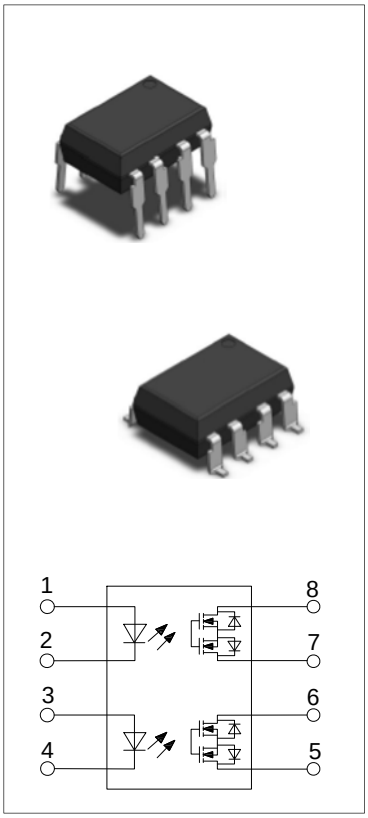
DESCRIPTION:

The products are 8-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 DIP8 package with different lead forming options. The detector consists of a high-speed photovoltaic diode array and driver circuitry. The products are widely used in isolation in high-speed inspection machines, telephones equipment and computers.



MAIN FEATURES

High isolation 5000 Vrms
Wide variation of load voltage 60V to 600V
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)

Input	Forward Current		I_F	50	mA
	Peak Forward Current		I_{FP}	1ŵ	A
	Reverse Voltage		V_R	6	V
	Input Power Dissipation		P_D	75	mW
Output	Load Voltage	JOCMB39C	V_L	60	V
		JOCMB38C		60	
		JOCMB57C		100	
		JOCMB66C		200	
		JOCMB75C		400	
		JOCMB74C		400	
		JOCMB83C		600	
	Continuous load current	JOCMB39C	I_L	2	A
		JOCMB38C		1	
		JOCMB57C		0.5	
		JOCMB66C		0.3	
		JOCMB75C		0.18	

		JOCMB74C		0.1	
		JOCMB83C		0.05	
	Output Power Dissipation		P_O	800	mW
Total Power Dissipation			P_{tot}	875	mW
Isolation Voltage			V_{iso}	5000	Vrms
Operating Temperature			T_{opr}	-40~110	℃
Junction Temperature			T_j	125	℃
Storage Temperature			T_{stg}	-40~125	℃
Soldering Temperature			T_{sol}	260	℃

NOTE1:

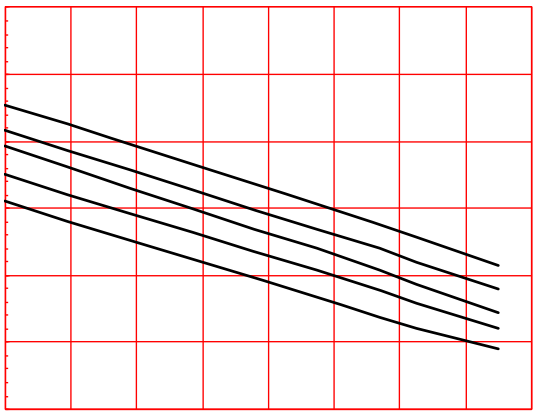
NOTE2:

ELECTRICAL CHARACTERISTICS (Temperature=25°C)

Input	Forward Voltage		V_F	I_F=10mA	-	1.2	1.5	V
	Reverse Current		I_R	V_R=6V	-	-	1	μA
	Action Current		$I_{F(ON)}$	I_L=$I_{L(MAX)}$	-	0.9	3	mA
	Reset Current		$I_{F(OFF)}$	I_L=$I_{L(MAX)}$	0.4	0.8	-	mA
Output	On Resistance	JOCMB39C	R_{on}	I_F=5mA I_L=Max. Within 1s on time	-	-	0.1	Ω
		JOCMB38C			-	-	0.3	
		JOCMB57C			-	-	0.2	
		JOCMB66C			-	-	2.5	
		JOCMB75C			-	-	25	
		JOCMB74C			-	-	25	
		JOCMB83C			-	-	35	
	Off State Leakage Current		I_{Leak}	I_F=0mA, V_L=Max.	-	-	1	μA
	Output Capacitance		C_{OFF}	V_{OFF}=0V, f_o=1MHz	-	6	-	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	1.5	pF
	Turn On Time	JOCMB39C	t_{on}	I_F=5mA, I_L=Max.	-	0.65	2	ms
		JOCMB38C			-	0.65	2	
		JOCMB57C			-	0.6	2	
		JOCMB66C			-	0.25	1	
		JOCMB75C			-	0.33	0.5	
		JOCMB74C			-	0.31	0.5	
		JOCMB83C			-	0.28	0.5	

