

AQO280EH

RATING

1. Absolute maximum ratings (Ambient temperature: 25°C 77°F)
DIP 4pin

Item		Symbol	AQY282EH	AQY280EH	AQY284EH	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	350 V	400 V	
	Continuous load current (peak AC)	I _L	0.5 A	0.13 A	0.12 A	
	Peak load current	I _{peak}	1.5 A	0.4 A	0.3 A	100 ms (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			
Operating temperature		T _{opr}	-40°C to +85°C -40°F to +185°F			Non-condensing at low temperature
Storage temperature		T _{stg}	-40°C to +100°C -40°F to +212°F			

DIP 8pin

Item		Symbol	AQW282EH	AQW280EH	AQW284EH	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	350 V	400 V	
	Continuous load current (peak AC)	I _L	0.4 (0.5) A	0.12 (0.14) A	0.1 (0.13) A	(): in case of using only 1 channel
	Peak load current	I _{peak}	1.2 A	0.36 A	0.3 A	100 ms (1 shot), V _L = DC
	Power dissipation	P _{out}	800 mW			
Total power dissipation		P _T	850 mW			
I/O isolation voltage		V _{iso}	5,000 V AC			
Operating temperature		T _{opr}	-40°C to +85°C -40°F to +185°F			Non-condensing at low temperature
Storage temperature		T _{stg}	-40°C to +100°C -40°F to +212°F			

2. Electrical characteristics (Ambient temperature: 25°C 77°F)
DIP4pin

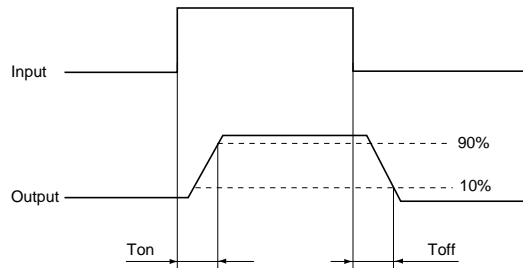
Item		Symbol	AQY282EH	AQY280EH	AQY284EH	Condition
Input	LED operate current	Typical	1.8 mA			I _L = Max.
		Maximum	3.0 mA			
	LED turn off current	Minimum	0.2 mA			I _L = Max.
		Typical	1.6 mA			
LED dropout voltage	Typical	1.14 V (1.25 V at I _F = 50mA)			I _F = 5 mA	
	Maximum	1.5 V				
Output	On resistance	Typical	0.85Ω	20Ω	28Ω	I _F = 5 mA I _L = Max. Within 1 s on time
		Maximum	2.5Ω	25Ω	35Ω	
	Off state leakage current	Maximum	1μA			I _F = 0 mA V _L = Max.
Transfer characteristics	Turn on time*	Typical	1.8 ms	1.5 ms		I _F = 5 mA I _L = Max.
		Maximum	5 ms			
	Turn off time*	Typical	0.5 ms			I _F = 5 mA I _L = Max.
		Maximum	2 ms			
	I/O capacitance	Typical	0.8 pF			f = 1 MHz V _B = 0V
Maximum		1.5 pF				
Initial I/O isolation resistance	Minimum	1,000 MΩ			500 V DC	

AQ○28○EH

DIP8pin

Item			Symbol	AQW282EH	AQW280EH	AQW284EH	Condition
Input	LED operate current	Typical	I_{Fon}	1.8 mA			$I_L = \text{Max.}$
		Maximum		3.0 mA			
	LED turn off current	Minimum	I_{Foff}	0.2 mA			$I_L = \text{Max.}$
		Typical		1.6 mA			
LED dropout voltage	Typical	V_F	1.14 V (1.25 V at $I_F = 50\text{mA}$)			$I_F = 5 \text{ mA}$	
	Maximum		1.5 V				
Output	On resistance	Typical	R_{on}	0.85Ω	20Ω	28Ω	$I_F = 5 \text{ mA}$ $I_L = \text{Max.}$ Within 1 s on time
		Maximum		2.5Ω	25Ω	35Ω	
	Off state leakage current	Maximum	I_{Leak}	1μA			$I_F = 0 \text{ mA}$ $V_L = \text{Max.}$
Transfer characteristics	Turn on time*	Typical	T_{on}	1.8 ms	1.5 ms		$I_F = 5 \text{ mA}$ $I_L = \text{Max.}$
		Maximum		5 ms			
	Turn off time*	Typical	T_{off}	0.5 ms			$I_F = 5 \text{ mA}$ $I_L = \text{Max.}$
		Maximum		2 ms			
	I/O capacitance	Typical	C_{iso}	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 MΩ			500 V DC	

*Turn on/Turn off time



3-4 the terminal leads receive solder plating or solder dip plating.

REFERENCE DATA

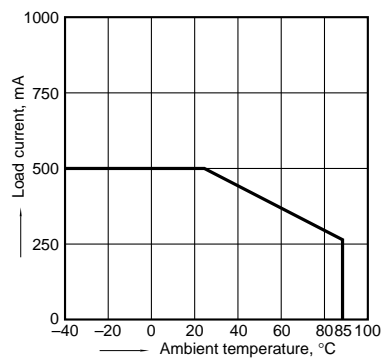
[DIP type]

1. Load current vs. ambient temperature characteristics

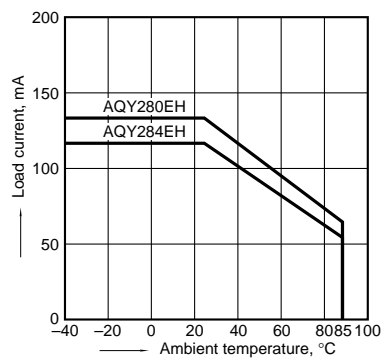
Allowable ambient temperature: -40°C to +85°C
-40°F to +185°F

