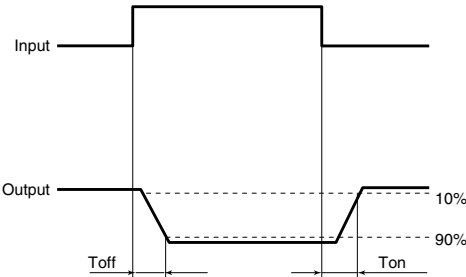


GE 1 Form B (AQY410EH)

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

Item			Symbol	AQY412EH(A)	AQY410EH(A)	AQY414EH(A)	Condition
Input	LED operate (OFF) current	Typical	I _{Foff}	1.4 mA			I _L =Max.
		Maximum		3.0 mA			
	LED reverse (ON) current	Minimum	I _{Fon}	0.4 mA			I _L =Max.
		Typical		1.3 mA			
	LED dropout voltage	Typical	V _F	1.25 (1.14 V at I _F = 5 mA)			I _F = 50 mA
		Maximum		1.5 V			
Output	On resistance	Typical	R _{on}	1Ω	18Ω	26Ω	I _F = 0 mA I _L = Max. Within 1 s on time
		Maximum		2.5Ω	25Ω	35Ω	
	Off state leakage current	Maximum	I _{Leak}	10μA			I _F = 5 mA V _L = Max.
Transfer characteristics	Operate (OFF) time*	Typical	T _{off}	3.0 ms	1.0 ms	0.8 ms	I _F = 0 mA → 5 mA I _L = Max.
		Maximum		10.0 ms	3.0 ms		
	Reverse (ON) time*	Typical	T _{on}	0.2 ms	0.3 ms	0.2 ms	I _F = 5 mA → 0 mA I _L = Max.
		Maximum		1.0 ms			
	I/O capacitance	Typical	C _{iso}	0.8 pF			f =1MHz V _B = 0 V
		Maximum		1.5 pF			
Initial I/O isolation resistance		Minimum	R _{iso}	1,000MΩ			500 V DC

*Operate/Reverse time



RECOMMENDED OPERATING CONDITIONS

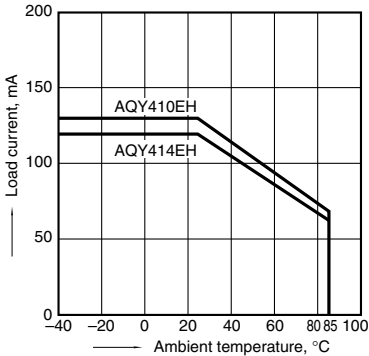
Please obey the following conditions to ensure proper device operation and resetting.

Item	Symbol	Recommended value	Unit
Input LED current	I _F	5 to 10	mA

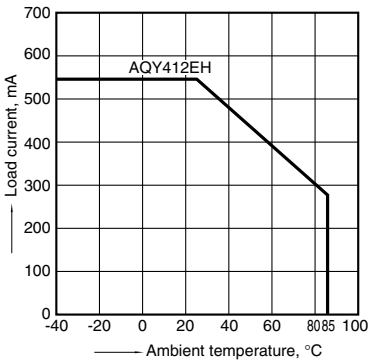
■ These products are not designed for automotive use.
If you are considering to use these products for automotive applications, please contact your local Panasonic Corporation technical representative.

REFERENCE DATA

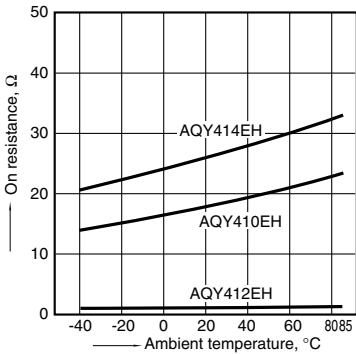
1-(1). Load current vs. ambient temperature characteristics
Allowable ambient temperature: -40°C to +85°C
-40°F to +185°F



1-(2). Load current vs. ambient temperature characteristics
Allowable ambient temperature: -40°C to +85°C
-40°F to +185°F

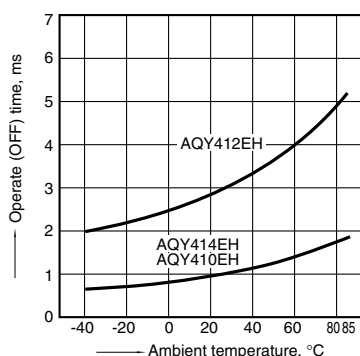


2. On resistance vs. ambient temperature characteristics
Measured portion: between terminals 3 and 4;
LED current: 0 mA; Load voltage: Max.(DC);
Continuous load current: Max. (DC)



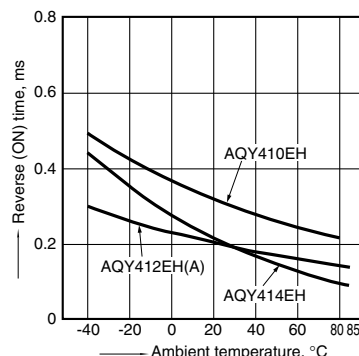
3. Operate (OFF) time vs. ambient temperature characteristics

