

**High capacity up to 6A  
in a slim SIL package**

**PhotoMOS®  
Power 1 Form A  
High Capacity (AQZ26○)**

## FEATURES

### 1. High capacity type power PhotoMOS.

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

### 2. Low on-resistance and high sensitivity.

Low on-resistance of less than typ. 0.036Ω (AQZ262). High sensitivity LED operate current of typ. 1 mA.

### 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

(L) 43.0 mm × (W) 9.0 mm × (H) 32.0 mm  
(L) 1.693 inch × (W) .354 inch × (H) 1.260 inch.

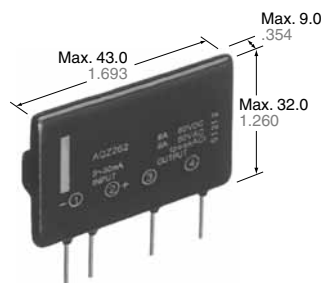
### 5. Low-level off state leakage current of max. 10 μA

### 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 feature extremely low closed-circuit offset voltage to enable control of low-level analog signals without distortion.

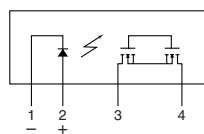
## TYPICAL APPLICATIONS

- Mercury relay replacement
- Compact motors, lamps, heaters
- OA equipment



(Height includes standoff)

mm inch



**RoHS compliant**

## TYPES

	Output rating*		Package	Part No.	Packing quantity	
	Load voltage	Load current			Inner carton	Outer carton
AC/DC dual use	60 V	6.0 A	SIL4-pin	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)

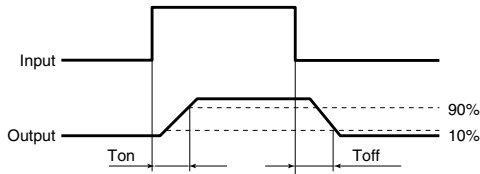
Item		Symbol	AQZ262	AQZ264	Remarks
Input	LED forward current	I <sub>F</sub>	50 mA		
	LED reverse voltage	V <sub>R</sub>	5 V		
	Peak forward current	I <sub>FP</sub>	1 A		f = 100Hz, Duty factor = 0.1%
	Power dissipation	P <sub>in</sub>	75 mW		
Output	Load voltage (peak AC)	V <sub>L</sub>	60 V	400 V	
	Continuous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

# Power 1 Form A High Capacity (AQZ26○)

## 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 $\Omega$	1.0 $\Omega$	$I_F = 10 \text{ mA}$ $I_L = \text{max.}$ Within 1 s on time
		Maximum	0.05 $\Omega$	1.4 $\Omega$	
	Off state leakage current	Maximum	10 $\mu\text{A}$		$I_F = 0 \text{ mA}$ $V_L = \text{max.}$
Transfer characteristics	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 $\Omega$		500 V DC
Maximum operating frequency	Maximum	—	0.5 cps		$I_F = 10 \text{ mA}$ Duty factor = 50% $I_L = \text{Max.}, V_L = \text{Max.}$

\*Turn on/off time



## RECOMMENDED OPERATING CONDITIONS

Please obey the following conditions to ensure proper device operation and resetting.

Item	Symbol	Recommended value	Unit
Input LED current	$I_F$	5 to 10	mA

■ For Dimensions.

■ For Schematic and Wiring Diagrams.

■ For Cautions for Use.

■ These products are not designed for automotive use.

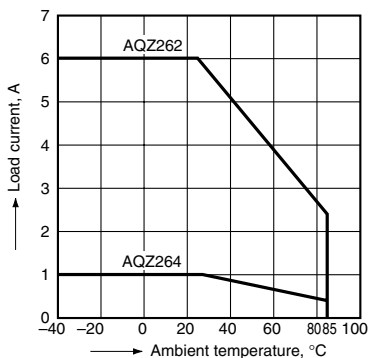
If you are considering to use these products for automotive applications, please contact your local Panasonic Corporation technical representative.

For more information.

## REFERENCE DATA

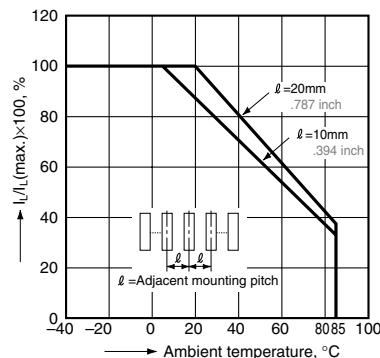
1. Load current vs. ambient temperature characteristics

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



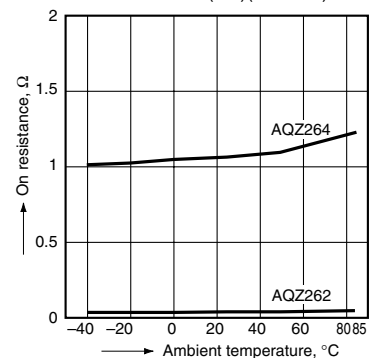
2. Load current vs. ambient temperature characteristics in adjacent mounting

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



3. On resistance vs. ambient temperature characteristics

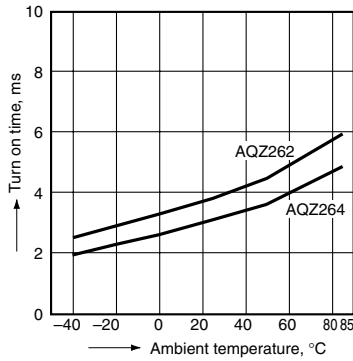
LED current: 10 mA;  
Continuous load current: 6A (DC)(AQZ262)  
1A (DC)(AQZ264)