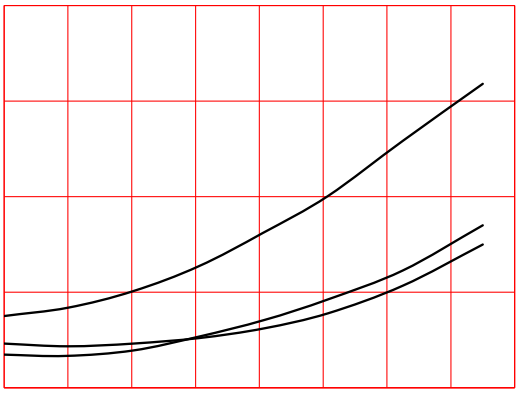
Characteristics Curves

LED Dropout Voltage vs. Ambient Temperature



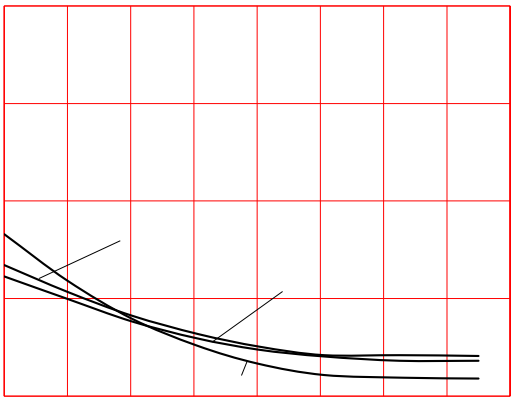
Output Current vs. Output Voltage

Turn On Time vs. Ambient Temperature



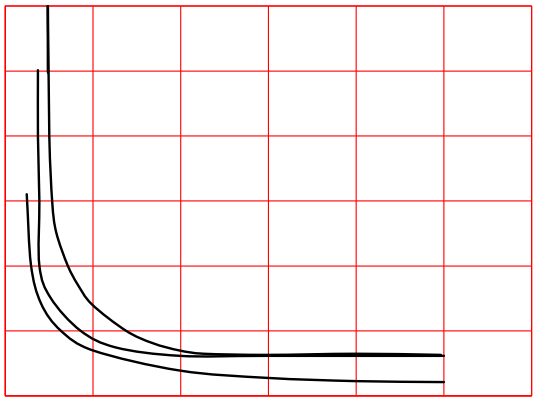
℃

Turn Off Time vs. Ambient Temperature



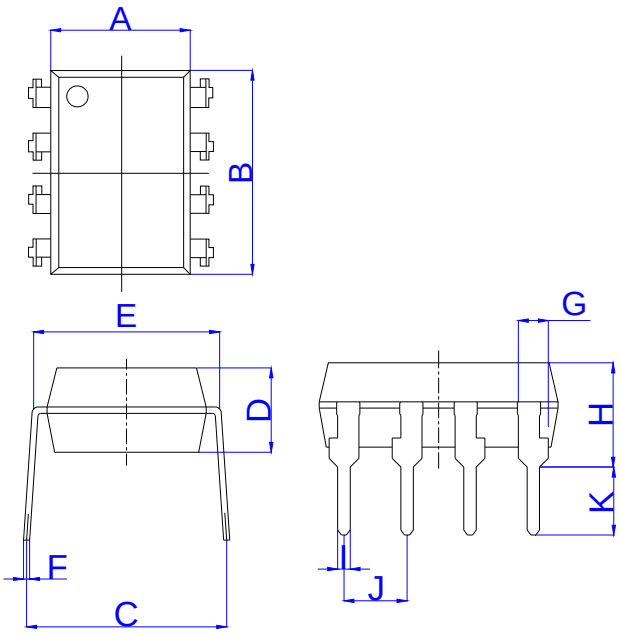
℃

Turn On Time vs. LED Forward Current

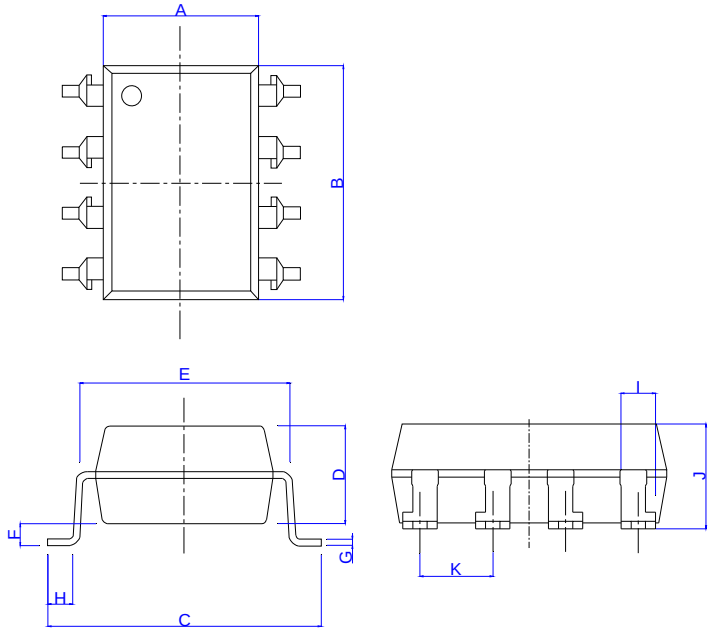


Turn Off Time vs. LED Forward Current

Package Dimension (Unit: mm)

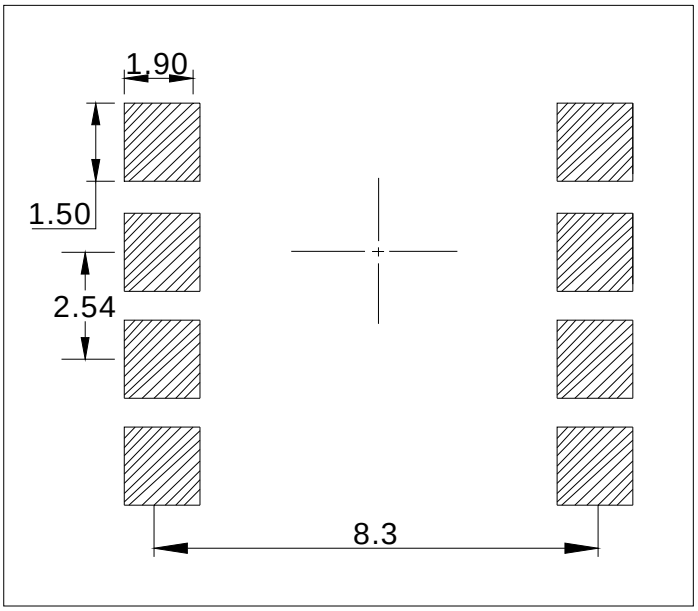


Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	6.20		6.60	0.244		0.260
B	9.40		9.80	0.370		0.386
C	7.15		8.95	0.281		0.352
