

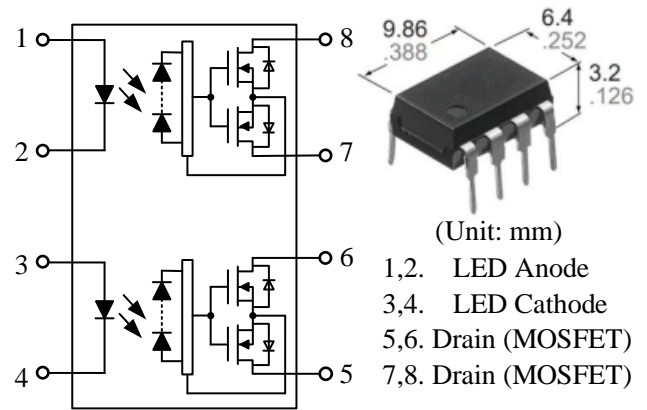
100V Normally Closed (2-Form-B) Solid State Relay

General Features

- Low-level off State Leakage Current
- No Moving Parts
- 1500 Vrms Input/Output Isolation
- Fast Switching Speed
- Highly Efficient GaAlAs Infrared LED and Reliability MOSFETs

V_{OFF}	I_{ON}	$R_{ON(TYP.)}$
100V	300mA	3Ω

DIP-8



Applications

- Telecommunications
- I/O Subsystems
- Industrial Control
- Security
- Aerospace
- Electronic Switching

Ordering Information

Part Number	Package	Marking	Packing quantity
OPW415	DIP-4	OPW415	2000pcs/REEL

Absolute Maximum Ratings

$T_a=25^{\circ}\text{C}$ unless otherwise specified

Item		Symbol	Note	Value	Unit
Input	LED Forward Current	I_F	--	50	mA
	LED Pulse Forward Current	I_{FP}	f=100Hz, duty=1%	1000	mA
	LED Reverse Voltage	V_R	--	5	V
	Diode Power Dissipation	P_D	--	75	mW
	LED Junction Temperature	T_j	--	125	$^{\circ}\text{C}$
Output	Load Voltage	V_{OFF}	AC Peak or DC	100	V
	On-state Current	I_{ON}	--	300	mA
	On-state Peak Current	I_{ONP}	100ms(1 pulse)	0.3	A
	Output Power Dissipation	P_O	--	300	mW
	Junction Temperature	T_j	--	125	$^{\circ}\text{C}$
Total Power Dissipation		P_T	--	350	mW
Storage Temperature		T_{stg}	--	-40 to 100	$^{\circ}\text{C}$
Operating Temperature		T_{opr}	--	-40 to 85	$^{\circ}\text{C}$
Lead Soldering Temperature		T_{sol}	10 sec max.	260	$^{\circ}\text{C}$
Isolation Voltage ^[3]		BV_{IO}	AC, RH≤60%, 60s	1500	Vrms

Caution: Stresses greater than those listed in the "Absolute Maximum Ratings" may cause permanent damage to the device.

Electrical Characteristics

$T_a = 25^\circ\text{C}$ unless otherwise specified

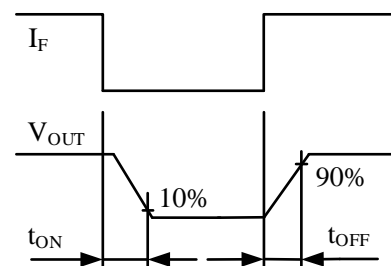
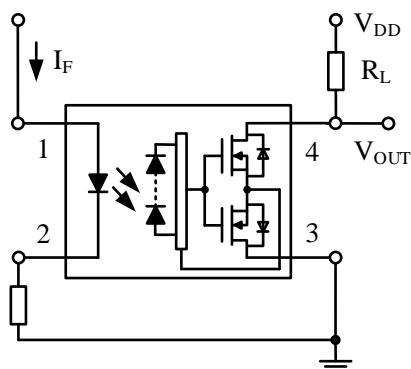
Item		Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Input	LED Forward Voltage	V_F	--	1.3	1.5	V	$I_F = 10\text{mA}$
	LED Reverse Current	I_R	--	--	5.0	μA	$V_R = 5\text{V}$
	Trigger LED Current	I_{FC}	--	0.2	2.0	mA	$I_{OFF} = 100\mu\text{A}$
	Return LED Current	I_{FT}	0.1	0.2	--	mA	$I_{ON} = 200\text{mA}$
	Return LED Voltage	V_{FC}	0.5	--	--	V	$I_{OFF} = 200\mu\text{A}$
Output	On-Resistance ^[2]	R_{ON}	--	3	6	Ω	$I_{ON} = 200\text{mA}$
	Off-State Leakage Current	I_{OFF}	--	--	1.0	μA	$V_{OFF} = 100\text{V}$, $I_F = 5\text{mA}$
	Output Capacitance	C_{OUT}	--	45	--	pF	$V_{OFF} = 0\text{V}$, $f = 1\text{MHz}$ $I_F = 5\text{mA}$
Transmission	Turn-on Time ^[3]	T_{ON}	--	--	0.5	ms	$I_F = 5\text{mA}$, $I_{ON} = 200\text{mA}$
	Turn-off Time ^[3]	T_{OFF}	--	--	0.5	ms	
Coupled	Capacitance Input to Output	C_{IO}	--	0.6	--	pF	$V_{IO} = 0\text{V}$, $f = 1\text{MHz}$
	Isolation Resistance	R_{IO}	10^{10}	--	--	Ω	DC = 500V
	Isolation Voltage	BV_{IO}	1500	--	--	V	AC, 60s

NOTE:

[1] LED pins are shorted together. Detector pins are also shorted together.

[2] Measurement Taken within 1 Second of On-time.

[3] Switching Time Test Circuit.



Package Dimensions

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