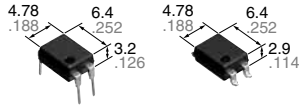


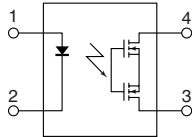
Load current greatly increased using next-generation MOSFET High Capacity 4-pin Type

GU PhotoMOS (AQY212GH)



(Height includes standoff)

mm inch



FEATURES

1. Greatly increased load current.
2. Reinforced insulation 5,000 V type.
3. Greatly improved specs allow you to use this in place of mercury and mechanical relays.
4. Compact 4-pin DIP size.

TYPICAL APPLICATIONS

- Crime and fire prevention market (use in I/O for alarm and security devices, etc.)
- Amusement market
- 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-pin side	Picked from the 3/4-pin side		
AC/DC type	60 V	1.1 A	AQY212GH	AQY212GHA	AQY212GHAX	AQY212GHAZ	1 tube contains 100 pcs. 1 batch contains 1,000 pcs.	1,000 pcs.

*Indicate the peak AC and DC values.

Note: For space reasons, the initial letters of the part number "AQY", the SMD terminal shape indicator "A" and the package style indicator "X" or "Z" are not marked on the relay.

RATING

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

	Item	Symbol	AQY212GH(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	1.1 A	
	Peak load current	I_{peak}	3.0 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}	5,000 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	

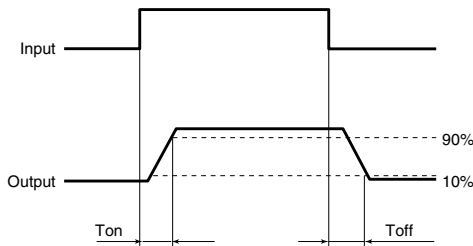
GU PhotoMOS (AQY212GH)

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

Item		Symbol	AQY212GH(A)	Condition
Input	LED operate current	Typical	1.1 mA	$I_L = 100\text{mA}$
		Maximum	3 mA	
	LED turn off current	Minimum	0.3 mA	$I_L = 100\text{mA}$
		Typical	1.0 mA	
LED dropout voltage	Typical	1.32 V (1.14 V at $I_F = 5\text{ mA}$)	$I_F = 50\text{ mA}$	
	Maximum	1.5 V		
Output	On resistance	Typical	0.34 Ω	$I_F = 5\text{ mA}$ $I_L = \text{Max.}$ Within 1 s on time
		Maximum	0.7 Ω	
	Off state leakage current	Maximum	1 μA	
Transfer characteristics	Turn on time*	Typical	1.3 ms	$I_F = 5\text{ mA}$ $I_L = 100\text{ mA}$ $V_L = 10\text{ V}$
		Maximum	5.0 ms	
	Turn off time*	Typical	0.1 ms	$I_F = 5\text{ mA}$ $I_L = 100\text{ mA}$ $V_L = 10\text{ V}$
		Maximum	0.5 ms	
	I/O capacitance	Typical	0.8 pF	$f = 1\text{ MHz}$ $V_B = 0\text{ V}$
		Maximum	1.5 pF	
Initial I/O isolation resistance	Minimum	R_{iso}	1,000 M Ω	500 V DC

Notes: 1. For type of connection.
2. Recommendable LED forward current $I_F = 5$ to 10 mA.

*Turn on/Turn off time

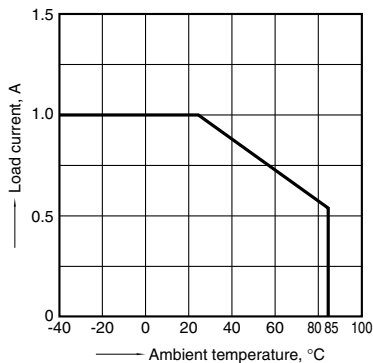


- For Dimensions.
- For Schematic and Wiring Diagrams.
- For Cautions for Use.

REFERENCE DATA

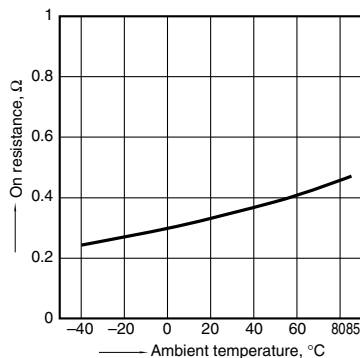
1. Load current vs. ambient temperature characteristics

Allowable ambient temperature: -40°C to $+85^{\circ}\text{C}$
 -40°F to $+185^{\circ}\text{F}$



2. On resistance vs. ambient temperature characteristics

Measured portion: between terminals 3 and 4;
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)