D	3.20		3.60	0.126		0.142
E	7.32		7.92	0.288		0.312
F	0.15		0.35	0.006		0.014
G	0.90		1.50	0.035		0.059
H	3.90		4.50	0.154		0.177
I	0.40		0.60	0.016		0.024
J	2.29		2.79	0.090		0.110
K	2.24		3.24	0.088		0.128

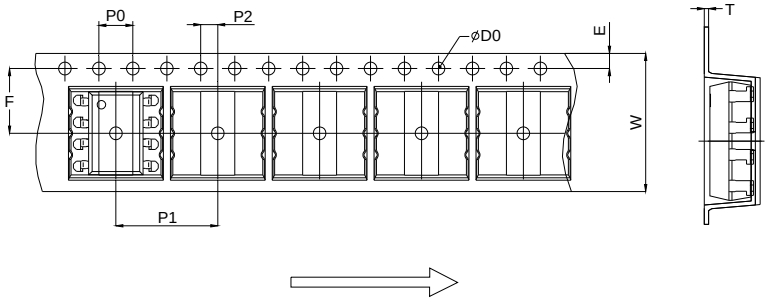


Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	6.20		6.60	0.244		0.260
B	9.40		9.80	0.370		0.386
C	9.50		10.50	0.374		0.413
D	3.20		3.60	0.126		0.142
E	7.32		7.92	0.288		0.312
F	0.05		0.35	0.002		0.014
G	0.16		0.36	0.006		0.014
H	0.60		1.40	0.024		0.055
I	0.90		1.50	0.035		0.059
J	3.30		3.90	0.130		0.154
K	2.29		2.79	0.090		0.110

RECOMMENDED SOLDER MASK (Dimensions in mm unless otherwise stated)

