

FEATURES

1. High capacity type power photoMOS relay.

Can switch a wide range of currents and voltages. Can control various types of loads, from very small loads to a maximum 6A AC/DC current for sequencers, motors, and lamps.

2. Low ON resistance and high sensitivity.

Low ON resistance of less than 50 mΩ on a par with mechanical relays (AQZ262). High sensitivity LED operate current of 3 mA (at 25°C 77°F).

3. AC/DC dual use

Bi-directional control is possible. There is no need to differentiate depending on the load as was necessary with the conventional SSR.

4. 4-pin SIL type.

4-pin SIL type of (L) 43.0 mm × (W) 9.0 mm × (H) 32.0 mm (L) 1.693 inch × (W) .354 inch × (H) 1.260 inch.

5. Low-level off state leakage current

In contrast to the SSR with an off state leakage current of several milliamperes, the PhotoMOS relay features a very small off state leakage current of typ. 10mA even at the rated load voltage.

6. Controls low-level analog signals

The triac, photocoupler, or SSR cannot be used to control signals of less than several hundred mV. The high capacity type power PhotoMOS relay feature extremely low closed-circuit offset voltage to enable control of low-level analog signals without distortion.

RoHS Directive compatibility information
<http://www.mew.co.jp/ac/e/environment/>

TYPICAL APPLICATIONS

- Mercury relay replacement
- Railroad, traffic signals
- Compact motors, lamps, heaters
- OA equipment

TYPES

AC/DC type

Output rating*		Part No.	Packing quantity	
Load voltage	Load current		Inner carton	Outer carton
60 V	6.0 A	AQZ262	20 pcs	200 pcs
400 V	1.0 A	AQZ264		

* Indicate the peak AC and DC values.

RATING

1) Absolute maximum ratings (Ambient temperature: 25°C 77°F)

Item		Symbol	AQZ262	AQZ264	Remarks
Input	LED forward current	I _F	50 mA		
	LED reverse voltage	V _R	5 V		
	Peak forward current	I _{FP}	1 A		f = 100Hz, Duty factor = 0.1%
	Power dissipation	P _{in}	75 mW		
Output	Load voltage (Peak AC)	V _L	60 V	400 V	
	Continuous load current (Peak AC)	I _L	6.0 A	1.0 A	
	Peak load current	I _{peak}	10.0 A	3.0 A	100 ms (1shot), V _L = DC
	Power dissipation	P _{out}	3.0 W		
Total power dissipation		P _T	3.0 W		
I/O isolation voltage		V _{iso}	1,500 V AC		
Temperature limits	Operating	T _{opr}	-40°C to +85°C	-40°F to 185°F	Non-condensing at low temperatures
	Storage	T _{stg}	-40°C to +100°C	-40°F to 212°F	

Power PhotoMOS (AQZ262, 264)

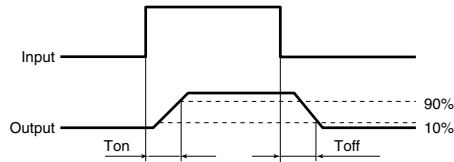
2) Electrical characteristics (Ambient temperature: 25°C 77°F)

Item		Symbol	AQZ262	AQZ264	Remarks	
Input	LED operate current	Typical	1.0 mA		$I_L = 100 \text{ mA}$ $V_L = 10 \text{ V}$	
		Maximum	3.0 mA			
	LED turn off current	Minimum	0.4 mA		$I_L = 100 \text{ mA}$ $V_L = 10 \text{ V}$	
		Typical	0.9 mA			
LED dropout voltage	Typical	1.25 V (1.16 V at $I_F = 10 \text{ mA}$)			$I_F = 50 \text{ mA}$	
	Maximum	1.5 V				
Output	On resistance	Typical	0.036 Ω	1.0 Ω	$I_F = 10 \text{ mA}$ $I_L = \text{max.}$ Within 1 s on time	
		Maximum	0.05 Ω	1.4 Ω		
	Off state leakage current	Maximum	10 μA		$I_F = 0 \text{ mA}$ $V_L = \text{max.}$	
Transfer characteristics	Switching speed	Turn on time*	Typical	5 ms	4 ms	$I_F = 10 \text{ mA}$ $I_L = 100 \text{ mA}$ $V_L = 10 \text{ V}$
			Maximum	10 ms		
		Turn off time*	Typical	0.32 ms	0.14 ms	$I_F = 10 \text{ mA}$ $I_L = 100 \text{ mA}$ $V_L = 10 \text{ V}$
			Maximum	3.0 ms		
	I/O capacitance	Typical	2.0 pF		$f = 1 \text{ MHz}$ $V_B = 0 \text{ V}$	
		Maximum	4.0 pF			
Initial I/O isolation resistance	Minimum	R_{iso}	1,000 M Ω		500 V DC	
Maximum operating frequency	Maximum	—	0.5 cps		$I_F = 10 \text{ mA}$ Duty factor = 50% $I_L = \text{Max.}, V_L = \text{Max.}$	

Note: Recommendable LED forward current $I_F = 5$ to 10 mA.

For type of connection.

*Turn on/off time

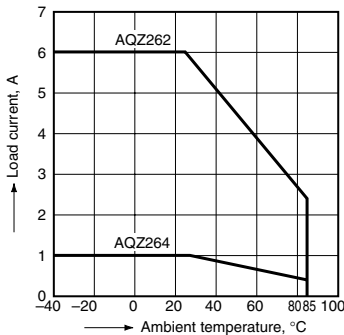


- For Dimensions.
- For Schematic and Wiring Diagrams.
- For Cautions for Use.

REFERENCE DATA

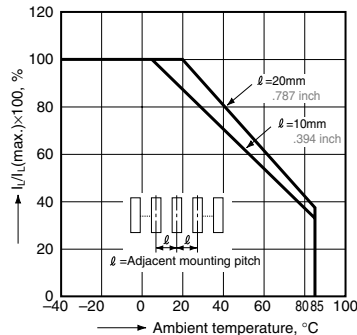
1. Load current vs. ambient temperature characteristics

Allowable ambient temperature: -40°C to +85°C
-40°F to +185°F



2. Load current vs. ambient temperature characteristics in adjacent mounting

I_L : Load current;
 $I_L(\text{max.})$: Maximum continuous load current



3. On resistance vs. ambient temperature characteristics

LED current: 10 mA;
Continuous load current: 6A (DC)(AQZ262)
1A (DC)(AQZ264)

