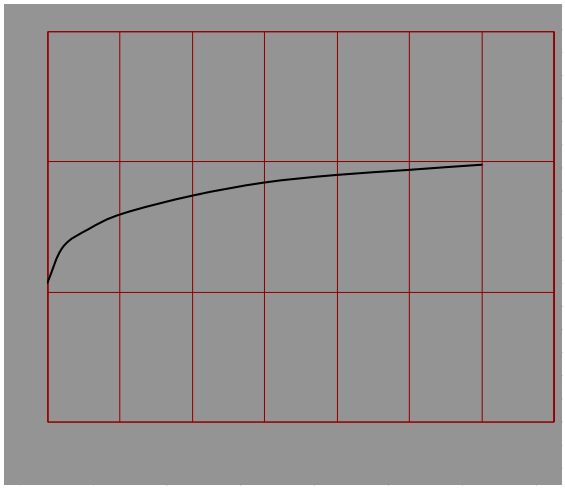
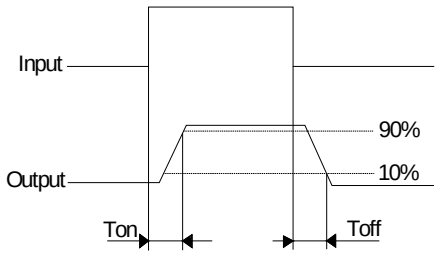
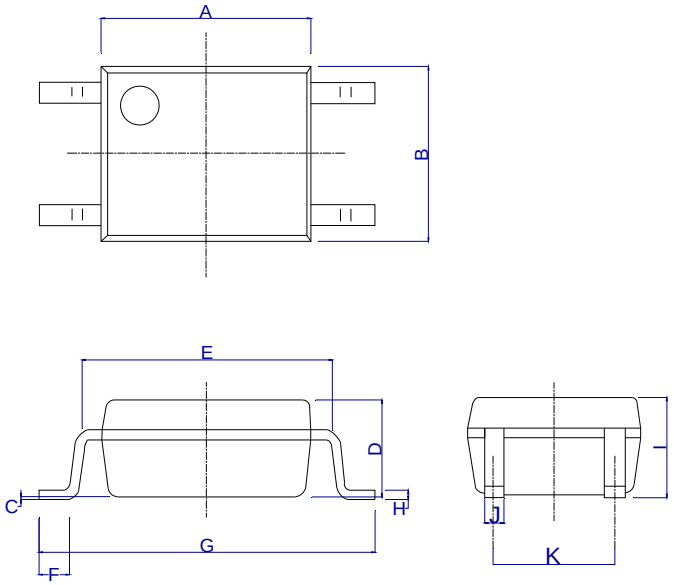


Fig.12: Turn on/Turn off time

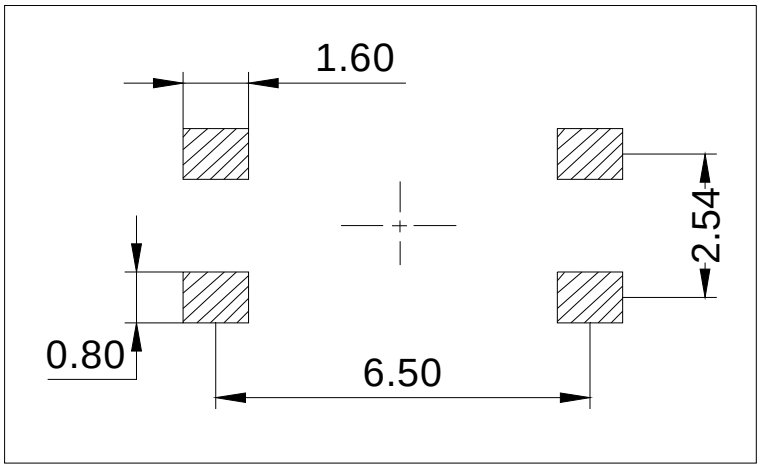


Package Dimension (Unit: mm)