LED current: 5 mA; Load voltage: Max. (DC);
Continuous load current: Max. (DC)



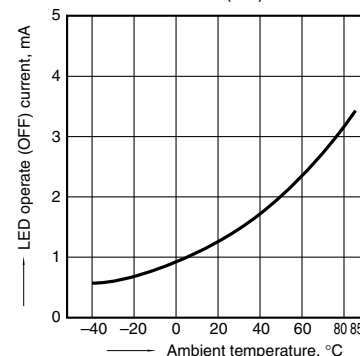
4. Reverse (ON) time vs. ambient temperature characteristics

LED current: 5 mA; Load voltage: Max. (DC);
Continuous load current: Max. (DC)



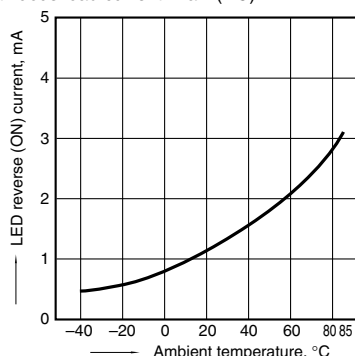
5. LED operate (OFF) current vs. ambient temperature characteristics

Sample: All types;
Load voltage: Max. (DC);
Continuous load current: Max. (DC)



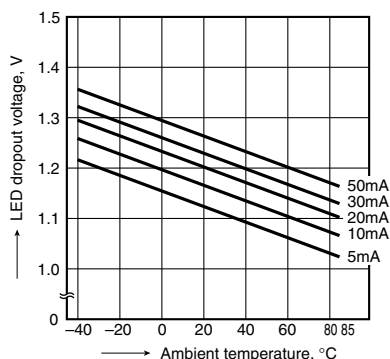
6. LED reverse (ON) current vs. ambient temperature characteristics

Sample: All types;
Load voltage: Max. (DC);
Continuous load current: Max. (DC)



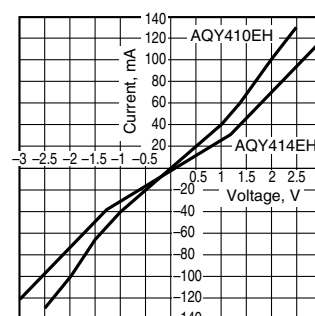
7. LED dropout voltage vs. ambient temperature characteristics

LED current: 5 to 50 mA



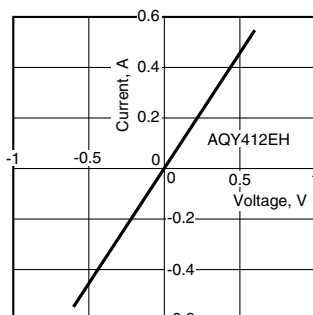
8-(1). Current vs. voltage characteristics of output at MOS portion

Measured portion: between terminals 3 and 4;
Ambient temperature: 25°C 77°F



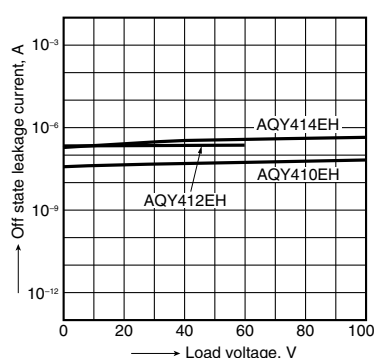
8-(2). Current vs. voltage characteristics of output at MOS portion

Measured portion: between terminals 3 and 4;
Ambient temperature: 25°C 77°F



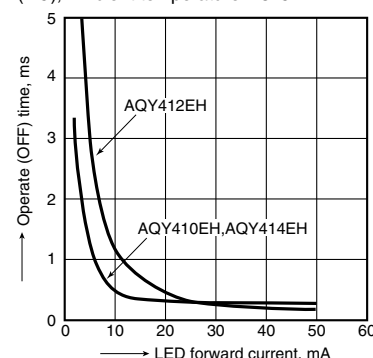
9. Off state leakage current vs. load voltage characteristics

Measured portion: between terminals 3 and 4;
Ambient temperature: 25°C 77°F



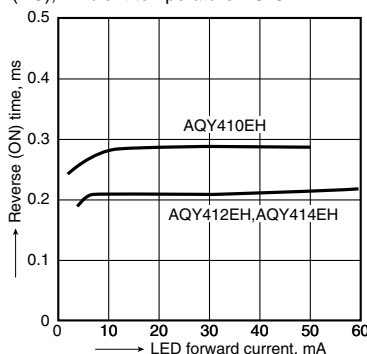
10. Operate (OFF) time vs. LED forward current characteristics

Measured portion: between terminals 3 and 4;
Load voltage: Max. (DC); Continuous load current: Max. (DC); Ambient temperature: 25°C 77°F



11. Reverse (ON) time vs. LED forward current characteristics

Measured portion: between terminals 3 and 4;
Load voltage: Max. (DC); Continuous load current: Max. (DC); Ambient temperature: 25°C 77°F



12. Output capacitance vs. applied voltage characteristics

Measured portion: between terminals 3 and 4;
Frequency: 1 MHz; Ambient temperature: 25°C 77°F