# Power 1 Form A High Capacity (AQZ26○)

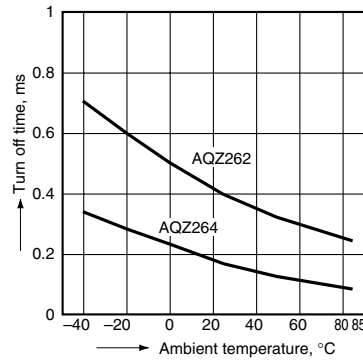
## 4. Turn on time vs. ambient temperature characteristics

LED current: 10 mA; Load voltage: 10 V (DC);  
Continuous load current: 100 mA (DC)



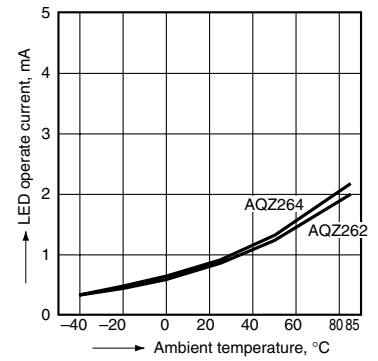
## 5. Turn off time vs. ambient temperature characteristics

LED current: 10 mA; Load voltage: 10 V (DC);  
Continuous load current: 100 mA (DC)



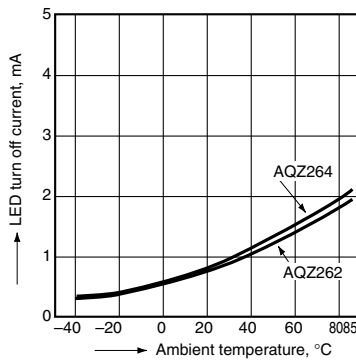
## 6. LED operate vs. ambient temperature characteristics

Load voltage: 10 V (DC);  
Continuous load current: 100 mA (DC)



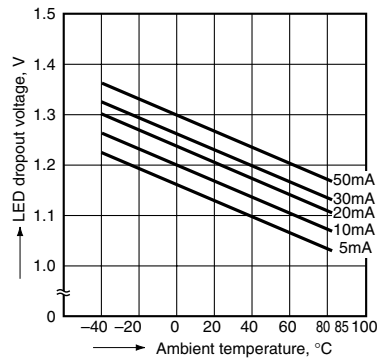
## 7. LED turn off current vs. ambient temperature characteristics

Load voltage: 10 V (DC);  
Continuous load current: 100 mA (DC)



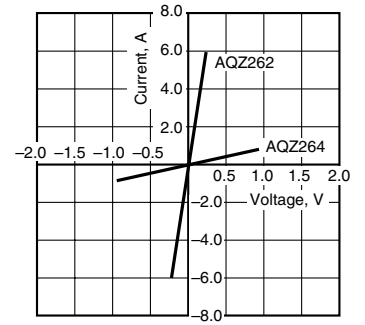
## 8. LED dropout voltage vs. ambient temperature characteristics

Sample: all types; LED current: 5 to 50 mA



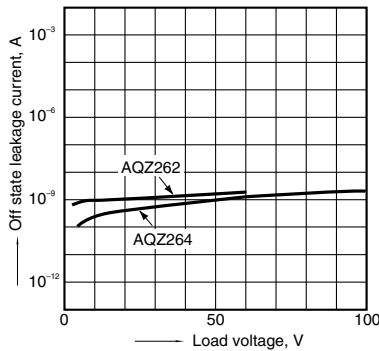
## 9. Current vs. voltage characteristics of output at MOS portion

Ambient temperature: 25°C 77°F



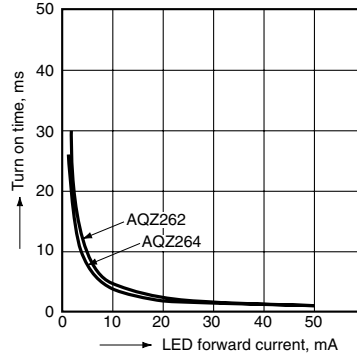
## 10. Off state leakage current vs. load voltage characteristics

Ambient temperature: 25°C 77°F



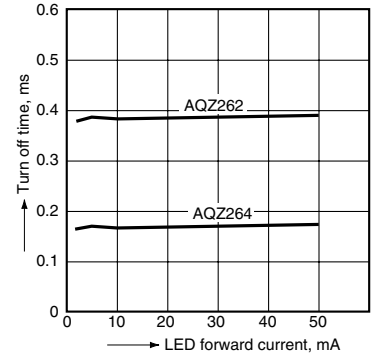
## 11. Turn on time vs. LED forward current characteristics

Load voltage: 10 V (DC); Continuous load current: 100 mA (DC); Ambient temperature: 25°C 77°F



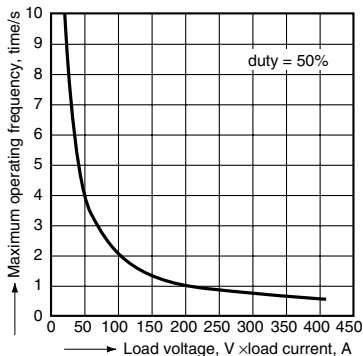
## 12. Turn off time vs. LED forward current characteristics

Load voltage: 10 V (DC); Continuous load current: 100 mA (DC); Ambient temperature: 25°C 77°F



## 13. Maximum operating frequency vs. load voltage/current characteristics

LED current: 10 mA; Ambient temperature: 25°C 77°F



## 14. Output capacitance vs. applied voltage characteristics

Frequency: 10 KHz; Ambient temperature: 25°C 77°F