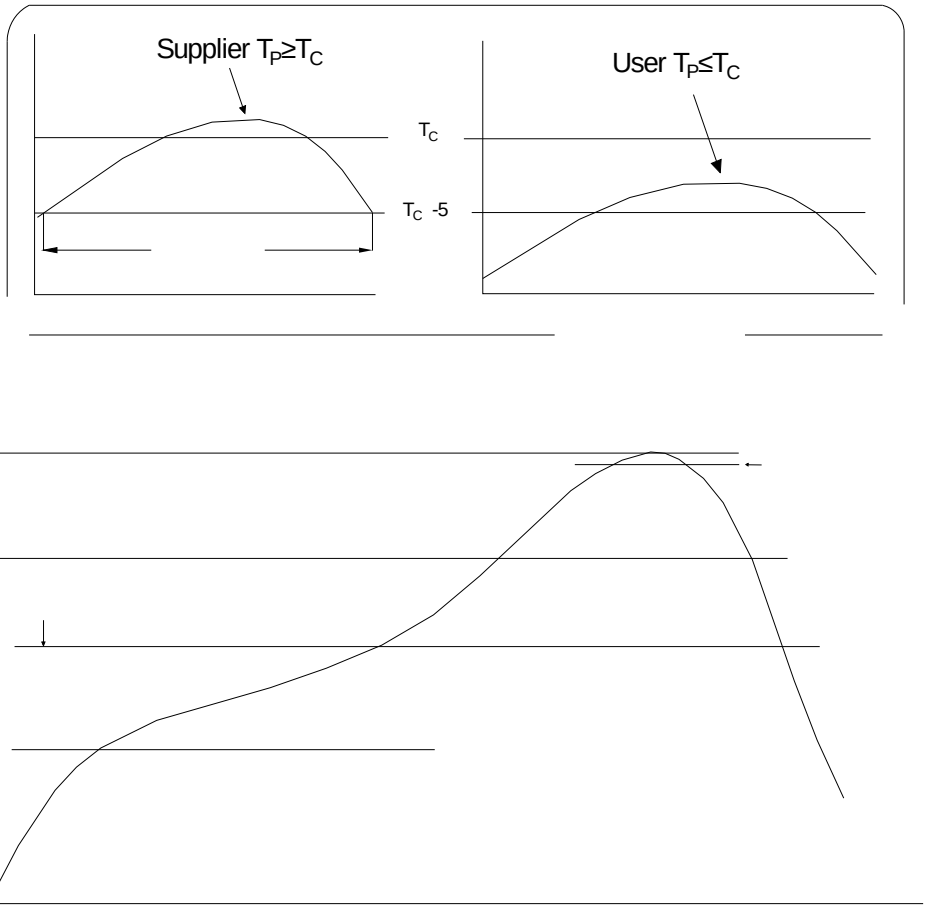


Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.80	0.173		0.189
B	3.60		4.20	0.142		0.165
C	0.00		0.20	0.000		0.008
D	1.90		2.30	0.075		0.091
E	5.00		5.60	0.197		0.220
F	0.34		0.94	0.013		0.037
G	6.70		7.30	0.264		0.287
H	0.10		0.30	0.004		0.012
I	2.00		2.40	0.079		0.094
J	0.25		0.55	0.010		0.022
K	2.29		2.79	0.090		0.110

RECOMMENDED SOLDER MASK (Dimensions in mm unless otherwise stated)



REFLOW INFORMATION



Note:

1. Reflow soldering is recommended at the temperatures and times shown, no more than three times.

2. Avoid direct contact between the epoxy body and any tools or surfaces exceeding its maximum storage temperature.

3. Application of pressure on the epoxy body is prohibited at elevated temperatures. In specific scenarios, any applied force must not exceed 2.5N.

4. Ensure the component has cooled to ambient temperature before proceeding with any subsequent manufacturing steps.

5. The component has a shelf life of one year when stored under standard conditions.

6. Recommend storage Temp.: 0~40°C;

Recommend storage humidity: <60%;

MSL level: MSL 1

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