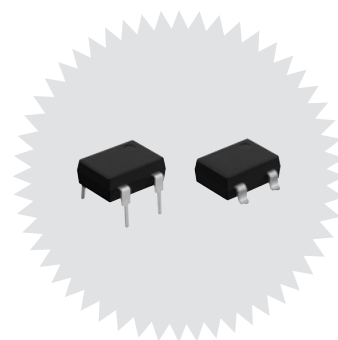


New Product Information

PhotoMOS® HE 1 Form A

Ideal for industrial battery monitoring system (BMS)



Features

- Load voltage: 1,500 V
- Load current: 20 mA
- Distance between output terminals expanded to cater to 6-pin DIP package

Typical Applications

- Isolation detection
- Voltage monitoring
- Signal control

*Please contact our sales representative for automotive applications of PhotoMOS.

Schedule of release

To be released in December, 2019

Types

Packing quantity: Through hole terminal: Inner carton (Tube packing style) 50 pieces, Outer carton 500 pieces
Surface-mount terminal: Inner carton (Tube packing style) 50 pieces, Outer carton 500 pieces
Inner carton (Tape and reel packing style) 1,000 pieces, Outer carton 1,000 pieces

	Output rating*		Part No.			
	Load voltage	Load current	Through hole terminal	Surface-mount terminal		
			Tube packing style	Tube packing style	Tape and reel packing style X	Tape and reel packing style Z
AC/DC dual use	1,500 V	20 mA	AQV258H5	AQV258H5A	AQV258H5AX	AQV258H5AZ

Note: Tape and reel packing style X: picked from the 1/2/3-pin side, tape and reel packing style Z: picked from the 4/6-pin side. The surface mount terminal shape indicator "A" and the packing style indicator "X" or "Z" are not marked on the device.

*Indicate the peak AC and DC values.

Rating

■ Absolute maximum ratings (Ambient temperature: 25°C)

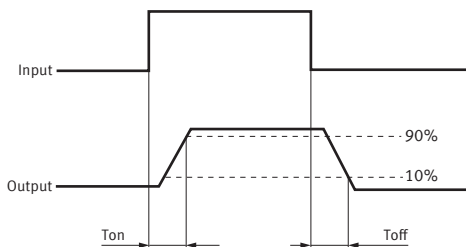
Item		Symbol	AQV258H5 (A)	Remarks
Input	LED forward current	I_F	50 mA	
	LED reverse voltage	V_R	5 V	
	Peak forward current	I_{FP}	1 A	$f = 100$ Hz, Duty Ratio = 0.1%
	Power dissipation	P_{in}	75 mW	
Output	Load voltage (peak AC)	V_L	1,500 V	
	Continuous load current	I_L	0.02 A	Peak AC, DC
	Peak load current	I_{peak}	0.06 A	100 ms (1 shot), $V_L = DC$
	Power dissipation	P_{out}	360 mW	
Total power dissipation		P_T	410 mW	
I/O isolation voltage		V_{iso}	5,000 Vrms	
Ambient temperature		T_{opr}	-40 to +85°C	(Avoid icing when using at temperatures lower than 0°C.)
Storage temperature		T_{stg}	-40 to +100°C	

■ Electrical characteristics (Ambient temperature: 25°C)

Item		Symbol	AQV258H5 (A)	Condition
Input	LED operate current	Typical	1.4 mA	$I_L = \text{Max.}$
		Maximum	3.0 mA	
	LED turn off current	Minimum	0.2 mA	$I_L = \text{Max.}$
		Typical	1.3 mA	
LED dropout voltage	Typical	1.32 V (1.16 V at $I_F = 10$ mA)		$I_F = 50$ mA
	Maximum	1.5 V		
Output	On resistance	Typical	315 Ω	$I_F = 10$ mA $I_L = \text{Max.}$ Within 1 s
		Maximum	500 Ω	
	Off state leakage current	Maximum	10 μA	$I_F = 0$ mA $V_L = \text{Max.}$
Transfer characteristics	Turn on time*	Typical	0.35 ms	$I_F = 10$ mA $I_L = \text{Max.}$
		Maximum	1.0 ms	
	Turn off time*	Typical	0.04 ms	$I_F = 10$ mA $I_L = \text{Max.}$
		Maximum	0.2 ms	
I/O capacitance	Typical	1.3 pF	$f = 1$ MHz $V_B = 0$ V	
	Maximum	3 pF		
	Initial I/O isolation resistance	Minimum	1,000 M Ω	500 V DC

Note: For the connection method, please refer to the schematic and wiring diagrams.

*Turn on/Turn off time



■ Recommended operating conditions (Ambient temperature: 25°C)

Please use under recommended operating conditions to obtain expected characteristics.

Item		Symbol	Min.	Max.	Unit
LED current		I_F	5	30	mA
AQV258H5 (A)	Load voltage (Peak AC)	V_L	-	1,200	V
	Continuous load current	I_L	-	0.02	A