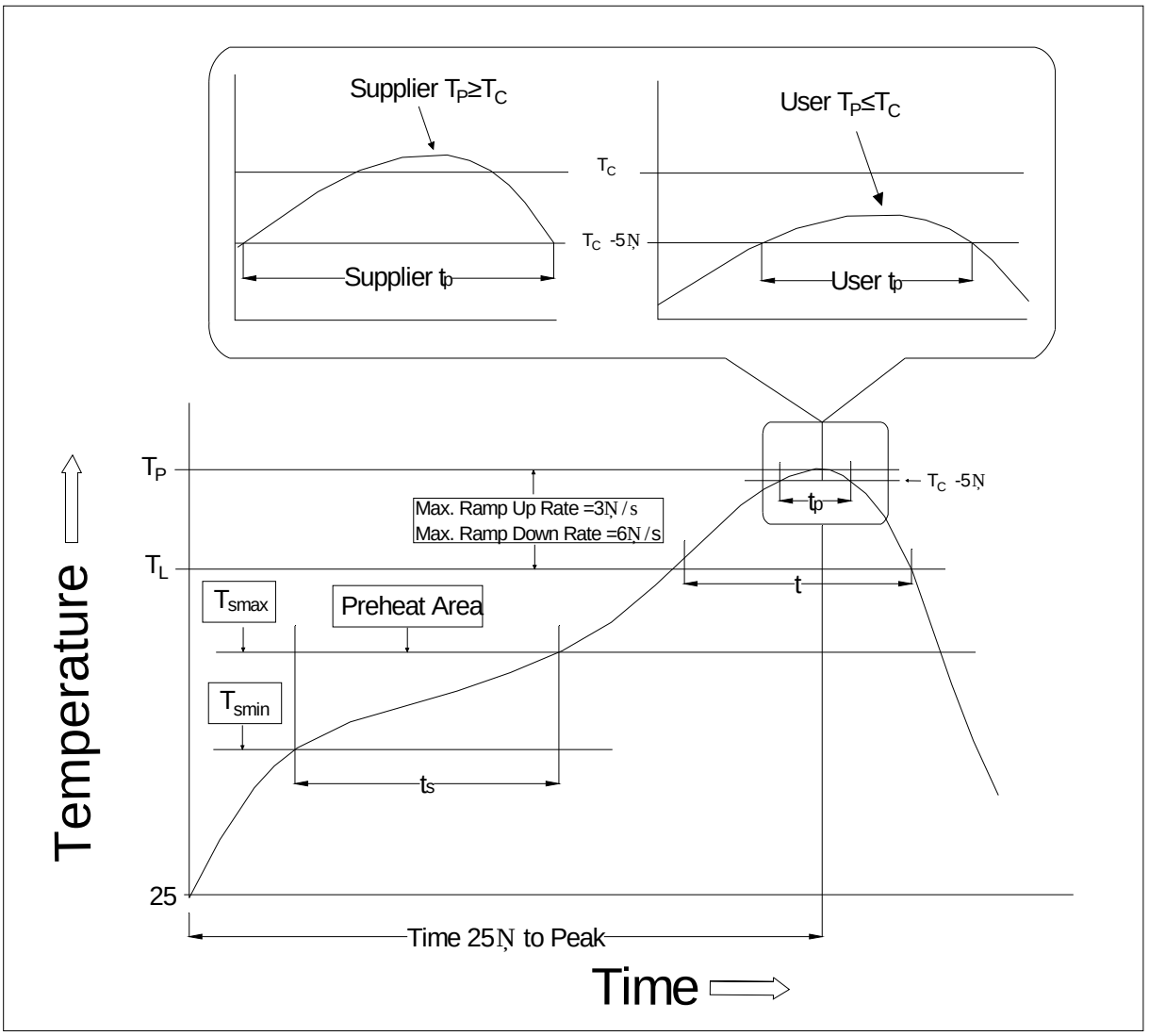


CARRIER TAPE SPECIFICATIONS (Dimensions in mm unless otherwise stated)



