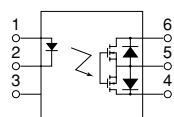
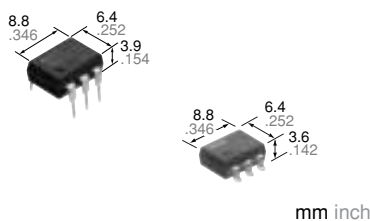


Panasonic ideas for life	Greatly increase load current (2.5A). Load voltage is 60V.	<h1 style="margin: 0;">HE PhotoMOS (AQV252G)</h1>
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FEATURES

1. Greatly increased load current in the same package size.
2. Greatly improved specs allow you to use this in place of mercury and mechanical relays.

TYPICAL APPLICATIONS

- Crime and fire prevention market (use in I/O for alarm and security devices, etc.)
- Measuring instrument market (circuit testers, etc.)

TYPES

Type	Output rating*		Part No.				Packing quantity	
			Through hole terminal	Surface-mount terminal			Tube	Tape and reel
	Load voltage	Load current	Tube packing style	Tape and reel packing style				
				Picked from the 1/2/3-pin side	Picked from the 4/5/6-pin side			
AC/DC type	60 V	2.5 A	AQV252G	AQV252GA	AQV252GAX	AQV252GAZ	1 tube contains 50 pcs. 1 batch contains 500 pcs.	1,000 pcs.

*Indicate the peak AC and DC values.

Note: For space reasons, the SMD terminal shape indicator "A" and the package type indicator "X" and "Z" are omitted from the seal.

RATING

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

Item		Symbol	Type of connection	AQV252G(A)	Remarks	
Input	LED forward current	I_F	/	50 mA		
	LED reverse voltage	V_R		5 V		
	Peak forward current	I_{FP}		1 A	f = 100 Hz, Duty factor = 0.1%	
	Power dissipation	P_{in}		75 mW		
Output	Load voltage (peak AC)	V_L	/	60 V		
	Continuous load current (peak AC)	I_L		A	2.5 A	A connection: Peak AC, DC B, C connection: DC
				B	3.5 A	
				C	5.0 A	
	Peak load current	I_{peak}		6.0 A	100ms (1 shot), $V_L = DC$	
Power dissipation	P_{out}	500 mW				
Total power dissipation		P_T		550 mW		
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		

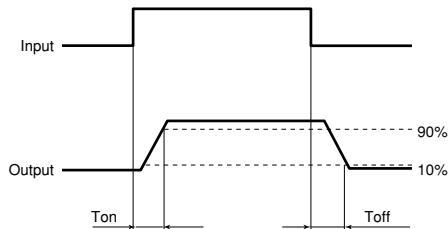
HE PhotoMOS (AQV252G)

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

Item		Symbol	Type of connection	AQV252G(A)	Condition	
Input	LED operate current	Typical	I _{Fon}	—	0.5 mA	
		Maximum				3 mA
	LED turn off current	Minimum	I _{Foff}	—	0.2 mA	I _L = 100mA
		Typical				
	LED dropout voltage	Typical	V _F	—	1.32 V (1.14 V at I _F = 5 mA)	I _F = 50 mA
Maximum		1.5 V				
Output	On resistance	Typical	R _{on}	A	0.08 Ω	I _F = 5 mA I _L = Max. Within 1 s on time
		Maximum			0.12 Ω	
		Typical	R _{on}	B	0.04 Ω	
		Maximum			0.06 Ω	
		Typical	R _{on}	C	0.02 Ω	
		Maximum			0.03 Ω	
	Off state leakage current	Maximum	I _{Leak}	—	1 μA	
Transfer characteristics	Turn on time*	Typical	T _{on}	—	1.1 ms	I _F = 5 mA I _L = 100 mA V _L = 10 V
		Maximum			5.0 ms	
	Turn off time*	Typical	T _{off}	—	0.25 ms	I _F = 5 mA I _L = 100 mA V _L = 10 V
		Maximum			0.5 ms	
	I/O capacitance	Typical	C _{iso}	—	0.8 pF	f = 1 MHz V _B = 0 V
Maximum		1.5 pF				
Initial I/O isolation resistance	Minimum	R _{iso}	—	1,000 MΩ	500 V DC	

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

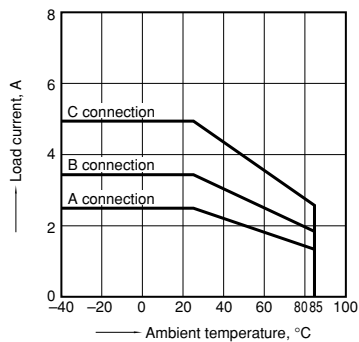
*Turn on/Turn off time



REFERENCE DATA

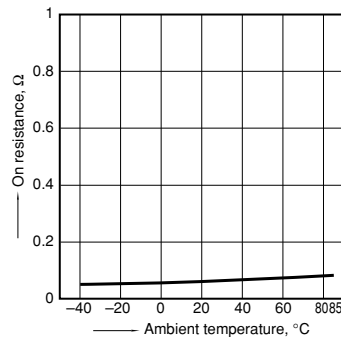
1. Load current vs. ambient temperature characteristics

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



2. On resistance vs. ambient temperature characteristics

Measured portion: between terminals 4 and 6;
LED current: 5 mA; Load voltage: Max. (DC)
Continuous load current: Max.(DC)



3. Turn on time vs. ambient temperature characteristics

LED current: 5 mA; Load voltage: 10 V (DC);
Continuous load current: 100 mA (DC)