Type of connection: A

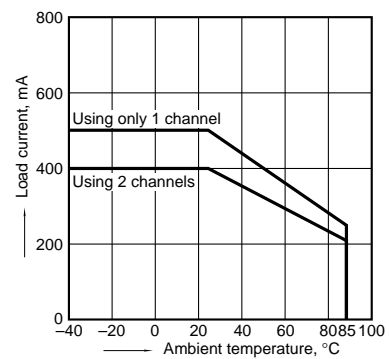
(1) AQY282EH



(2) AQY280EH, AQY284EH



(3) AQW282EH

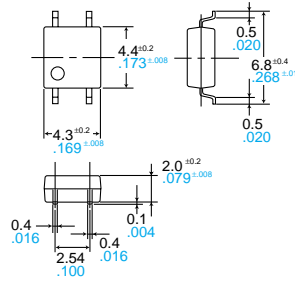


AQ○28○S, AQ○28○EH

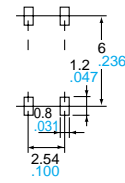
DIMENSIONS

mm inch

AQY28○S



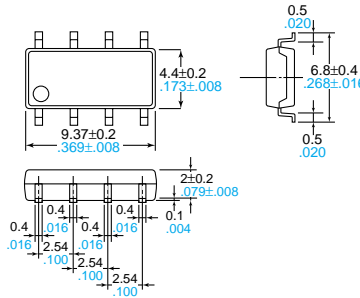
Recommended mounting pad (Top view)



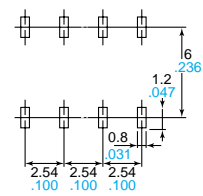
Terminal thickness = 0.15 .006
 General tolerance: ±0.1 ±.004

Tolerance: ±0.1 ±.004

AQW28○S



Recommended mounting pad (Top view)

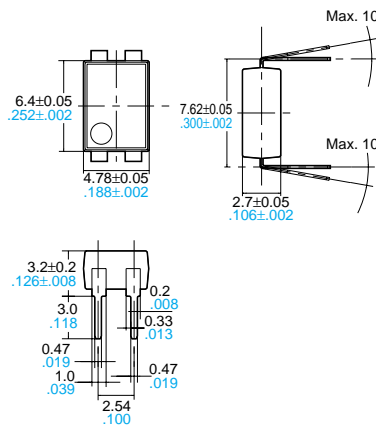


Terminal thickness = 0.15 .006
 General tolerance: ±0.1 ±.004

Tolerance: ±0.1 ±.004

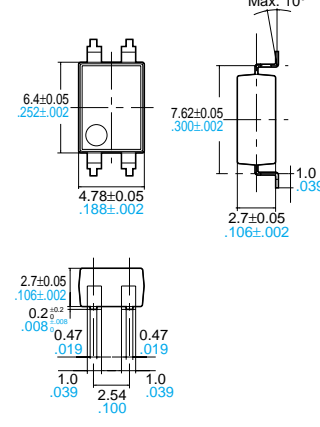
AQY28○EH(A)

Through hole terminal type



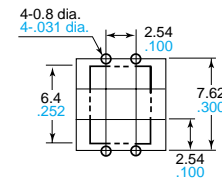
Terminal thickness = 0.2 .008
 General tolerance: ±0.1 ±.004

Surface mount terminal type



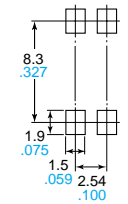
Terminal thickness = 0.2 .008
 General tolerance: ±0.1 ±.004

PC board pattern (Bottom view)



Tolerance: ±0.1 ±.004

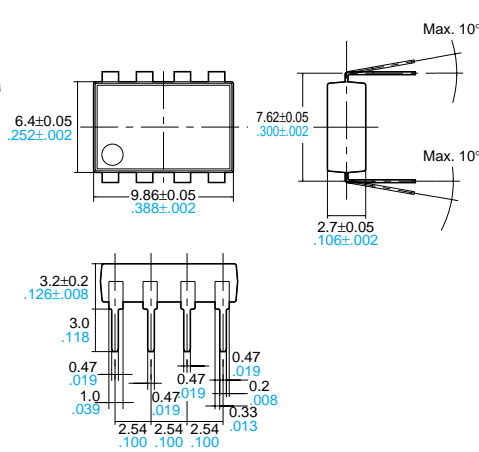
Mounting pad (Top view)



Tolerance: ±0.1 ±.004

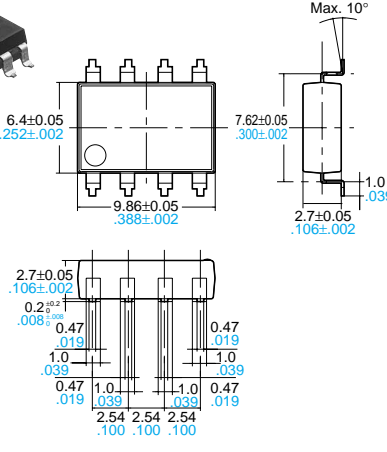
AQW28○EH(A)

Through hole terminal type



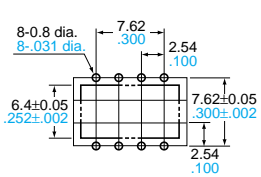
Terminal thickness = 0.2 .008
 General tolerance: ±0.1 ±.004

Surface mount terminal type



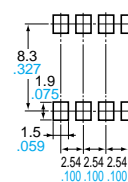
Terminal thickness = 0.2 .008
 General tolerance: ±0.1 ±.004

PC board pattern (Bottom view)



Tolerance: ±0.1 ±.004

Mounting pad (Top view)



Tolerance: ±0.1 ±.004