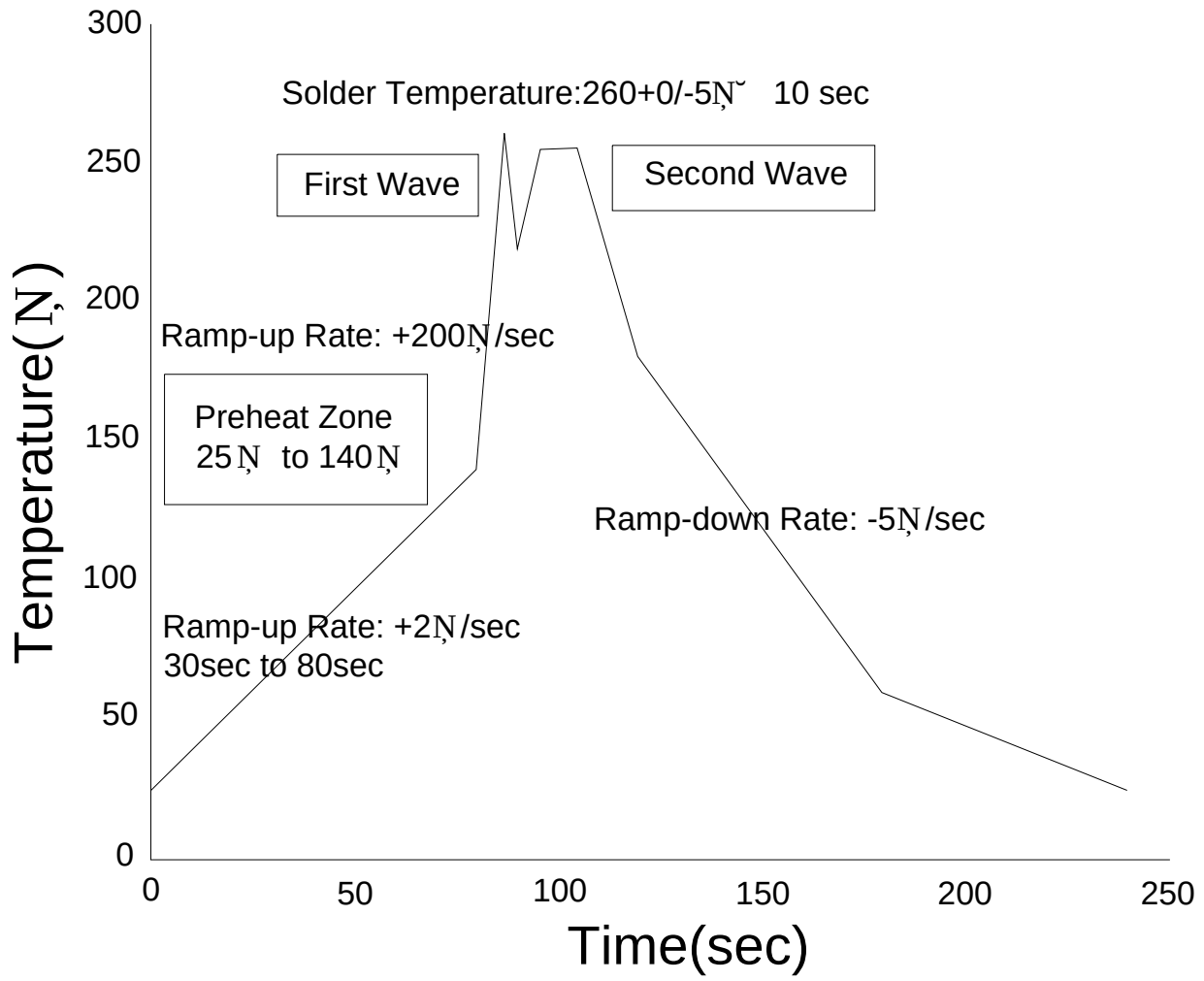
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
D0		1.50	1.60		0.059	0.063
P0	3.90	4.00	4.10	0.154	0.157	0.161
P1	11.90	12.00	12.10	0.469	0.472	0.476
P2	1.90	2.00	2.10	0.075	0.079	0.083
E	1.65	1.75	1.85	0.065	0.069	0.073
F	7.40	7.50	7.60	0.291	0.295	0.299
T	0.35	0.40	0.45	0.014	0.016	0.018
W	15.90	16.00	16.20	0.626	0.630	0.638

REFLOW INFORMATION



Temperature Min. (Tsmin)	100	150℃
Temperature Max. (Tsmax)	150	200℃
Time (ts) from (Tsmin to Tsmax)	60-120 seconds	60-120 seconds
Ramp-up Rate (tL to tP)	3℃/second max.	3℃/second max.
Liquidus Temperature (TL)	183℃	217℃
Time (tL) Maintained Above (TL)	60-150 seconds	60-150 seconds
Peak Body Package Temperature	235℃+0℃/-5℃	260℃+0℃/-5℃
Time (tP) within 5℃ of 260℃	20 seconds	30 seconds
Ramp-down Rate (TP to TL)	6℃/second max.	6℃/second max.
Time 25℃ to Peak Temperature	6 minutes max.	8 minutes max.

WAVE SOLDERING



HAND SOLDERING BY SOLDERING IRON	
Soldering Temperature	360 ¤ 5Ņ
Soldering Time	3s max.

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